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Ford Motor Company

Response Action Implementation Report

Baseball Fields – Feature 139

Twin Cities Assembly Plant (TCAP)
St. Paul, Minnesota
MPCA VIC Project Number VP23530
MPCA PBP Project Number PB3682

March 13, 2008

ARCADIS

Andrew Fiskness, PG
Staff Geologist

Bryan Zinda, PE
Project Manager

Eric Carman
Principal in Charge, VP

I hereby certify that this plan, document, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Geologist under the laws of the State of Minnesota.

Print Name: Andrew M. Fiskness

Signature:

Date: 3/13/08 License # 44133

Response Action Implementation Report
Baseball Fields – Feature 139

Twin Cities Assembly Plant
St. Paul, Minnesota

Prepared for:
Ford Motor Company

Prepared by:
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Our Ref.:
MN000593.0001

Date:
March 13, 2008

Table of Contents

ARCADIS

Response Action Implementation Report Baseball Fields – Feature 139

Twin Cities Assembly Plant
St. Paul, Minnesota

On behalf of Ford Motor Company (Ford), ARCADIS has prepared this Response Action Implementation Report (RAIR) for a portion of the Ford Twin Cities Assembly Plant (TCAP) located at 966 South Mississippi River Boulevard in St. Paul, Ramsey County, Minnesota. This RAIR describes the soil removal activities conducted to address surface soils that were identified as containing arsenic concentrations above the standard background level in Minnesota in a small portion of the baseball field area (Feature 139) of the TCAP property. The activities were conducted in accordance with the document entitled "Soil Removal Work Plan Baseball Fields – Feature 139" (Work Plan). That document was submitted to the Minnesota Pollution Control Agency (MPCA) on January 3, 2008 and was approved by the MPCA on January 12, 2008.

1. Property Location and Description

The TCAP is located at 966 South Mississippi River Boulevard in St. Paul, Ramsey County, Minnesota at the approximate easting coordinate 484562.5 meters (m) and northing coordinate 4973822.5m. The TCAP is located in a mixed industrial-, commercial-, and residential-use area on the eastern shore of the Mississippi River, along the east side of South Mississippi River Boulevard, south of Ford Parkway and west of South Cleveland Avenue in St. Paul, Minnesota (see Figure 1).

2. Previous Investigation Results

During the previous soil investigation conducted at Feature 139 from July 2007 to September 2007, arsenic was detected in several surface soil samples above the applicable MPCA soil screening level (Tier 2 Soil Reference Value [SRV] for recreational land use). The Tier 2 Recreational SRV for arsenic (5 milligrams per kilogram [mg/kg]) was exceeded in five of the 39 surface soil samples collected at Feature 139. The maximum concentration of arsenic detected in the surface soil samples was 16.4 mg/kg, which was detected in Sample AGM-SS-001. A statistical analysis was completed to characterize the data set and to provide a basis for comparison to applicable statewide background data provided by the MPCA. Surface soil sample results for arsenic were shown to be consistent with and generally less than naturally occurring arsenic background concentrations in Minnesota. Although the site arsenic data appeared to be consistent with applicable background data, one sample result (16.4 mg/kg for Sample AGM-SS-001) appeared to be a statistical outlier and was above the arsenic standard background level in Minnesota of 15 mg/kg.

The results from a surface soil risk assessment conducted for Feature 139 indicate that the detected concentrations of arsenic in surface soils are acceptable for continued recreational use and do not present a concern (unacceptable risk or hazard) to users of the baseball fields. The previous investigation and risk assessment results were presented in the following ARCADIS report: *Additional Soil Investigation and Surface Soil Risk Assessment Report – Baseball Fields – Feature 139,* which was submitted to the MPCA on December 14, 2007.

Although the surface soil assessment for Feature 139 indicates that risks and hazards are acceptable for the current land use, Ford elected to implement precautionary mitigation measures for the surface soils proximal to surface soil Sample (AGM-SS-001. The mitigation measures involved removal of surface soils in this one defined area as described below.

3. Excavation Delineation Soil Sampling

ARCADIS collected additional samples on December 20, 2007 to further delineate the area for soil removal around the location of Sample AGM-SS-001. Eight surface soil samples(see Figure 2) were collected from a depth of approximately 6-inches below ground surface as discussed during a telephone conversation on December 18, 2007 between Bryan Zinda of ARCADIS and Amy Hadiaris of the MPCA. The samples were collected in accordance with the June 18, 2007 Field Sampling Plan (FSP) that was developed for the TCAP. The samples were collected in four directions from Sample AGM-SS-001 at a distance of 10 feet and 20 feet. The samples were submitted to Test America North Canton, Ohio for laboratory analysis. Four surface soil samples (AGM-SS-40, AGM-SS-042, AGM-SS-044 and AGM-SS-046) from the distance of 10 feet were analyzed for arsenic. Four samples (AGM-SS-041, AGM-SS-043, AGM-SS-045 and AGM-SS-047) from the distance of 20 feet were placed on hold at the laboratory pending the analytical results of the samples analyzed.

The results of the four surface soil samples were consistent with background levels at the site and were below the maximum concentration of arsenic in the background data set of 15 mg/kg. Arsenic was detected in AGM-SS-040 (4.5 mg/kg), AGM-SS-042 (4.9 mg/kg), AGM-SS-044 (4.4 mg/kg) and AGM-SS-046 (4.3 mg/kg). Based on the results of these four samples the MPCA gave approval for the delineation of the area and the four samples placed on hold were disposed by the laboratory

A copy of the January 12, 2008 correspondence with the Amy Hadiaris of the MPCA is provided in Appendix A. Table 1 summarizes the field screening and laboratory status of the surface soil samples submitted for analysis. Table 2 summarizes surface soil analytical results. Copies of the laboratory analytical results are provided in Appendix B.

4. Excavation

On January 22, 2008 ARCADIS supervised the excavation of soil by Stevens Drilling and Environmental Services of Maple Plain, Minnesota. The excavation was conducted in accordance with the MPCA approved Work Plan. A total of 28.56 tons of soil was removed during the activities.

Excavated soil was loaded directly into two roll-off containers and transported off-site and disposed by Waste Management at Spruce Ridge Landfill in Glencoe, Minnesota on January 24, 2008. Data from the previous soil investigation events demonstrated that all excavated soil could be managed as non-hazardous. Copies of the non-hazardous waste manifests are provided in Appendix C.

Two confirmation samples, A_E01_CS-001(20080122) and A_E01_CS-002 (20080122) were collected on January 22, 2008 from the floor of the excavation. The samples were analyzed for total arsenic by United States Environmental Protection Agency (USEPA) Method 6010. The approximate excavation area was 504 square feet with approximate dimensions of 22 feet by 22 feet by 12 inches.

Confirmation sample locations and the final excavation boundary are presented on Figure 3. Arsenic was detected in the confirmation samples at a concentration of 11.3 mg/kg at A_E01_CS-001 and 11.4 mg/kg at A_E01_CS-002, respectively. Both concentrations exceeded the Tier 1 Residential and Tier 2 Recreational SRVs of 5 mg/kg. The results however, were below the maximum concentration for arsenic in the background data set, confirming that soil containing the arsenic concentrations above the standard background level in Minnesota had been removed. Analytical results of the confirmation soil samples are summarized in Table 3, and the laboratory analytical results are provided in Appendix B. Background soil data for arsenic in Minnesota is summarized in Table 4.

Following confirmation sampling the excavation was backfilled in two lifts, with each lift being compacted into an approximately 6-inch thickness. The source of the backfill materials was Bursh Brothers Sand and Gravel located in Monticello, Minnesota. The first lift consisted of imported, clean fill material, and the second lift consisted of imported topsoil. Final grading will be completed following ground thawing in spring 2008. Following grading the surface will be restored to its previous condition.

5. Summary

Excavation activities successfully removed impacted soil from the area of Sample AGM-SS-001. The excavation was completed to a depth of 12 inches bgs, backfilled, and compacted. Final grading and seeding will be completed in spring 2008. No additional soil remediation is proposed for Feature 139.

