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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION (RFI) REPORT

COMPANY VEHICLE OPERATIONS (CVO)
YPSILANTI, MICHIGAN

Prepared for: RACER

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Report Number:23

Based on my knowledge of the conditions of the property described in the remedial action plan (RAP) and my inquiry of the person or persons who manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Grant Trigger

Grant Trigger
Michigan Cleanup Manager
Revitalizing Auto Communities
Environmental Response Trust

10-8-13

Date:

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LIST OF ACRONYMS

bgs	Below Ground Surface
cis-DCE	cis-1,2-Dichloroethene
COC	Constituent of Concern
CRA	Conestoga-Rovers & Associates
CVO	Company Vehicle Operations
DNAPL	Dense Non Aqueous Phase Liquid
CVOCs	Chlorinated Volatile Organic Compounds
EM	Electromagnetic Survey
GM	General Motors Corporation
GM LLC	General Motors LLC
GSI	Groundwater Surface Water Interface
IMWP	Interim Measures Work Plan
MAGS	Modified Active Soil Gas
MDEQ	Michigan Department of Environmental Quality
MLC	Motors Liquidation Company
PAOC	Potential Area of Concern
PCBs	Polychlorinated Biphenyls
PPM	Parts Per Million
RACER	Revitalizing Auto Communities Environmental Response Trust
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
Site	Company Vehicle Operations Property
SPLP	Synthetic Precipitation Leaching Procedure
SSDS	Subslab Depressurization System
SSBL	Site-Specific Background Levels
SVOCs	Semi-Volatile Organic Compounds
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leachate Procedure
VC	Vinyl Chloride

VOCs	Volatile Organic Compounds
VSIC	Volatile Soil Inhalation Criteria
WRBC	Willow Run Business Center

1.0 INTRODUCTION

Conestoga-Rovers & Associates, Inc. (CRA) has prepared this Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report for the Willow Run Company Vehicle Operations (CVO) property (Site) at the former Willow Run Assembly Plant located in Ypsilanti, Michigan. Figure 1.1 presents the Site location. A Site Summary Report (CRA, January 2012) was prepared for CVO to summarize historical operations, previous investigations, and remedial activities completed through 2010 and evaluated existing data with respect to applicable criteria. Additional field work was completed between 2011 and 2013 to further investigate and address data gaps based on the investigations completed at the Site. This RFI Report was prepared to update results of the Site investigations completed to date. The RFI Report presents the results of the investigations using tables and figures to minimize the length of the report and discussion. Additional Site background information is provided in the Site Summary Report (CRA, January 2012) and RFI Work Plan (CRA, February 2012).

The former Willow Run Assembly Plant property currently encompasses the Willow Run Business Center (WRBC) and the Site. The WRBC was sold by General Motors Corporation (GM) to In Site Real Estate in 1997, while GM retained ownership of CVO. As a result of GM's bankruptcy, certain operating assets of GM were sold on July 10, 2009 to a newly formed company which is now known as General Motors LLC (GM LLC). Existing, non-conforming assets remained the property of GM, which was renamed Motors Liquidation Company (MLC). On October 20, 2010, MLC entered into a settlement agreement with federal and state governmental authorities regarding MLC's environmental obligations at its owned real property, including this Site (Settlement Agreement). On March 3, 2011, this Settlement Agreement was approved by the United States Bankruptcy Court for the Southern District of New York as part of MLC's Chapter 11 Plan of Liquidation. According to the terms of the Settlement Agreement, MLC transferred its interests in this Site to the Revitalizing Auto Communities Environmental Response Trust (RACER) on March 31, 2011, the Effective Date of MLC's Chapter 11 Plan of Liquidation. Ownership was transferred to RACER Properties, LLC. As such, the Site is now operated by RACER and this RFI report has been prepared on RACER's behalf.

