

Ms. Shanna Schmitt and Ms. Stacey Hendry-Van Patten Minnesota Pollution Control Agency 520 Lafayette Road North St. Paul, Minnesota 55155-4194 ARCADIS U.S., Inc.
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**ENVIRONMENT** 

Subject

Technical Memorandum
Environmental Contingency Plan – *Site-Wide Contingency Plan*Ford Twin Cities Assembly Plant, St. Paul, Minnesota
MPCA VIC Project Number VP23530
MPCA PBP Project Number PB3682

Dear Ms. Schmitt and Ms. Hendry-Van Patten:

This letter report provides the Site-Wide Contingency Plan (Contingency Plan) that will be utilized by on-site contractors at the Ford Motor Company Twin Cities Assembly Plant (TCAP; Site), during the course of demolition activities. This Contingency Plan is in support of the previously submitted and approved *Environmental Contingency Plan – Underground Storage Tank (UST) Removal*, and therefore does not consider the potential encounter of USTs (ARCADIS 2013a). The decommissioning, structural demolition, subsurface removals and abandonment, and Site restoration are scheduled to continue through 2017. All tasks incorporated within the scope of the demolition activities will be completed by licensed contractors and overseen by Ford personnel. In response to these activities, ARCADIS has prepared this Contingency Plan to address environmental concerns that may arise.

#### Site Location

The Site 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 4973822.5 m. The Site is located in a mixed industrial, commercial-, and residential-use area on the eastern shore of the Mississippi River, along the east and west sides of South Mississippi River Boulevard, south of Ford Parkway and west of South Cleveland Avenue, in St. Paul, Minnesota (Figure 1).

Date:

July 17, 2013

Contact:

Angharad Pagnon

Phone:

612.373.0223

Email:

apagnon@arcadis-us.com

Our ref:

DE000373.0002

Imagine the result

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## Site Background

Operations at the Site formerly consisted of the assembly and painting of light duty trucks (Ford Ranger) using parts manufactured off-Site. Assembly processes included welding, metal cleaning, painting and curing, windshield and trim installation and preparation of the vehicles for final delivery. In addition, a wastewater treatment plant and steam plant operated at the Site and was associated with the former assembly operations. Manufacturing operations at the Site ceased on December 16, 2011 and demolition activities commenced on June 10, 2013.

From 2007 to the present, environmental assessments, remedial action, and subsurface investigations have been completed at the Site to determine potential impacts in soil and groundwater from former operations and Features. These activities included:

- A Phase I Environmental Site Assessment completed in 2007 to identify Features and obtain information regarding environmental activities and conditions at the Site (ARCADIS 2007a).
- Soil investigations and a Surface Soil Risk Assessment completed in 2007 to evaluate the Potential Battery Waste Disposal Area (Feature 139), located east of the plant (ARCADIS 2007b; 2007c).
- Remedial action for the Potential Battery Waste Disposal Area (Feature 139) completed in 2008 (ARCADIS, 2008).
- An initial and supplemental Phase II investigation of the Site exterior (outside building footprint) completed in June and July 2007 (ARCADIS 2007d) and between August and November 2011 and October 2012 (ARCADIS 2013b), respectively.
- An initial Phase II investigation of the Site interior completed in August 2010 and continued in May and June of 2012.

To facilitate implementation of this Contingency Plan, the Site footprint was divided into 11 Focus Areas (FAs) as shown on Figure 2. The FA boundaries were developed with consideration of Features identified in the Phase I, historical environmental concerns, as well as use and construction sequence of infrastructure.

As demolition activities expose subsurface soils and Features, all data collected to date, including identified Features and locations of soil and groundwater exceedances, will be utilized in the implementation of this Contingency Plan and has been illustrated for each FA on Figures 3 through 11. FA-08 and FA-10 have been excluded as they will not be affected by demolition activities. Additionally, in

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preparation of the removal of existing infrastructure, all Features identified during the 2007 Phase I ESA were surveyed to allow investigation to be completed after concrete slab removal.