6. References

ARCADIS (2007), *Additional Soil Investigation and Surface Soil Risk Assessment Report – Baseball Fields – Feature 139,* December 14, 2007.

ARCADIS (2008) *Soil Removal Work Plan Baseball Fields – Feature 139*, January 3, 2008

Tables

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Table 1. Field Screening Headspace Summary and Surface Soil Sampling Laboratory Analysis Status Twin Cities Assembly Plant, St. Paul, Minnesota

Boring Location	Interval (feet. - feet. bgs)	Sample Date	PID (ppm)	Laboratory Analysis
AGM-SS-040	0-0.5	20-Dec-07	0.1	Analyzed
AGM-SS-041	0-0.5	20-Dec-07	0.1	Hold
AGM-SS-042	0-0.5	20-Dec-07	0.1	Analyzed
AGM-SS-043	0-0.5	20-Dec-07	0.2	Hold
AGM-SS-044	0-0.5	20-Dec-07	0.1	Analyzed
AGM-SS-045	0-0.5	20-Dec-07	0.1	Hold
AGM-SS-046	0-0.5	20-Dec-07	0.1	Analyzed
AGM-SS-047	0-0.5	20-Dec-07	0.1	Hold

Note:

AGM-SS	ARCADIS Surface Soil sample location.
Analyzed	Sample analysis was completed by the laboratory.
ASB	ARCADIS Soil Boring location.
bgs	Below ground surface.
Hold	Sample analysis was placed on hold at the laboratory. Samples were released and disposed of by the laboratory on January 12, 2008.
ppm	Parts per million.
PID	Photoionization detector.

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Table 2. **Summary of Surface Soil Sample Results Collected in December 2007**
Twin Cities Assembly Plant, St. Paul, Minnesota

Location ID Sample Name Depth Interval (feet) Sample Date	Units	Tier 1 Residential SRV	Tier 2 Recreational SRV	Tier 2 Industrial SRV	Minnesota Background Maximum	AGM-SS-040 AGM-SS-040_0-0.5(20071220) 0-0.5 12/20/2007	AGM-SS-042 AGM-SS-042_0-0.5(20071220) 0-0.5 12/20/2007	AGM-SS-044 AGM-SS-044_0-0.5(20071220) 0-0.5 12/20/2007	AGM-SS-046 AGM-SS-046_0-0.5(20071220) 0-0.5 12/20/2007
Arsenic	mg/kg	5	5	20	15	4.5	4.9	4.4	4.3
Percent Solids	mg/kg	NS	NS	NS	NS	73.1	77.1	74.2	74.9

Results are reported in milligrams per kilogram (mg/kg)

References:
ARCADIS (2007), *Additional Soil Investigation and Surface Soil Risk Assessment Report – Baseball Fields – Feature 139,* December 14, 2007.

Notes:

AGM-SS	ARCADIS Surface Soil Sampling Location.
NS	No standard.
Bold/Underline	Value is above the Tier 1 Residential Soil Reference Value (SRV).
	Value is above the Tier 2 Recreational Soil Reference Value (SRV).
Shade	Value is above the Tier 2 Industrial Soil Reference Value (SRV).

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Table 3. **Summary of Confirmation Soil Sample Results**
Twin Cities Assembly Plant, St. Paul, Minnesota

Location ID						A_E01_CS001	A_E01_CS002
Sample Name		Tier 1 Residentia	Tier 2 Recreationa	Tier 2 Industrial	Minnesota Backgroun	A_E01_CS-001(20080122)	A_E01_CS-002(20080122)
Depth Interval (feet)	Units	SRV	SRV	SRV	Maximum	--	--
Sample Date						1/22/2008	1/22/2008
Arsenic	mg/kg	5	5	20	15	**11.3**	**11.4**
Percent Solids	mg/kg	NS	NS	NS	NS	89.9	81.3

Results are reported in milligrams per kilogram (mg/kg)

References:
ARCADIS (2007), *Additional Soil Investigation and Surface Soil Risk Assessment Report – Baseball Fields – Feature 139,* December 14, 2007.

Notes:

A_E01	ARCADIS Confirmation Sample Location
NS	No standard.
Bold/Underline	Value is above the Tier 1 Residential Soil Reference Value (SRV).
	Value is above the Tier 2 Recreational Soil Reference Value (SRV).
Shade	Value is above the Tier 2 Industrial Soil Reference Value (SRV).

Table 4. Summary of Background Data
Twin Cities Assembly Plant, St. Paul, Minnesota

Metals	Units	Minimum	Maximum	Minnesota A. Mean	SD	N
Arsenic	mg/kg	0.5	15	5.5	4.6	37

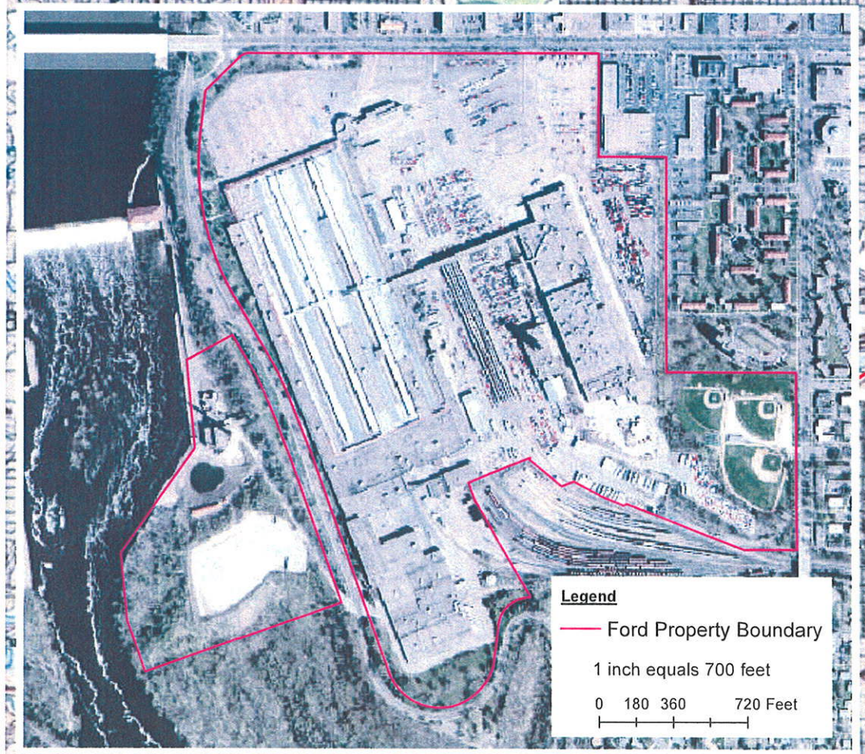
References:

"Elements in North American Soils," J. Dragun, A. Chiasson, December 1991.
Boerngen, J.G. and H.T. Shacklette. 1981. "Chemical analyses of soils and other surficial materials of the conterminous United States," U.S. Geological Survey Open-File Report 81-197.