Historical filling practices at the Site have impacted soil and groundwater. Soils and groundwater at the Site are impacted with volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), inorganics, and polychlorinated biphenyls (PCBs). VOCs are the predominant constituents of concern in soil and groundwater at the Site. Several Potential Areas of Concern (PAOC) have been indentified based on previous Site activities and environmental investigations. There are two areas of

significantly elevated concentrations in groundwater: near the Haulaway Building (PAOC 23) and near the sheetpile wall (PAOC 18). Soil gas and indoor air samples from the Haulaway Building indicate that VOC vapors are migrating into the building. Stained soils and dense non-aqueous phase liquid (DNAPL) were observed in PAOC 18 along the southern bank of Tyler Pond.

A source area removal has been initiated in PAOC 18 that will involve the excavation and off-Site disposal of soils. Additional investigation activities were completed in 2012 and 2013 within PAOC 18 to better define the scope of work for the remedial work. This RFI does not include the results from the 2012 and 2013 PAOC 18 investigation activities since these soils will be excavated. These results are presented in PAOC 18 Interim Measures Work Plan (IMWP) (CRA, February 2013). Data collected as part of the implementation of the removal action will be presented in report that will be submitted to the MDEQ following completion of the removal action.

2.0 INVESTIGATION PROGRAM

As stated in Section 1.0, the majority of the investigation activities completed at the Site were conducted between 2001 and 2010 and are summarized in the Site Summary Report. The additional field work completed in 2011 through 2013 that was not discussed in the Site Summary Report includes:

- Fall 2011 investigation activities
- RFI Work Plan (CRA, February 2012) field activities
- Additional paint sludge delineation activities
- Additional soil investigations in PAOC 18
- Soil gas sampling beneath Haulaway Building

2.1 FALL 2011 INVESTIGATION ACTIVITIES

The investigation completed in the fall of 2011 included:

- Vinyl Chloride (VC) Delineation Activities – An investigation was completed along the south side of Tyler Road to assess the extent of chlorinated volatile organic compounds (CVOCs) in groundwater beyond the southern property boundary.
- Delineation of Impacts Near and Beneath Haulaway Building (installation of three wells) – Three monitoring wells were installed to delineate vinyl chloride impacts in groundwater near and beneath the Haulaway building.
- Sitewide Groundwater Monitoring Event – This monitoring event was conducted to evaluate the current concentrations of VOCs on-Site.
- Electromagnetic survey in the Northwestern area of the Site – Electromagnetic (EM) survey was completed in the northwestern area of the Site and adjacent to the Haulaway building to detect any buried metal.
- PAOC 18 - In-Situ Waste Characterization sampling – This sampling event was completed to further delineate and characterize the soils prior to planned remediation activities.

A detailed description of the work completed and the results are presented in a memorandum titled Summary of Fall 2011 Investigation Activities which was submitted

to the Michigan Department of Environmental Quality (MDEQ) on May 5, 2012 (Appendix A).

2.2 RFI WORK PLAN (WORK PLAN) FIELD ACTIVITIES

The Work Plan was prepared to further investigate and address data gaps based on the investigations completed at the Site. Specifically, this Work Plan presented the additional investigation activities that were conducted to:

- Investigate soil and groundwater impacts at the upgradient western boundary, northern property boundary, and the area east of PAOC 18
- Delineate paint sludge and petroleum type impacts observed in 2005 in the northwest portion of the Haulaway Building
- Investigate deep (75 to 85 feet below ground surface [bgs]) aquifer quality
- Determine the portion of total chromium related to hexavalent chromium (if any) in soil
- Calculate the Site-specific background metals concentrations in groundwater
- Evaluate unsaturated soil impacts using Modified Active Gas Sampling (MAGS) beneath the Haulaway Building

A copy of the Work Plan was provided to MDEQ in February 2012. The work was completed in February and March 2012. The results of these investigations are presented on Figures and Tables in this report and additional discussion is provided in Section 3.

2.3 PAINT SLUDGE DELINEATION

The historical filling practices at the Site included the deposition of paint sludge and other debris. Paint sludge has been observed beneath the Haulaway Building. Previous investigations indicate that the paint sludge is a contributing factor to elevated levels of VOCs in soil gas beneath the building. The paint sludge beneath the building may also be a contributing factor to the elevated levels of VOCs in groundwater in the area. The excavation and disposal of the paint sludge and contaminated soils near and beneath the Haulaway Building is evaluated as an interim measure.