### **Contingency Plan**

### **Environmental Monitoring Plan**

Throughout demolition activities, subsurface soil and potentially perched groundwater will be exposed. A Ford-approved designated environmental representative will oversee the excavation or removal of any soil, infrastructure, and utilities removed as part of demolition scope of work. During the course of these removals, monitoring and inspection of the removed and exposed soil will be completed and documented consistent with the details in Attachment 1. Soil will be screened with a photo-ionization detector (PID, 11.7 eV lamp) and visually inspected for indication of the presence and extent of potential impacts. Furthermore, the field screening will be utilized to segregate any excavated soil for future sampling in accordance with the MPCA-approved Case Specific Beneficial Use Determination (CSBUD) for the determination of potential re-use on-site or off-site disposal (Golder Associates, 2012).

Field screening will be conducted a minimum of once for every 10 cubic yards of excavated soil, with the implementation of more frequent screening if any of the following are observed:

- a change in stratigraphy or other areas of transition;
- excavations are extended in proximity to an identified Feature; or
- to delineate areas with visual impacts or high PID readings.

If less than 10 cubic yards are removed and none of the aforementioned criteria are met, a minimum of one sample will be collected for field screening.

After excavation is complete, exposed soil on the excavation sidewalls will be screened once for every 25 lateral feet at 4-foot vertical intervals from below the ground surface (i.e. 0 to 4, 4 to 8, etc.). Additionally, exposed soil will be screened once for every 100 square feet along the excavation base. Screening of soil with the PID will be conducted in accordance with MPCA Petroleum Remediation Program Guidance Document 4-04 *Soil Sample Collection and Analysis Procedures*. To ensure the viability of field screening results, the PID will be calibrated twice daily (morning and early afternoon).

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Field screening will also include sampling exposed soil with a petroleum sheen test if visual impacts are observed. The petroleum sheen test will be conducted in accordance with MPCA Petroleum Remediation Program Guidance 4-04.

### **On-Site Screening Criteria**

Excavated soil will be characterized consistent with MPCA Petroleum Remediation Program Guidance Document 3-01, 5-01, and 5-03:

- Soils with observed PID readings below 10 ppm will be replaced within the excavated area.
- Soils with observed PID readings above 10 ppm will be segregated, staged, and evaluated in accordance with the CSBUD.

These screening criteria are based on residential and recreational land development standards for re-use on-site. In addition, if visual impacts are observed in exposed soil, a petroleum sheen test will be conducted in accordance with MPCA Petroleum Remediation Program Guidance 4-04. Sheen tests typically identify one of two results:

- Droplets of product or a rainbow sheen: this indicates the soil is most likely
  petroleum saturated. This soil will be segregated separately and staged in
  preparation for off-site disposal at an MPCA approved facility. Confirmation
  samples will be collected for characterization and a plan for additional corrective
  action may be required.
- No droplets of product or a rainbow sheen: this indicates the soil is not petroleum saturated and may be segregated as noted above based on PID readings.

### **Excavated Soil**

Excavated soil designated for off-site disposal in accordance with the CSBUD and will be sampled for waste characterization. Samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), Resource Conservation and Recovery Act (RCRA) metals, Toxic Characteristic Leaching Procedure (TCLP) lead, cyanide, gasoline range organics (GRO), and diesel range organics (DRO). The number of samples will be dependent on the excavated soil volume as specified in the table below, which is consistent with MPCA Petroleum Remediation Program Guidance Document 4-04 *Soil Sample Collection and Analysis Procedures:* 



Cubic yards of soil	Number of grab samples						
Less than 50	1						
51-500	2						
501-1000	3						
1001-2000	4						
2001-4000	5						
Each additional 2,000	One additional sample						

#### Sidewall and Excavation Base

As stated above, excavation sidewalls and base will be monitored whenever soil is exposed in support of demolition activities. If soil screening results from the newly exposed soil indicate potential impacts through field screening results (PID greater than 10 ppm) or visual and olfactory indicators, appropriate samples will be collected from the exposed sidewalls or base. The confirmation samples will be analyzed for, at a minimum, GRO and DRO and compared to the MPCA limit of 100 mg/kg for unregulated fill.