Notes:

A. mean	Arithmetic mean.
SD	Standard Deviation.
N	Number of samples.
mg/kg	Milligrams per kilogram.

Figures



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Project Manager: E. Carman	Assistant Project Manager: B. Zinda
Drawn: M. Gress	Checked: T. Nelson-Kalmes

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Imagery Source: U.S. Geological Survey
High Resolution Orthoimagery for the
Minneapolis-St. Paul, Minnesota Urban Area
Topographic Map Source: http://services.arcgisonline.com/v92,
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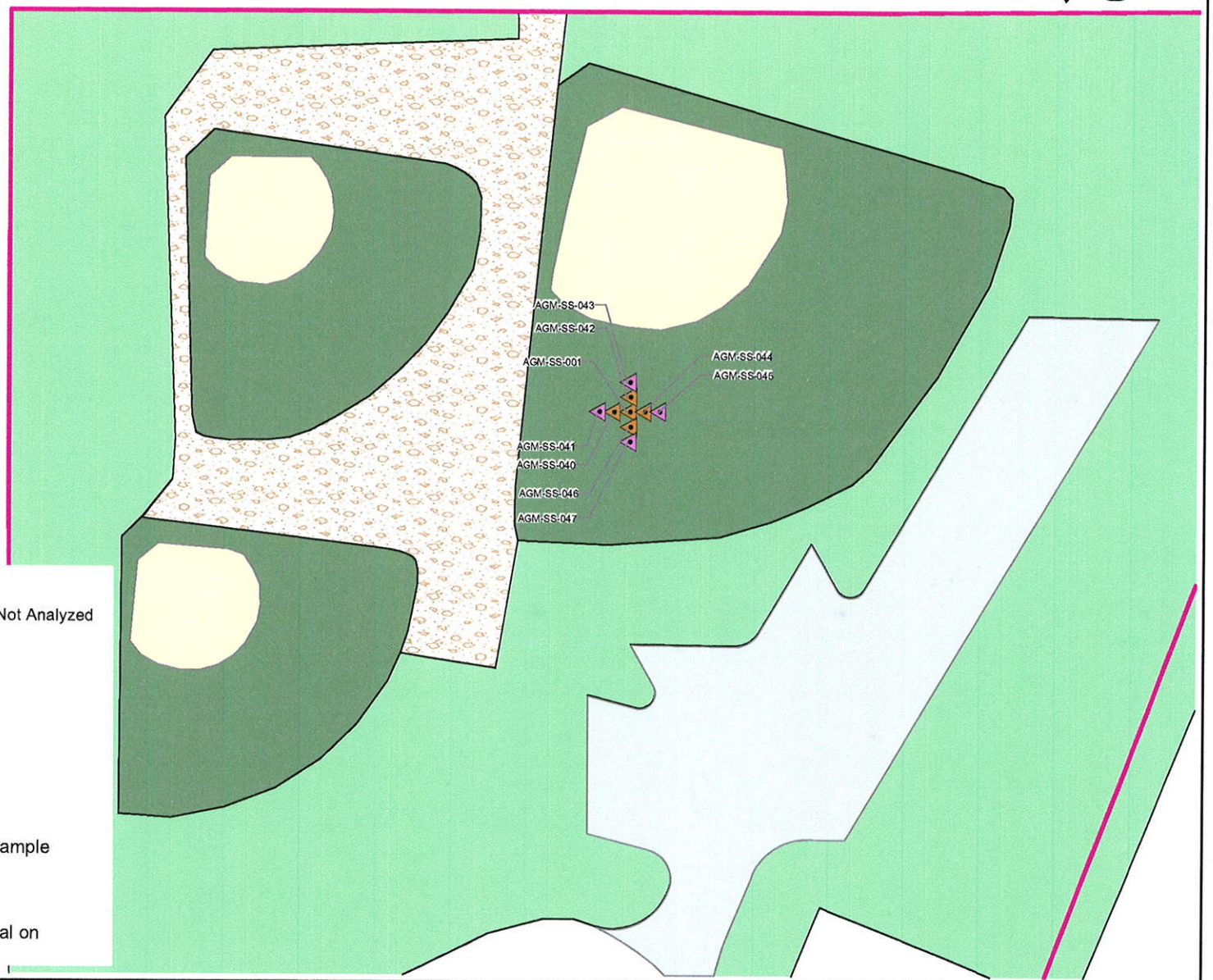
Site Location / Property Layout
Twin Cities Assembly Plant
St. Paul, Minnesota

Project Number	MN000593
Date	22-JAN-08
Figure	1



Legend

- Surface Soil Sample Locations - Not Analyzed
- Surface Soil sample Locations
- Ford Property Boundary
- Asphalt
- Grass
- Baseball Field Infield
- Baseball Field Outfield
- Gravel Parking Area

Notes:
AGM-SS: ARCADIS Surface Soil Sample

Not analyzed sample locations were put on hold at the lab, and disposed of following MPCA approval on January 12, 2008

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ARCADIS
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Minneapolis, Minnesota 55401
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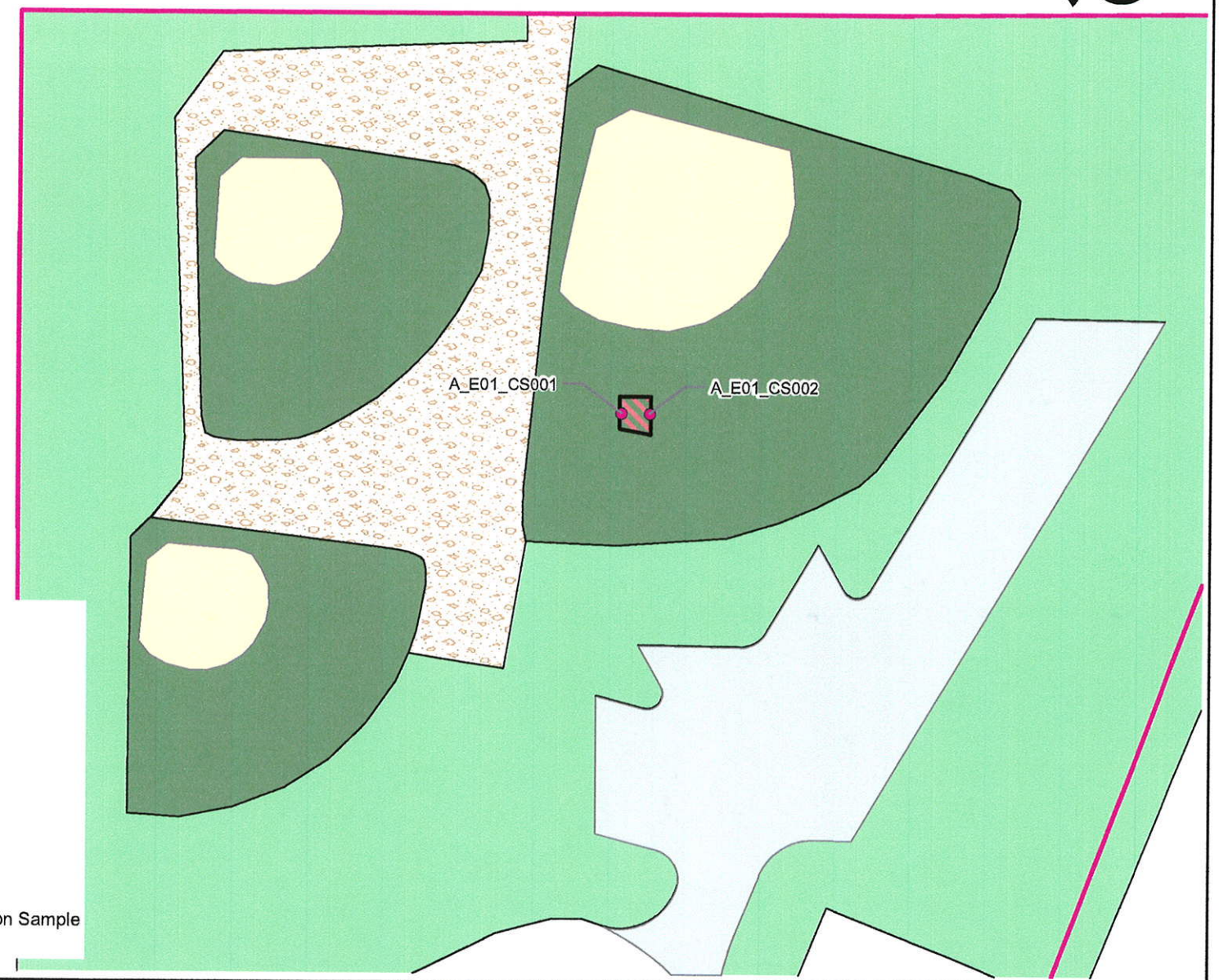
0 50 100 Feet