Paint sludge delineation activities were completed in September and December 2012 to better define the area for the removal of the material as part of the remediation activities. The investigation activities completed in 2012 included:

- Completion of soil borings to delineate paint sludge near the Haulaway Building and collecting soil analytical data near the Haulaway Building
- Water (pore water and groundwater) sampling activities to evaluate groundwater conditions within the area near the northwest area of the Haulaway Building. This data is presented in this report and was used to evaluate removal of paint sludge

2.4 PAOC 18 ADDITIONAL INVESTIGATIONS

The following investigation activities were completed within PAOC 18 to further delineate the area for the planned remediation activities. The results for PAOC 18 investigation activities are presented in the PAOC 18 IMWP (CRA, February 2013), and therefore, not provided in this report.

- In April 2012, a total of 40 soil borings (SB18-280 through SB18-319) were completed within PAOC 18 to better define the areas of elevated VOCs. This data along with previously collected VOC data was used to create a 3-dimensional visualization of the impacts in the area to aid in the planning of an excavation remedy.
- In September 2012, thirteen soil borings were completed to obtain analytical data to support the target soil criteria for the PAOC 18 remedy. Soil samples were collected for VOCs, synthetic precipitation leaching procedure (SPLP) VOCs, toxicity characteristic leachate procedure (TCLP) VOCs, and fraction of organic carbon. Soil borings were completed adjacent to previous locations with known concentrations of VOCs.
- In March and April 2013, additional soil borings were completed to further define the extent of PCBs greater than 50 parts per million (ppm) for the implementation of a removal remedy.

2.5 SOIL GAS DELINEATION

Soil gas probes were installed and sampled to delineate the extent of impacted soil gas beneath the Haulaway Building concrete floor. This information is presented in this

report and was used to issue a request for proposal (RFP) for a subslab depressurization system (SSDS).

3.0 INVESTIGATION RESULTS

3.1 UPDATED SITE GEOLOGY & HYDROGEOLOGY

Detailed stratigraphy logs were completed for each borehole and monitoring well installed at the Site. The stratigraphy logs for the locations completed in 2011 and 2012 are provided in Appendix B-1.

In general the investigations completed in 2011 and 2012 did not alter the understanding of the geology and hydrogeology of the Site as presented in the Site Summary Report (CRA, January 2012). Fill material is present up to 20 feet bgs underlain by a significant clay confining layer across the Site. The fill unit varies from fill sands and clays to construction debris and historical waste material. Groundwater at the Site is typically encountered at very shallow depths (i.e.; 10 to 12 feet). One cross section was extended and an additional cross section was prepared from the work completed along the southern property boundary and the area south of Tyler Road in 2011. Figure 3.1 presents the locations of the previous and updated cross sections. Figures 3.2, 3.3, and 3.4 present the revised and new cross sections.

Two deep monitoring wells were installed during the 2012 field investigation activities at the Site. The wells were installed at 82 feet bgs where the first water bearing zone was identified beneath the confining clay (shown on cross sections). Based on these wells the confining clay unit is approximately 60 feet thick at the Site, beginning at approximately 17 feet bgs. The stratigraphy logs for these wells are included in Appendix B-1. Photos of the soil cores from the deep well locations are included in Appendix B-2. Utilizing groundwater levels from newly installed deep wells at an adjacent RACER property to the north, at approximately the same depth, the deep groundwater zone generally flows to the south.

Shallow groundwater flow conditions at the Site are influenced by utility corridors, various fill areas, and Tyler Pond which is a discharge boundary for part of the groundwater unit. Subsurface utilities include storm sewers, sanitary sewers and a former sludge line. A groundwater flow divide exists across the central portion of the property, generally running parallel to Tyler Pond. Groundwater to the south of the divide flows to the south/southeast, while groundwater to the north of the divide flows towards Tyler Pond. A groundwater elevation contour map from the September 2011 event is presented on Figure 3.5. The September 2011 groundwater elevation contour map is consistent with historical groundwater contour maps.