If excavated soils have elevated PID readings but do not have any indication of petroleum impacts, confirmation samples will also be analyzed for VOCs. If unexpected conditions, wastes, debris, clinkers, tar product, staining, etc. or any contaminated media are encountered during the excavation, confirmation samples will be analyzed for RCRA metals, TCLP lead, cyanide, and SVOCs. If excavated soils have any indication of oily wastes, samples will be analyzed for PCBs. Samples will be collected after removing approximately 1 foot of soil from the area to ensure a representative sample is collected.

Soil screening samples and samples collected for laboratory analysis will be labeled in accordance with MPCA Guidance Document 3-01. The areal location of each sample will be marked on a map or recorded using a handheld GPS.

Further removal activities will be suspended and the area will be isolated until conditions can be fully characterized and appropriate safety precautions put in place. Furthermore, the following personnel will be notified:

MPCA Petroleum Brownfields Program staff: 651.296.6300

MPCA VIC Program staff: 651.296.6300

• State Duty Office: 651.649.5451

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Following notification and written approval from the MPCA VIC and PB program staff, all soil will remain in place and the area will be included for investigation as part of the concurrently occurring Subsurface Investigation – Work Element 1 (ARCADIS 2013c).

#### **Free Product**

If free product is encountered during soil excavation, work in the area will be stopped and the area will be secured. Notification will be given to the MPCA and the State Duty Officer noted above within 24 hours of the discovery. A plan will be developed for further characterization of the area.

### **Unidentified Waste**

If unidentified wastes are encountered during soil excavation, work in the area will be stopped and the area will be secured until the wastes can be characterized and appropriate safety measures can be put in place. Notification will be given to the MPCA and Staff Duty Officer as noted above. A removal plan will be developed prior to initiating further activities.

### **Unidentified Utilities**

If any unidentified utilities are encountered during excavation, work will be stopped in the area until the utility is identified and evaluated to determine if it is in use and if there is any immediate hazard to human health. If the utility is no longer in use it will be removed from the site. If the utility is active and must be left in place, soil screened above 10 ppm will be removed surrounding the utility trench. If excavation to meet this standard exceeds 150 cubic yards of soil, a vapor barrier will be placed in the utility trench in accordance with MPCA Petroleum Remediation Program Guidance 5-03.

### **On-Site Staging and Off-Site Disposal**

Any soil requiring on-site staging for off-site disposal or re-use will be relocated to the designated staging area. The stockpile will be placed on 6-mil reinforced plastic overlaying the concrete surface and covered with securely anchored 10-mil reinforced plastic. The stockpile(s) will remain covered until removed from the Site. Excavated soil designated for off-site disposal will be disposed of at a Ford-approved and MPCA-permitted off-site facility.

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Ms. Shanna Schmitt and Ms. Stacey Hendy-Van Patten July 17, 2013

### **Documentation**

Soil characteristics for all excavated soil (including PID screening results, quantity, depth, location, petroleum sheen test results) as well as samples collected for laboratory analysis (confirmation and waste samples) will be documented utilizing the Soil Removal Tracking form in Attachment 1. In addition, if field observations (i.e. presence of free product or product sheen, and PID screening results) demonstrate petroleum contaminated soil was excavated, the *General Excavation Report Worksheet* (MPCA Guidance Document 3-02) will be completed and submitted to MPCA VIC and PB staff. Furthermore, upon completion of subsurface demolition activities, a Contingency Plan Implementation Summary Report will be provided to the MPCA.

#### Conclusion

We appreciate your assistance with this project. If you have questions or need additional information, please call Angharad Pagnon of ARCADIS at your convenience.

Sincerely,

ARCADIS U.S., Inc.