1 inch equals 100 feet

Surface Soil Sample Locations
Twin Cities Assembly Plant
St. Paul, Minnesota

FORD MOTOR COMPANY

PROJECT MANAGER B. Zinda	ASSISTANT PROJECT MANAGER B. Zinda
DRAWN M. Grese	CHECKED A. Fiskness
PROJECT NUMBER MN000593.0001	DRAWING NUMBER 2



Legend

- Confirmation Sample
- Excavation Area
- Ford Property Boundary
- Asphalt
- Grass
- Baseball Field Infield
- Baseball Field Outfield
- Gravel Parking Area

Notes:
A_E01_CS: ARCADIS Confirmation Sample

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0 50 100 Feet

1 inch equals 100 feet

Soil Excavation and Confirmation Sampling Locations
Twin Cities Assembly Plant
St. Paul, Minnesota

FORD MOTOR COMPANY

PROJECT MANAGER B. Zinda	ASSISTANT PROJECT MANAGER B. Zinda
DRAWN M. Grese	CHECKED A. Fishman
PROJECT NUMBER MN000593.0001	DRAWING NUMBER 3

Appendix A

Email Correspondences

Zinda, Bryan

From: Hadiaris, Amy [Amy.Hadiaris@state.mn.us]
Sent: Saturday, January 12, 2008 3:47 PM
To: Zinda, Bryan
Cc: Kromar, Karen
Subject: RE: TCAP_ Baseball Field Soil Sample Results

Thanks for the data. Looks good.

Regarding the baseball field soil samples still on hold, yes, you can release those.

Amy K. Hadiaris, P.G.
Voluntary Investigation and Cleanup Program
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155
Phone: (651) 296-8947
Fax: (651) 296-9707
Email: amy.hadiaris@state.mn.us

-----Original Message-----
From: Zinda, Bryan [mailto:Bryan.Zinda@arcadis-us.com]
Sent: Tuesday, January 08, 2008 2:35 PM
To: Kromar, Karen; Hadiaris, Amy
Subject: TCAP_ Baseball Field Soil Sample Results

Hello,

Attached are the results from the four delineation samples.

Also, can we release from the lab all of the samples that are on hold from the borings completed at the baseball fields?

Thanks

Bryan

Zinda, Bryan

From: Hadiaris, Amy [Amy.Hadiaris@state.mn.us]
Sent: Saturday, January 12, 2008 4:09 PM
To: Zinda, Bryan
Cc: Kromar, Karen; Merritt Clapp-Smith
Subject: Approval of Soil Removal Work Plan - Baseball Fields

Hi Bryan,

The Soil Removal Work Plan for the baseball fields, dated January 3, 2008, is approved, subject to the following clarification:

Backfill for the excavation shall meet the following criteria:

- Free from debris, asbestos-containing material, visual staining, and odor;
- No organic vapors above background, as measured by a PID;
- Less than Residential Soil Reference Values (SRVs);
- Less than Tier 1 Soil Leaching Values (SLVs); and
- Less than 10 mg/kg DRO/GRO

In general, if the fill material is imported from a commercial gravel pit, we don't require sampling. But if the source of the fill is excess soil from another property, the fill material should be screened and sampled to make sure it meets the criteria listed above.

Please let us know at least 1 or 2 days ahead of time when the excavation at the baseball fields will occur, on the chance that we receive any calls from neighbors who may wonder what's going on. Thanks.

Amy K. Hadiaris, P.G.
Voluntary Investigation and Cleanup Program
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155
Phone: (651) 296-8947
Fax: (651) 296-9707
Email: amy.hadiaris@state.mn.us

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Appendix B

Analytical Laboratory Reports

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

FORD TWIN CITIES E200572

Lot #: A7L210375

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

December 30, 2007

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

CASE NARRATIVE

A7L210375

The following report contains the analytical results for four solid samples and one water sample submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc. from the Ford Twin Cities E200572 Site. The samples were received December 21, 2007, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 31.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 1.9, 2.0, 2.3, and 2.7°C.

CASE NARRATIVE (continued)

METALS

The analytical results met the requirements of the laboratory's QA/QC program.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A7L210375

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
AGM-SS-040_0-0.5(20071220) 12/20/07 09:25 001				
Arsenic	4.5	1.4	mg/kg	SW846 6010B
Percent Solids	73.1	10.0	%	MCAWW 160.3 MOD
AGM-SS-042_0-0.5(20071220) 12/20/07 09:35 003				
Arsenic	4.9	1.3	mg/kg	SW846 6010B
Percent Solids	77.1	10.0	%	MCAWW 160.3 MOD
AGM-SS-044_0-0.5(20071220) 12/20/07 09:45 005				
Arsenic	4.4	1.3	mg/kg	SW846 6010B
Percent Solids	74.2	10.0	%	MCAWW 160.3 MOD
AGM-SS-046_0-0.5(20071220) 12/20/07 09:55 007				
Arsenic	4.3	1.3	mg/kg	SW846 6010B
Percent Solids	74.9	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A7L210375

PARAMETER	ANALYTICAL METHOD
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7L210375

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KEPED	001	AGM-SS-040_0-0.5(20071220)	12/20/07	09:25
KEPE0	003	AGM-SS-042_0-0.5(20071220)	12/20/07	09:35
KEPE3	005	AGM-SS-044_0-0.5(20071220)	12/20/07	09:45
KEPE5	007	AGM-SS-046_0-0.5(20071220)	12/20/07	09:55
KEPFA	009	EB-002(20071220)	12/20/07	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-040_0-0.5(20071220)

TOTAL Metals

Lot-Sample #...: A7L210375-001 Matrix.....: SO
Date Sampled...: 12/20/07 09:25 Date Received..: 12/21/07
% Moisture.....: 27

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358028						
Arsenic	4.5	1.4	mg/kg	SW846 6010B	12/24/07	KEPED1AC
		Dilution Factor: 1		MDL.....: 0.41		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-040_0-0.5(20071220)

General Chemistry

Lot-Sample #...: A7L210375-001 Work Order #...: KEPED Matrix.....: SO
Date Sampled...: 12/20/07 09:25 Date Received..: 12/21/07
% Moisture.....: 27

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	73.1	10.0	%	MCAWW 160.3 MOD	12/26-12/27/07	7360262

Dilution Factor: 1 MDL.....: 10.0

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-042_0-0.5(20071220)

TOTAL Metals

Lot-Sample #...: A7L210375-003 Matrix.....: SO
Date Sampled...: 12/20/07 09:35 Date Received..: 12/21/07
% Moisture.....: 23

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358028						
Arsenic	4.9	1.3	mg/kg	SW846 6010B	12/24/07	KEPE01AC
		Dilution Factor: 1		MDL.....: 0.39		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-042_0-0.5(20071220)

General Chemistry

Lot-Sample #...: A7L210375-003 Work Order #...: KEPE0 Matrix.....: SO
Date Sampled...: 12/20/07 09:35 Date Received..: 12/21/07
% Moisture.....: 23

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	77.1	10.0	%	MCAWW 160.3 MOD	12/26-12/27/07	7360262

Dilution Factor: 1 MDL.....: 10.0

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-044_0-0.5(20071220)

TOTAL Metals

Lot-Sample #...: A7L210375-005 Matrix.....: SO
Date Sampled...: 12/20/07 09:45 Date Received..: 12/21/07
% Moisture.....: 26

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358028						
Arsenic	4.4	1.3	mg/kg	SW846 6010B	12/24-12/25/07	KEPE31AC
		Dilution Factor: 1		MDL.....: 0.40		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-044_0-0.5(20071220)

General Chemistry

Lot-Sample #...: A7L210375-005 Work Order #...: KEPE3 Matrix.....: SO
Date Sampled...: 12/20/07 09:45 Date Received..: 12/21/07
% Moisture.....: 26

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	74.2	10.0	%	MCAWW 160.3 MOD	12/26-12/27/07	7360262

Dilution Factor: 1 MDL.....: 10.0

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-046_0-0.5(20071220)

TOTAL Metals

Lot-Sample #...: A7L210375-007 Matrix.....: SO
Date Sampled...: 12/20/07 09:55 Date Received..: 12/21/07
% Moisture.....: 25

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358028						
Arsenic	4.3	1.3	mg/kg	SW846 6010B	12/24-12/25/07	KEPE51AC
		Dilution Factor: 1		MDL.....: 0.40		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: AGM-SS-046_0-0.5(20071220)

General Chemistry

Lot-Sample #...: A7L210375-007 Work Order #...: KEPE5 Matrix.....: SO
Date Sampled...: 12/20/07 09:55 Date Received..: 12/21/07
% Moisture.....: 25

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	74.9	10.0	%	MCAWW 160.3 MOD	12/26-12/27/07	7360262
	Dilution Factor: 1			MDL.....: 10.0		

ARCADIS U.S., Inc.