3.2 UDPATED CRITERIA

All investigation data has been screened against the current Part 201 criteria updated on September 28, 2012. Databox figures were prepared to present soil and groundwater data and are included in Appendix C. Included in the September 28, 2012 criteria update was a revised spreadsheet for the calculation of Part 201 Groundwater Surface Water Interface (GSI) for {G} footnoted hazardous substances. Table 3.1 provides a copy of this updated spreadsheet showing the recalculated values for this Site. The previous version of these calculations was presented in the Site Summary Report (CRA, January 2012) which also provides the basis for the pH and hardness values used in these calculations. These updated values were used to screen data presented in this report.

During the 2012 RFI activities, a speciation analysis was completed to determine the trivalent and hexavalent chromium concentrations at the Site. Tables 3.2 and 3.3 provide the chromium speciation results for soil and groundwater, respectively. As indicated by Table 3.2, chromium is predominantly present in the trivalent form in soils at the Site and therefore chromium (III) screening criteria was used for evaluating total chromium concentrations. Chromium exceedances have not been observed in groundwater, therefore chromium (III) screening criteria was used for evaluating total chromium concentrations.

A background concentration evaluation was completed to develop Site-specific background levels (SSBL) for metals in groundwater using statistical calculation procedures presented in the MDEQ guidance document entitled "Sampling Strategies and Statistics Training Materials" for Part 201 Cleanup Criteria. The calculations are provided in Appendix D. Table 3.4 provides a summary of the Site-specific concentrations calculated for CVO and the RACER property north of Tyler Pond, Willow Run Powertrain, as well as background levels obtained for several other sites in the immediate area. To evaluate how the background levels would alter the Part 201 exceedances identified on the figures presented in this report, Table 3.5 was prepared comparing metals results for groundwater to the SSBL and to the least restrictive background level from the other sites as a regional evaluation.

3.3 UPDATED SOIL AND GROUNDWATER RESULTS

Databox figures were prepared to present soil and groundwater data for constituents of concern (COCs) for that matrix. COCs for soil and groundwater were defined as any constituent that exceeded residential criteria anywhere on Site for that matrix. Only

COCs are shown in the databox figures. If soil or groundwater samples from a location were never analyzed for a COC, that COC is not shown in the databox for that location.

The COC list for soil remained the same as the Site Summary Report with the exception of chromium III. As stated in Section 3.2, chromium III screening criteria was used for evaluating the total concentrations. In addition, a total of nine constituents were added to the groundwater COC list included in the Site Summary Report for groundwater due to concentrations detected in the latest round of data. These constituents included 1,1,2,2-tetrachloroethane, 4-methyl-2-pentanone, 2-butanone, carbon tetrachloride, tetrachloroethene, phenol, barium, cobalt, and zinc.

The Site Summary Report (CRA, January 2012) presented databox figures that included data through 2010. The databox figures included in this Report are the figures from the Site Summary Report updated to include data collected in 2011 and 2012 and compared to the Part 201 updated clean up criteria, with the following exceptions:

- Databoxes for any soil previously excavated from the Site have been removed (i.e. GS-6 excavation).
- The soil databox figures for PAOC 18 for VOCs and PCBs were not updated. A 3D model was prepared and included with the PAOC IMWP (CRA, February 2013) that summarizes these results. The majority of these soils will be excavated in the near future.

The databox figures are provided in Appendix C. To further summarize current Site characterization, summary databox figures were prepared to present only constituents with criteria exceedances other than drinking water or groundwater surface water interface protection. These results are shown on Figures 3.6 for soil and 3.7 for groundwater, respectively. These figures were prepared to highlight whether further response actions are needed for pathways other than water protection.

Additional summary databox figures were prepared to summarize constituent concentrations near the property boundaries. On these perimeter figures, constituents exceeding all generic Part 201 residential and non-residential criteria are shown. However, only metal concentrations also exceeding SSBLs are flagged as exceedances. To simplify the figure, results from only the most recent event are included. These results are presented on Figures 3.8 for soil and 3.9 for groundwater, respectively.