Angharad Pagnon

Project Environmental Specialist

Ryan Oesterreich

Project Engineer, PE, PG

Copies:

Mr. Charles Pinter, Ford Motor Company, Dearborn, Michigan

Mr. John Meyers, Ford Twin Cities Assembly Plant, St. Paul, Minnesota

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Ms. Shanna Schmitt and Ms. Stacey Hendy-Van Patten July 17, 2013

#### References

ARCADIS, 2007a. Phase I Environmental Site Assessment, Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota." June 2007a.

ARCADIS, 2007b. Soil Investigation Report – Baseball Fields – Feature 139, Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota. September 2007.

ARCADIS, 2007c. Additional Soil Investigation and Surface Soil Risk Assessment Report – Baseball Fields – Feature 139, Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota. December 2007.

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ARCADIS, 2008. Response Action Implementation Report – Baseball Fields – Feature 139, Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota. March 2008.

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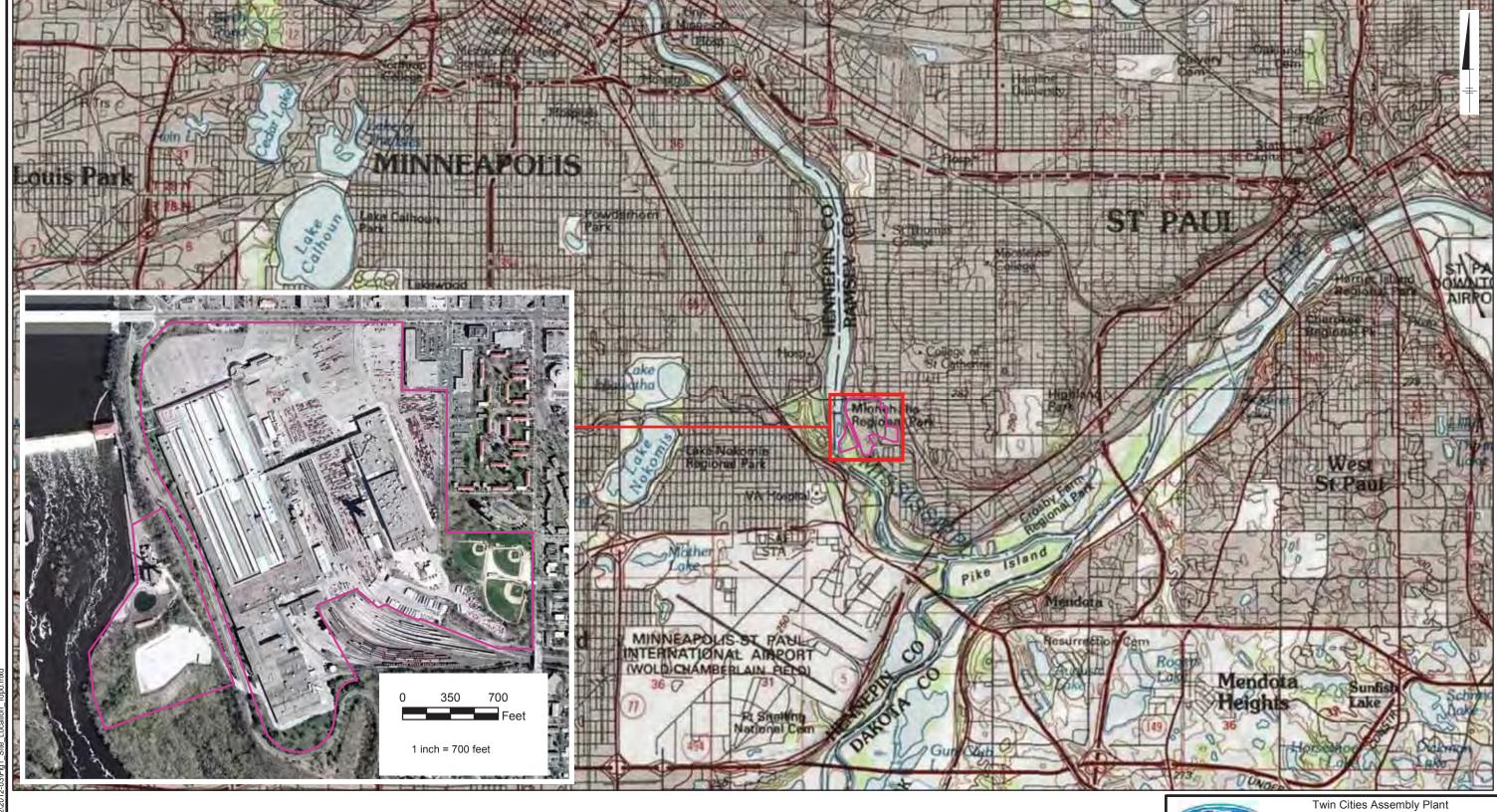
ARCADIS, 2013b. Supplemental Phase II – Exterior Investigation Report (Revised), Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota. May 2013.