Client Sample ID: EB-002(20071220)

TOTAL Metals

Lot-Sample #...: A7L210375-009 **Matrix.....:** WQ
Date Sampled...: 12/20/07 **Date Received..:** 12/21/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7358031						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/24-12/25/07	KEPFA1AA
		Dilution Factor: 1		MDL.....: 3.2		

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7L210375 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7L240000-028 Prep Batch #...: 7358028						
Arsenic	ND	1.0	mg/kg	SW846 6010B	12/24/07	KEQMH1AJ
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7L210375 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7L240000-031 **Prep Batch #...:** 7358031						
Arsenic	ND	10.0	ug/L	SW846 6010B	12/24/07	KEQML1AA
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A7L210375 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: KER2W1AA		MB Lot-Sample #:	A7L260000-262	
	ND	10.0	%	MCAWW 160.3 MOD	12/26-12/27/07	7360262
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L210375 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7L240000-028 **Prep Batch #...:** 7358028					
Arsenic	90	(80 - 120)	SW846 6010B	12/24/07	KEQMH1AV
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L210375 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7L240000-031 **Prep Batch #...:** 7358031					
Arsenic	91	(80 ~ 120)	SW846 6010B	12/24/07	KEQML1A3
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L210375 **Matrix.....:** SOLID
Date Sampled...: 12/20/07 11:00 **Date Received..:** 12/21/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7L210281-001 **Prep Batch #...:** 7358028							
						% Moisture.....: 0.88	
Arsenic	89	(75 - 125)			SW846 6010B	12/24/07	KENN01A8
	92	(75 - 125)	2.7	(0-20)	SW846 6010B	12/24/07	KENN01A9
		Dilution Factor: 5					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7L210375 **Matrix.....:** WATER
Date Sampled...: 12/20/07 10:10 **Date Received..:** 12/21/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7L210202-001 **Prep Batch #...:** 7358031							
Arsenic	90	(75 - 125)			SW846 6010B	12/24/07	KEMX61A4
	92	(75 - 125)	1.4	(0-20)	SW846 6010B	12/24/07	KEMX61A5
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7L210375 **Work Order #...:** KEGJN-SMP KEGJN-DUP **Matrix.....:** SOLID

Date Sampled...: 12/19/07 13:35 **Date Received..:** 12/19/07

% Moisture.....: 19

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7L190290-011		
	81.2	82.3	%	1.3	(0-20)	MCAWW 160.3 MOD	12/26-12/27/07	7360262

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7L210375 **Work Order #...:** KEPC2-SMP KEPC2-DUP **Matrix.....:** SOLID

Date Sampled...: 12/20/07 12:14 **Date Received..:** 12/21/07

% Moisture.....: 23

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7L210369-003		
	77.0	77.2	%	0.25	(0-20)	MCAWW 160.3 MOD	12/26-12/27/07	7360262

Dilution Factor: 1

Chain of Custody Record

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TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS U.S. INC.	BRYAN ZINDA	12/20/07	379757
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
630 FIRST AVE N., SUITE 720	612-339-9434 / 612-336-4538		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
MINNEAPOLIS / MN / 55401		DENISE POHL	
Project Name and Location (State)	**Carrier/Waybill Number**		
FORD TWIN CITIES; PHASE B ST. PAUL, MN			
Contract/Purchase Order/Quote No.			
FORD-TCAP-03/ENOVIS E200575-WA7			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: ARSENIC (6010)	Analysis: TOTAL CR^{+6}	Special Instructions/ Conditions of Receipt
															** LEVEL 2 **
AGM-SS-040-0.5'(20071220)	12/20/07	0925				X			X				1		ANALYZE
AGM-SS-041-0-0.5'(20071220)	12/20/07	0930				X			X				1		HOLD
AGM-SS-042-0-0.5'(20071220)	12/20/07	0935				X			X				1		ANALYZE
AGM-SS-043-0-0.5'(20071220)	12/20/07	0940				X			X				1		HOLD
AGM-SS-044-0-0.5'(20071220)	12/20/07	0945				X			X				1		ANALYZE
AGM-SS-045-0-0.5'(20071220)	12/20/07	0950				X			X				1		HOLD
AGM-SS-046-0-0.5'(20071220)	12/20/07	0955				X			X				1		ANALYZE
AGM-SS-047-0-0.5'(20071220)	12/20/07	1000				X			X				1		HOLD
EB-002 (20071220)	12/20/07	—		X		X			X				9		
TEMP BLANK - TB-002(20071220)	12/20/07	—		X										1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other NORMAL

QC Requirements (Specify)

	Date	Time
1. Relinquished By	12/20/07	14:15
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By		
2. Received By	12.21.07	0030
3. Received By		

Comments
PLEASE ANALYZE: AGM-SS-040, 042, 044, 046 *
HOLD: AGM-SS-041, 043, 045, 047

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

TestAmerica Cooler Receipt Form/Narrative — North Canton Facility

Lot Number: ATL210375

Client ARCADIS | Project _____ | Quote # 75208

Cooler Received on 12-21-07 | Opened on 12-21-07 | By _____ (Signature)

FedEx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other _____

TestAmerica Cooler # Back-4 | Foam Box ☐ | Client Cooler ☐ | Other _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were custody seals on the outside of cooler signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottles? Yes ☐ No ☑
   If YES, are there any exceptions _____
2. Shipper's packing slip attached to this form? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temps)

METHOD: IR ☑ Other ☐ _____

COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH upon receipt? Yes ☑ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a Trip Blank present in the cooler? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred: _____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #071707-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

What time was preservative added to sample(s)? _____

Sample(s) _____ were received with bubble > 6 mm in diameter (Notify PM)

Client ID	pH	Date	Initials
1500	?2 <2	12-21-07	MS
1125	<2 <2		
0740	<2 <2		
905	<2 <2		
DUP 001	<2 <2		
1310	<2 <2		
1336	<2 <2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp °C	Method	Coolant
D464	2.0	IR	ice
K742	2.7	"	"
L572	1.9	"	"
K653	2.3	"	"

Discrepancies Cont'd

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END OF REPORT

December 31, 2007

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A7L210375
Sample date: 2007-12-20
Report received by Enovis: 2007-12-31
Initial Data Verification completed by Enovis: 2007-12-31

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

There were no significant QC anomalies or exceptions to report.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://63.106.80.11/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory's reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

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ANALYTICAL REPORT

PROJECT NO. MN000593

FORD TCAP E200572

Lot #: A8A300208

Rebecca Forbort

ARCADIS U.S., Inc.
430 1st. Ave. North
Suite 720
Minneapolis, MN 55401

TESTAMERICA LABORATORIES, INC.

Denise Pohl
Project Manager

February 6, 2008

4101 Shuffel Street N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

CASE NARRATIVE

A8A300208

The following report contains the analytical results for two solid samples submitted to TestAmerica North Canton by ARCADIS Geraghty & Miller, Inc from the Ford TCAP E200572 Site, project number MN000593. The samples were received January 30, 2008, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 23.

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 17.1°C.

See TestAmerica's Cooler Receipt Form for additional information.

METALS

The matrix spike/matrix spike duplicate(s) for batch(es) 8031021 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A8A300208

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
A_E01_CS-001(20080122) 01/22/08 12:45 001				
Arsenic	11.3	1.1	mg/kg	SW846 6010B
Percent Solids	89.9	10.0	%	MCAWW 160.3 MOD
A_E01_CS-002(20080122) 01/22/08 14:45 002				
Arsenic	11.4	6.1	mg/kg	SW846 6010B
Percent Solids	81.3	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A8A300208

PARAMETER	ANALYTICAL METHOD
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A8A300208

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KGAMJ	001	A_E01_CS-001(20080122)	01/22/08	12:45
KGAM1	002	A_E01_CS-002(20080122)	01/22/08	14:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS U.S., Inc.

Client Sample ID: A_E01_CS-001(20080122)

TOTAL Metals

Lot-Sample #...: A8A300208-001 Matrix.....: SO
Date Sampled...: 01/22/08 12:45 Date Received..: 01/30/08
% Moisture.....: 10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8031021						
Arsenic	11.3	1.1	mg/kg	SW846 6010B	01/31/08	KGAMJ1AC
		Dilution Factor: 1		MDL.....: 0.33		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A_E01_CS-001(20080122)

General Chemistry

Lot-Sample #...: A8A300208-001 Work Order #...: KGAMJ Matrix.....: SO
Date Sampled...: 01/22/08 12:45 Date Received..: 01/30/08
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	89.9	10.0	%	MCAWW 160.3 MOD	01/30-01/31/08	8030296

Dilution Factor: 1 MDL.....: 10.0

ARCADIS U.S., Inc.

Client Sample ID: A_E01_CS-002(20080122)

TOTAL Metals

Lot-Sample #...: A8A300208-002 Matrix.....: SO
Date Sampled...: 01/22/08 14:45 Date Received..: 01/30/08
% Moisture.....: 19

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8031021						
Arsenic	11.4	6.1	mg/kg	SW846 6010B	01/31/08	KGAM11AC
		Dilution Factor: 5		MDL.....: 1.8		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A_E01_CS-002(20080122)

General Chemistry

Lot-Sample #...: A8A300208-002 Work Order #...: KGAM1 Matrix.....: SO
Date Sampled...: 01/22/08 14:45 Date Received..: 01/30/08
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	81.3	10.0	%	MCAWW 160.3 MOD	01/30-01/31/08	8030296

Dilution Factor: 1 MDL.....: 10.0

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A8A300208 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A8A310000-021 Prep Batch #...: 8031021						
Arsenic	ND	1.0	mg/kg	SW846 6010B	01/31/08	KGCJA1CV
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A8A300208 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: KGAV31AA		MB Lot-Sample #:	A8A300000-296	
	ND	10.0	%	MCAWW 160.3 MOD	01/30-01/31/08	8030296
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A8A300208 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A8A310000-021 Prep Batch #...: 8031021					
Arsenic	82	(80 - 120)	SW846 6010B	01/31/08	KGCJA1C1
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A8A300208 Matrix.....: SOLID
Date Sampled...: 01/29/08 09:35 Date Received..: 01/30/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A8A300151-001 Prep Batch #...: 8031021						% Moisture.....: 17	
Arsenic	80	(75 - 125)			SW846 6010B	01/31/08	KF9621D6
	74 N	(75 - 125)	8.0	(0-20)	SW846 6010B	01/31/08	KF9621D7

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8A300208 **Work Order #...:** KF935-SMP KF935-DUP **Matrix.....:** SOLID

Date Sampled...: 01/29/08 13:52 **Date Received..:** 01/30/08

% Moisture.....: 26

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A8A300139-001		
	74.0	73.6	%	0.47	(0-20)	MCAWW 160.3 MOD	01/30-01/31/08	8030296

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8A300208 **Work Order #...:** KF98P-SMP KF98P-DUP **Matrix.....:** SOLID

Date Sampled...: 01/29/08 15:00 **Date Received..:** 01/30/08

% Moisture.....: 6.5

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A8A300151-021		
	93.5	95.5	%	2.2	(0-20)	MCAWW 160.3 MOD	01/30-01/31/08	8030296

Dilution Factor: 1

WRA 0713

TestAmerica
ANALYTICAL TESTING CORPORATION

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: ARCADIS Client #: _____
Address: 430 FIRST AVE N., SUITE 720 Project Name: FORD-TCAP
City/State/Zip Code: MINNEAPOLIS / MN / 55401 Project #: MN000593
Project Manager: BRYAN ZINDA BRYAN.ZINDA@ARCADIS-US.COM Site/Location ID: ST. PAUL State: MN
Telephone Number: 612-339-9434 Fax: _____ Report To: BRYAN ZINDA
Sampler Name: (Print Name) MELISSA MEEHUSEN Invoice To: BRYAN ZINDA
Sampler Signature: _____ Quote #: _____ PO#: _____

TAT: X Standard; ___ Rush (surcharges may apply); Date Needed: _____; Fax Results: Y (N)

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: ARSENIC	TAKE BACK	QC Deliverables: X None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____ — MN OFFICE REMARKS
A-EQL-CS-001(20080122)	1/22/08	12:45	G	-	S						1		1		01-29-08
A-EQL-CS-002(20080122)	1/22/08	14:45	G	-	S						1		1		REBECCA FORWARD
															CALLED REQUEST
TEMP BLANK	1/22/08	-	-		WATER						1			1	FORWARD SAMPLES
															TO NORTH CANTON
															ATTN DENISE PORT
															LETTER
															SEE VIA FEDEX

Special Instructions: 01-24-08 WARREN CALLED MELISSA ABOUT EXTRA BAG IN COOLER, BAG IS EXTRA SAMPLE TO BE DISPOSED. BAG WILL BE DUMPED. 1400

Relinquished By:	Date: 1/23/08	Time: 1400	Received By:	Date: 1-23	Time:	LABORATORY COMMENTS: Init Lab Temp:	
Relinquished By:	Date: 1-23	Time:	Received By:	Date: 1/24/08	Time: 8:51	Rec Lab Temp: -.1	
Relinquished By:	Date:	Time:	Received By:	Date: 1/30/08	Time: 9:30	Custody Seals: Y (N) N/A; Bottles Supplied by Test America: (Y) N; Method of Shipment: Delivered	

R 1/24/08

20

TestAmerica North Canton

TestAmerica Cooler Receipt Form/Narrative — Lot Number: NA 300208

North Canton Facility

Client Arcadis — Project ____ — Quote # 175208

Cooler Received on 11/30/08 — Opened on 11/30/08 — By ____ (Signature)

FedEx ☒ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other ____

TestAmerica Cooler # ____ Foam Box ☐ Client Cooler ☐ Other Box

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity ____
   Were custody seals on the outside of cooler signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottles? Yes ☐ No ☒
   If YES, are there any exceptions ____
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other ____
6. Cooler temperature upon receipt 10.4 °C (see back of form for multiple coolers/temps)

METHOD: IR ☒ (Wet) Other ☐ ____

COOLANT: ~~Wet Ice~~ ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☒

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
9. Were samples at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a Trip Blank present in the cooler? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒

Contacted PM DOF Date 11/30/08 by ____ via Voice Mail ☒ Verbal ☐ Other ☐

Concerning #14

14. CHAIN OF CUSTODY

The following discrepancies occurred: High Temp - No Ice.

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #071707-HNO3 - Sulfuric Acid Lot # 092006-H2SO4; Sodium Hydroxide Lot # 122805 -NaOH; Hydrochloric Acid Lot # 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot # 050205-CH3COO2ZN/NaOH*

What time was preservative added to sample(s)? ____

Sample(s) ____ were received with bubble > 6 mm in diameter (Notify PM)

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp °C	Method	Coolant

Discrepancies Cont'd

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

February 07, 2008

Rebecca Forbort
ARCADIS
430 First Avenue North, Ste 720
Minneapolis, MN US 55401

Enovis project ID: E200572
Project: FORD-Twin Cities Assembly Plant
Project number: MN000591.0001.0001
Laboratory: TestAmerica - North Canton
Laboratory submittal: A8A300208
Sample date: 2008-01-22
Report received by Enovis: 2008-02-06
Initial Data Verification completed by Enovis: 2008-02-07

Data verification for the report specified above was completed using the Ford Motor Company Environmental Laboratory Technical Specification, the Enovis Standard Operating Procedure for the Verification of Environmental Analytical Data and the associated analytical methods as references for evaluating the batch QC, sample data and report content. The EPA National Functional Guidelines for validating organic and inorganic data were used as guidance when addressing out of control QC results and the associated data qualifiers.