ARCADIS, 2013c. Subsurface Investigation Work Plan – *Work Element 1*, Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota. July 2013.

Golder Associates, 2012. Case Specific Beneficial Use Determination Application, Ford Motor Company, Twin Cities Assembly Plant, St. Paul, Minnesota. November 2012.



**Figures** 



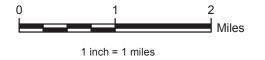
LEGEND:

Ford Property Boundary

NOTES:

Imagery Source: United States Geological Survey High Resolution Orthoimagery for the Minneapolis-St. Paul, Minnesota Urban Area

Topographic Map Source:
© 2007 National Geographic Society





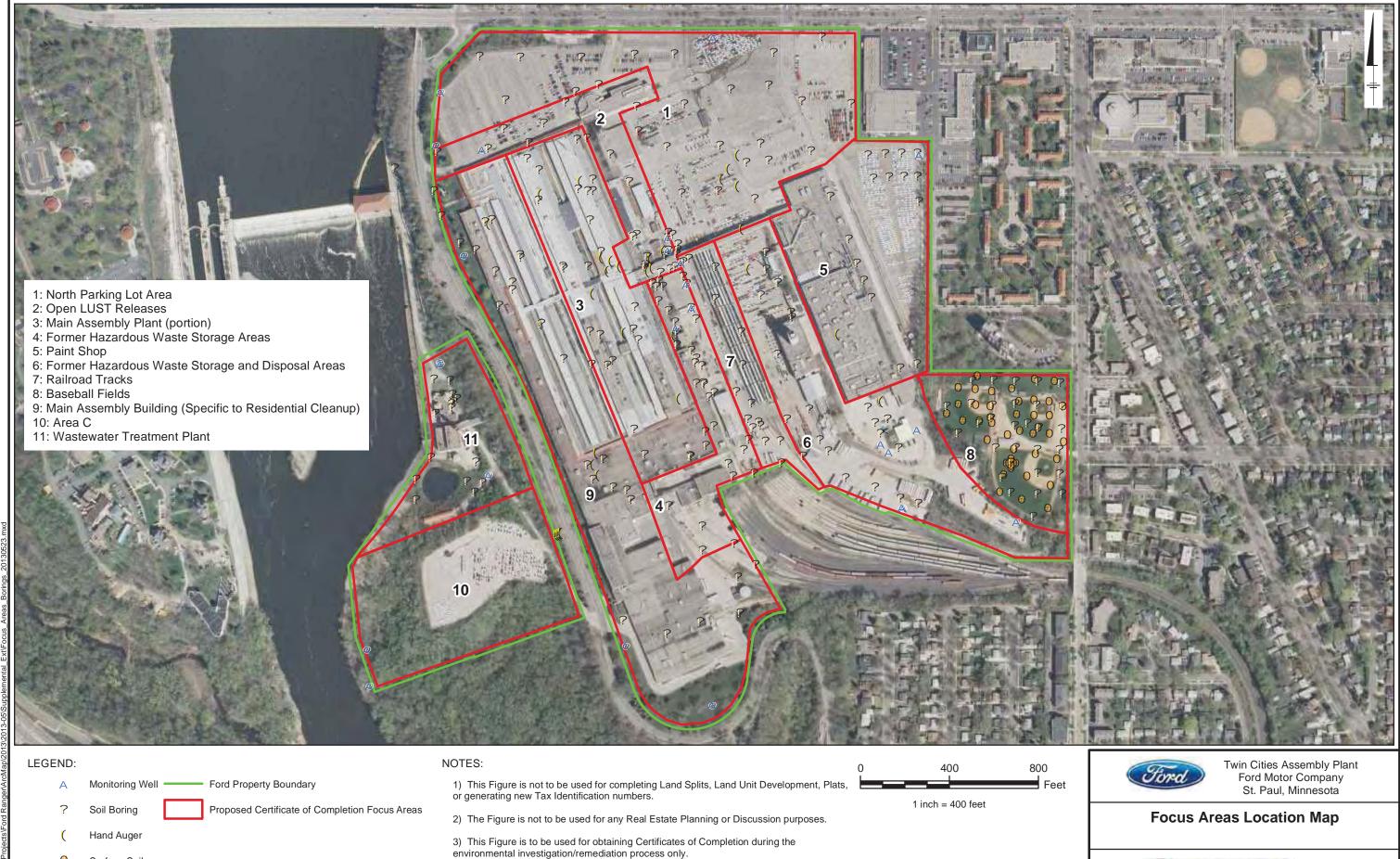
Twin Cities Assembly Plant
Ford Motor Company
St. Paul, Minnesota
Phase II Supplemental Exterior Investigation