There were no significant QC anomalies or exceptions to report.

The definitions of the qualifiers used for this data package are defined in the analytical report. Enovis valid qualifiers are defined in the table below. To view and download a PDF copy of the laboratory's analytical report access the Enovis CLMS at http://enovis-inc.com/enovis53/index.cfm.

Please contact me if you have any questions.

Sincerely,

Tim Abston

Project Scientist

Enovis Valid Qualifiers

Valid Qualifiers	Description
B	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was greater than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the reported concentration. For Inorganic methods the sample concentration was greater than the RDL and less than 10x the blank concentration and is considered non-detect at the reported concentration.
E	The analyte / Compound reported exceeds the calibration range and is considered estimated.
EMPC	Estimated Minimum Potential Contamination - Dioxin/Furan analyses only
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of an analyte / compound but the result is less than the sample Quantitation limit, but greater than zero. The flag is also used in data validation to indicate a reported value should be considered estimated due to associated quality assurance deficiencies.
JB	The analyte / compound was detected in the associated blank between the MDL and the laboratory`s reporting detection limit. For Inorganic methods the sample concentration was < 10x the blank concentration and is considered estimated. For Organic methods the sample concentration was < 5x or 10x for common laboratory contaminates, the blank concentration and is considered estimated.
JH	The sample result is considered estimated and is potentially biased high.
JL	The sample result is considered estimated and is potentially biased low.
R	Indicates the value is considered to be unusable. (Note: The analyte / compound may or may not be present.)
TNTC	Too Numerous to Count - Asbestos and Microbiological Results
U	Indicates that the analyte / compound was analyzed for, but not detected.
UB	The analyte / compound was detected in the associated blank. For Organic methods the sample concentration was less than the RDL and less than 5x (or 10x for common lab contaminates) the blank concentration and is considered non-detect at the RDL. For Inorganic methods the sample concentration was less than the RDL and less than 10x the blank concentration and is considered non-detect at the RDL.
UJ	The analyte / compound was not detected above the reported sample Quantitation limit. However, the Quantitation limit is considered to be approximate due to associated quality assurance results and may or may not represent the actual limit of Quantitation to accurately and precisely report the analyte in the sample.

ARCADIS

Appendix C

Non-Hazardous Waste Manifests

WASTE MANAGEMENT

MN/IA Landfills - Spruce Ridge RMF
12755 127TH ST
BLENCOE, MN, 56236
Ph: (320) 86--9508

Original
Ticket# 211472

Customer Name WM-BLAINE
Ticket Date 01/24/2000
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 20472
Destination 6 FINISE
PO
Profile SR100179NNE (FORD MOTOR COMPANY/SOIL BORINGS)
Generator 150-FORDMOTORC FORD MOTOR COMPANY

Carrier WMBLAINE WM-BLAINE
Vehicle# 646
Container
Driver DAN
Check#
Billing # 0000004
Gen EPA ID
License YTR2473:5X

Volume

	Time	Scale	Operator		
In	01/24/2000 11:52:09	Scale	faye	Gross	71040 lb
Out	01/24/2000 12:20:46	Scale	faye	Tare	43480 lb
				Net	28360 lb
				Tons	14.18

Comments Form soil borings

	Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1	Special Instructions 100		14.18	Tons				40MGM

Total Tax
Total Ticket

Driver's Signature

BALLFIELD
SOIL

403WM

SECTION 6 ASBESTOS (operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

a) Operator's Name: _____ c) Telephone Number: ( ) _____

b) Operator's Address: _____ City, State, Zip _____

d) Recommended special handling instructions and additional information: _____

e) Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) _____ Signature of Operator's Authorized Agent _____ Date _____

f) Responsible Agency Name and Address: Minnesota Pollution Control Agency, 520 Lafayette Road N., St. Paul, MN 55155
Metro 651-296-6300 Out of State 1-800-657-3864

GSM-9-30

111-005/SPRUCE

WHITE – DESTINATION • YELLOW GENERATOR • PINK – CONTRACTOR • GOLD – TRANSPORTER

WM MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

If waste is asbestos waste, complete all Sections.
If waste is NOT asbestos waste, complete only Sections 1, 2, 3, 4 and 5.

Manifest No. 28478

SECTION 1 — GENERATOR INFORMATION (generator to complete)

a) Generator's Name: Ford Motor Company c/o Waste Management
b) Generator's Address: 966 S. Mississippi River Blvd, St. Paul, MN 55116
c) Generator's Representative: Todd [illegible]
d) Telephone Number: 612 655-7738
e) WASTE MANAGEMENT APPROVAL CODE: SR 702 SR 1001 79 MNE
f) Common Name of Waste: Soil
g) Description of Waste: Soil (Ball Park)
h) Disposal Volume: 10

___ Tons X Cubic Yards ___ Other ___

i) Number of Containers: 1

j) Generating Location (Name):
k) Address:
l) Telephone Number: ( )
m) Asbestos ONLY - ☐ Friable; ☐ Both; ___ % friable ___ % non-friable
☐ Non-friable; ☐ N/A
n) Type of Containers: TR How Many 1
o) Total Yards ___ How Many ___
___ How Many ___

TYPE OF CONTAINERS
TR - TRUCK
DM - METAL DRUM
DP - PLASTIC DRUM
DC - CARDBOARD DRUM
BA - BAG
BB - 6 MIL. PLASTIC BAG
BC - 12 MIL. PLASTIC BAG

p) I hereby warrant that the above named material is the same material as represented on the Special Waste Disposal Application identified by the above Waste Management Code and such material was delivered to the transporter on the shipment date referenced below.

Todd [illegible] — Generator's Authorized Agent Name (print/type)
[signature] — Signature of Generator's Authorized Agent
1-24 — Shipment Date

SECTION 2 — TRANSPORTER 1

a) Transporter's Name: [illegible]
b) Transporter's Address: [illegible]
c) Telephone Number: ( ) [illegible]
d) Vehicle License No./State: [illegible]
e) Trailer or Container No.:
f) Name of Driver (print/type): [illegible]
g) I hereby warrant that the above named and described material was received from the generator on the date of receipt referenced below.

[signature] — Signature of Driver; [illegible] — Date of Receipt

h) I hereby warrant that the above named and described material was delivered without incident or contamination on the date of delivery referenced below.

[signature] — Signature of Driver; [illegible] — Date of Delivery

SECTION 3 — TRANSFER FACILITY - (Complete if applicable)

a) Transfer Facility's Name:
b) Transfer Facility's Address:
c) Telephone Number: ( )
d) Vehicle License No./State:
e) Trailer or Container No.:
f) Name of Transfer Facility's Authorized Agent (print/type)
g) I hereby warrant that the above named and described material was received from the transporter on the date of receipt referenced below.

Signature of Transfer Facility's Authorized Agent — Date of Receipt

h) I hereby warrant that the above named and described material was delivered to the transporter without incident or contamination on the date of delivery referenced below.

Signature of Transfer Facility's Authorized Agent — Date of Delivery

SECTION 4 — TRANSPORTER 2 - (Complete if applicable)

a) Transporter's Name:
b) Transporter's Address:
c) Telephone Number: ( )
d) Vehicle License No./State:
e) Trailer or Container No.:
f) Name of Driver (print/type)
g) I hereby warrant that the above named and described material was received on the date of receipt referenced below.

Signature of Driver — Date of Receipt

h) I hereby warrant that the above named and described material was delivered on the delivery date referenced below.