**Site Location / Property Layout** 



FIGURE

CITY: Minneapolis, MN DB: MGress PM: Project MN000593



4) Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 12/3/2012

CITY: Minneapolis, MN DB: MGress PM: Bryan Zinda Project MN000593

Surface Soil

Sump

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Hand Auger

MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance

MPCA Tier 1 Residential SRV Exceedance or

MPCA Tier 2 Industrial SRV Exceedance

HRL = Health Risk Limit

MCL - Maximum Contaminant Level

MDH = Minnesota Department of Health

MPCA = Minnesota Pollution Control Agency

RAA = Risk Assessment Advice SRV = Soil Reference Value

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013

Focus Area 1 - North Parking Lot Area



MDH = Minnesota Department of Health

RAA = Risk Assessment Advice

SRV = Soil Reference Value

MPCA = Minnesota Pollution Control Agency

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013

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CITY: Minneapolis, MN DB: MGress PM: Bryan Zinda Project MM(001503

Hand Auger

MPCA Tier 1 Residential SRV Exceedance or

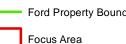
MPCA Tier 2 Industrial SRV Exceedance

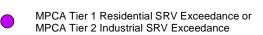
MDH HRL/HBV/RAA or

EPA Arsenic MCL Exceedance



Hand Auger





MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance EPA = Environmental Protection Agency

HBV = Health Based Value HRL = Health Risk Limit

MCL - Maximum Contaminant Level

MDH = Minnesota Department of Health MPCA = Minnesota Pollution Control Agency

RAA = Risk Assessment Advice SRV = Soil Reference Value

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013

1 inch = 200 feet



Ford Motor Company St. Paul, Minnesota

Focus Area 3 - Main Assembly Plant



FIGURE 5

HBV = Health Based Value

MCL - Maximum Contaminant Level

RAA = Risk Assessment Advice

SRV = Soil Reference Value

MDH = Minnesota Department of Health

MPCA = Minnesota Pollution Control Agency

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013

HRL = Health Risk Limit

1 inch = 180 feet

Focus Area 4 -

**Former Hazardous Waste Storage Areas** 

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Soil Boring

Hand Auger

Focus Area

MDH HRL/HBV/RAA or

EPA Arsenic MCL Exceedance

MPCA Tier 1 Residential SRV Exceedance or MPCA Tier 2 Industrial SRV Exceedance



108 Feature Monitoring Well Ford Property Boundary Soil Boring Focus Area Hand Auger MPCA Tier 1 Residential SRV Exceedance or MPCA Tier 2 Industrial SRV Exceedance MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance

NOTES:

AMW = ARCADIS Monitoring Well

ASB = ARCADIS Soil Boring

EPA = Environmental Protection Agency HBV = Health Based Value

HRL = Health Risk Limit MCL - Maximum Contaminant Level MDH = Minnesota Department of Health
MPCA = Minnesota Pollution Control Agency RAA = Risk Assessment Advice

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013

1 inch = 150 feet



Ford Motor Company St. Paul, Minnesota

Focus Area 5 - Paint Shop





Monitoring Well

Soil Boring

Hand Auger

Sump

Ford Property Boundary

Focus Area

MPCA Tier 1 Residential SRV Exceedance or MPCA Tier 2 Industrial SRV Exceedance

37 Feature

MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance

HBV = Health Based Value

HRL = Health Risk Limit MCL - Maximum Contaminant Level

MDH = Minnesota Department of Health
MPCA = Minnesota Pollution Control Agency

RAA = Risk Assessment Advice SRV = Soil Reference Value

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013



Feet

1 inch = 200 feet

Ford Motor Company St. Paul, Minnesota

Focus Area 6 - Former Hazardous Waste **Storage and Disposal Areas** 



8



Soil Boring

Monitoring Well

Ford Property Boundary



10 Feature



MPCA Tier 1 Residential SRV Exceedance or MPCA Tier 2 Industrial SRV Exceedance

MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance

HBV = Health Based Value

HRL = Health Risk Limit

MCL - Maximum Contaminant Level

MDH = Minnesota Department of Health
MPCA = Minnesota Pollution Control Agency

RAA = Risk Assessment Advice

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013

75

150

1 inch = 150 feet

300

Feet



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

Focus Area 7 - Railroad Tracks



FIGURE 9





Monitoring Well

Ford Property Boundary

23 Feature

Soil Boring

Hand Auger

Focus Area

MPCA Tier 1 Residential SRV Exceedance or MPCA Tier 2 Industrial SRV Exceedance

MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance

HBV = Health Based Value

HRL = Health Risk Limit

MCL - Maximum Contaminant Level
MDH = Minnesota Department of Health
MPCA = Minnesota Pollution Control Agency

RAA = Risk Assessment Advice SRV = Soil Reference Value

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013



Feet

1 inch = 350 feet

Ford Motor Company St. Paul, Minnesota

Focus Area 9 - Main Assembly Building (Specific to Residential Cleanup)

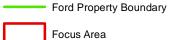


10





Monitoring Well

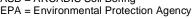


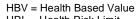


MPCA Tier 2 Recreational SRV Exceedance or MPCA Tier 2 Industrial SRV Exceedance

42 Feature

MDH HRL/HBV/RAA or EPA Arsenic MCL Exceedance





HRL = Health Risk Limit

MCL - Maximum Contaminant Level MDH = Minnesota Department of Health MPCA = Minnesota Pollution Control Agency

RAA = Risk Assessment Advice SRV = Soil Reference Value

Imagery Source: MnGeo WMS service, 2010 color 7-county http://geoint.lmic.state.mn.us/cgi-bin/wms? Accessed 6/10/2013



Feet

1 inch = 130 feet

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

Focus Area 11 - Wastewater Treatment Plant





Attachment 1

# Twin Cities Assembly Plant Ford Motor Company St. Paul, Minnesota Soil Removal Tracking

			Soil Origin				Ch	aracteristic	:s									
Identification	Date				Dimensions					Field	Staging		Laboratory	Soil Classification	Disposal	Date		
	Generated	Focus Area	Historical Features	General Location Description	Width Length Depth (ft) (ft) (ft)	Depth (ft)	Weight (lbs)	Odor	Colour	Screening Results	Location	Sample IDs	Analysis (TCLP, etc)	[Reuse, Disposal (Haz. Non-Haz.]	Method	Removed	Notes	
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