Signature of Driver — Date of Delivery

SECTION 5 — DESTINATION (Disposal Facility)

a) Disposal Facility's Name: SPRUCE RIDGE LANDFILL — Permit No. SW-6
b) Physical Address: 12755 137th ST. GLENCOE, MN 55336
c) Telephone Number: (320) 864-5503
d) Mailing Address: SAME
e) Name of Disposal Facility's Authorized Agent (print/type): [illegible]
f) The material delivered by the Transporter has been received at the Disposal Facility.

[signature] — Signature of Disposal Facility's Authorized Agent; 1-24-08 — Date of Receipt

g) The material delivered by the Transporter has been rejected for disposal at the Disposal Facility.

Signature of Disposal Facility's Authorized Agent — Date of Rejection
Signature of Driver — Date of Rejection

SECTION 6 — ASBESTOS (operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

a) Operator's Name:
b) Operator's Address:
c) Telephone Number: ( )
City, State, Zip
d) Recommended special handling instructions and additional information:
e) **Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.**

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

f) Responsible Agency Name and Address: Minnesota Pollution Control Agency, 520 Lafayette Road N., St. Paul, MN 55155
Metro 651-296-6300 Out of State 1-800-657-3864

GSM-9-30

111-005/SPRUCE WHITE – DESTINATION • YELLOW GENERATOR • PINK – CONTRACTOR • GOLD – TRANSPORTER

WASTE MANAGEMENT

[illegible] Spruce Ridge Rd
12755 137TH ST
CLEARCOF, MN, 55330
Ph: (320) 864-5508

Original
Ticket# 016834

Customer Name: WM-BLAINE
Ticket Date: 01/30/2008
Payment Type: Credit Account
Manual Ticket#:
Hauling Ticket#:
Route:
State Waste Code:
Manifest: 20479
Destination: 6 PHASE
PO:
Profile: SR100179MNE (FORD MOTOR COPANY/SOIL BORINGS)
Generator: 148-FORDMOTORC FORD MOTOR COMPANY

Carrier: WMBLAINE WM-BLAINE
Vehicle#: 125
Container:
Driver: DAN
Check#:
Billing #: 0000041
Gen EPA ID:
License: YMD564S2/5X

Volume

	Time	Scale	Operator		
In	01/30/2008 11:25:31	Scale	Kel	Gross	73320 lb
Out	01/30/2008 11:43:14	Scale	Kel	Tare	44560 lb
				Net	28760 lb
				Tons	14.38

Comments:

Product	LB%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc-Tons - 100		14.38	Tons				MANSN

Total Tax
Total Ticket

Driver's Signature: _____

403WM

Date of Delivery | Signature of Driver | Date of Rejection

SECTION 6 — **ASBESTOS (operator to complete)**

"Operator" is defined as the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

a) Operator's Name: _____ c) Telephone Number: ( ) _____

b) Operator's Address: _____ City, State, Zip _____

d) Recommended special handling instructions and additional information: _____

e) **Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.**

Operator's Name (print/type) _____ Signature of Operator's Authorized Agent _____ Date _____

f) Responsible Agency Name and Address: Minnesota Pollution Control Agency, 520 Lafayette Road N., St. Paul, MN 55155
Metro 651-296-6300 Out of State 1-800-657-3864

GSM-9-30

11-005/SPRUCE WHITE - DESTINATION; YELLOW-GENERATOR; PINK -

NON-HAZARDOUS WASTE MANIFEST

If waste is asbestos waste, complete all Sections.
If waste is NOT asbestos waste, complete only Sections 1, 2, 3, 4 and 5.

Manifest No. 28479

SECTION 1 GENERATOR INFORMATION (generator to complete)

a) Generator's Name: FORD MOTOR COMPANY
c/o WASTE MANAGEMENT
b) Generator's Address: 966 S. MISSISSIPPI RIVER BLVD
ST. PAUL, MN 55116
c) Generator's Representative: TODD O'BRIEN
d) Telephone Number: (612) 685-7938
e) WASTE MANAGEMENT APPROVAL CODE: SR 702 [illegible]
f) Common Name of Waste: Soil
g) Description of Waste: Soil (Ball Park)
h) Disposal Volume: 10
___ Tons   X Cubic Yards   ___ Other ___
i) Number of Containers: 1

j) Generating Location (Name): ___
k) Address: ___
l) Telephone Number: ( ) ___

m) Asbestos ONLY - ☐ Friable; ☐ Both; ___ % friable ___ % non-friable
☐ Non-friable; ☐ N/A
n) Type of Containers: TR How Many 1
o) Total Yards ___ How Many ___
___ How Many ___

TYPE OF CONTAINERS
TR - TRUCK
DM - METAL DRUM
DP - PLASTIC DRUM
DC - CARDBOARD DRUM
BA - BAG
BB - 6 MIL. PLASTIC BAG
BC - 12 MIL. PLASTIC BAG

p) I hereby warrant that the above named material is the same material as represented on the Special Waste Disposal Application identified by the above Waste Management Code and such material was delivered to the transporter on the shipment date referenced below.

TODD O'BRIEN — [signature] — [illegible]
Generator's Authorized Agent Name (print/type) | Signature of Generator's Authorized Agent | Shipment Date

SECTION 2 TRANSPORTER 1

a) Transporter's Name: [illegible]
b) Transporter's Address: [illegible] MN
c) Telephone Number: ( ) [illegible]
d) Vehicle License No./State: [illegible]
e) Trailer or Container No.: ___
f) Name of Driver (print/type): [illegible]
g) I hereby warrant that the above named and described material was received from the generator on the date of receipt referenced below.

[signature] — [illegible]
Signature of Driver | Date of Receipt

h) I hereby warrant that the above named and described material was delivered without incident or contamination on the date of delivery referenced below.

[signature] — [illegible]
Signature of Driver | Date of Delivery

SECTION 3 TRANSFER FACILITY - (Complete if applicable)

a) Transfer Facility's Name: ___
b) Transfer Facility's Address: ___
c) Telephone Number: ( ) ___
d) Vehicle License No./State: ___
e) Trailer or Container No.: ___
f) Name of Transfer Facility's Authorized Agent (print/type) ___
g) I hereby warrant that the above named and described material was received from the transporter on the date of receipt referenced below.

Signature of Transfer Facility's Authorized Agent | Date of Receipt

h) I hereby warrant that the above named and described material was delivered to the transporter without incident or contamination on the date of delivery referenced below.

Signature of Transfer Facility's Authorized Agent | Date of Delivery

SECTION 4 TRANSPORTER 2 - (Complete if applicable)

a) Transporter's Name: ___
b) Transporter's Address: ___
c) Telephone Number: ( ) ___
d) Vehicle License No./State: ___
e) Trailer or Container No.: ___
f) Name of Driver (print/type) ___
g) I hereby warrant that the above named and described material was received on the date of receipt referenced below.

Signature of Driver | Date of Receipt

h) I hereby warrant that the above named and described material was delivered on the delivery date referenced below.

Signature of Driver | Date of Delivery

SECTION 5 DESTINATION (Disposal Facility)

a) Disposal Facility's Name: SPRUCE RIDGE LANDFILL — Permit No. SW-6
b) Physical Address: 12755 137th ST. GLENCOE, MN 55336
c) Telephone Number: (320) 864-5503
d) Mailing Address: SAME
e) Name of Disposal Facility's Authorized Agent (print/type) [illegible]
f) The material delivered by the Transporter has been received at the Disposal Facility.

[signature] — [illegible]
Signature of Disposal Facility's Authorized Agent | Date of Receipt

g) The material delivered by the Transporter has been rejected for disposal at the Disposal Facility.

Signature of Disposal Facility's Authorized Agent | Date of Rejection

Signature of Driver | Date of Rejection

SECTION 6 ASBESTOS (operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

a) Operator's Name: ___
c) Telephone Number: ( ) ___
b) Operator's Address: ___ City, State, Zip ___
d) Recommended special handling instructions and additional information: ___

e) Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

f) Responsible Agency Name and Address: Minnesota Pollution Control Agency, 520 Lafayette Road N., St. Paul, MN 55155
Metro 651-296-6300 Out of State 1-800-657-3864

GSM-9-30