A data validation assessment was completed on all final laboratory analytical data, based on the quality control procedures identified in the Quality Assurance Project Plan

(QAPP). The data validation summaries for 2011 and 2013 investigations are presented in Appendix E. The validated analytical data for soil and groundwater are included in tables presented in Appendix F.

3.4 SOURCE AREA INVESTIGATIONS

Modified Active Gas Sampling (MAGS)

A MAGS assessment was completed for detecting volatile organic source areas in vadose zone soils within the Haulaway Building and the surrounding area in February 2012. MAGS is an assessment tool effective at rapidly detecting unsaturated soil source areas impacted by volatile organic compounds.

A summary of MAGS assessment is included in Appendix G. The MAGS study consisted of the installation of 34 MAGS sampling points. A total of seven MAGS locations were converted to permanent sampling points. The remaining locations were abandoned. The sampling points were installed with a Geoprobe rig. The results of the PID analysis of soil gas from the MAGS sampling event identified the presence of elevated organic vapors above background at approximately 21 sample locations ranging from 3.1 to greater than 10,000 parts per million (ppm). These screening data were confirmed by fixed laboratory results which revealed concentrations of trichloroethene (TCE), cis-1,2-dichloroethene (cis-DCE), total xylenes, acetone, and methylene chloride above the laboratory method detection limits at some MAGS points sampled to verify field data accuracy.

The MAGS event conducted at the Site clearly demonstrates the presence of TCE, cis-DCE, and total xylenes impacts in the vadose soil that confirms the presence of a source for these parameters.

Soil Gas Delineation

In May and June 2013, soil gas samples were collected to delineate the extent of subslab soil gas impacts beneath the Haulaway Building. Sub slab soil gas probes (i.e. vapor pins) were installed and sampled per the MDEQ May 2013 Guidance Document for the Vapor Intrusion Pathway (Appendix F.3 and F.7). Soil gas analytical data is presented on Figure 3.10. The soil gas sampling results further demonstrate the presence of TCE (and confirm the results of the MAGS study). Based on these results, the southernmost portion of the building does not appear to have impacted soil gas beneath the building slab.

Additional Paint Sludge Delineation

Paint sludge was observed in a soil boring (GP19-03D) completed in 2005 in the northwest corner of the Haulaway building. Paint sludge was also observed in seven locations completed inside and outside of the building in February 2012 as part of the MAGS Survey during the RFI Work Plan field activities. Previous investigations indicate that paint sludge is a contributing factor to elevated levels of VOCs in soil gas beneath the building. Paint sludge removal is being evaluated to reduce the vapors entering in the building and facilitate more effective groundwater treatment in the area.

A paint sludge investigation was completed in September 2012 to delineate the paint sludge and to define potential paint sludge removal areas. During this investigation a small amount of free product was identified within a sample of paint sludge beneath the building. A product sample was collected and was analyzed for VOCs, SVOCs, Site inorganics, and PCBs. The analytical results for the paint sludge and the product observed near the Haulaway Building are presented in Appendix F. A total of 22 soil borings were also completed to identify the extent of the paint sludge/source material near the Haulaway Building in December 2012. Figure 3.11 shows the locations where paint sludge was observed.

Northwest Portion of the Site

Groundwater samples were collected from wells (MW19-36 through MW19-39, MW19-12, and GS-1), located near the northwestern portion of the Site. Groundwater results show an increase in concentration of CVOCs between wells (MW19-38 and MW19-12) in this area. It was suspected that buried debris in the area could be the cause of the impacts.

A total of 7 soil borings (SB19-66 through SB19-72) were completed to evaluate VOC concentrations in the groundwater (via pore water sample) near the northern property boundary wells in December 2012. Pore water samples were collected through a Geoprobe screen point using a peristaltic pump.

The source of the elevated VOC concentrations in the groundwater (between MW19-38 and MW19-12) is unclear. High level detections of VOCs were not observed in the soil borings completed in December 2012. It should be noted that a slight sheen and a strong odor were observed at depths of 14.8 and 16 feet bgs, respectively during the installation of MW19-12. A localized source may be causing the elevated CVOc concentrations between wells MW19-38 and MW19-12. It should be noted that CVOcs concentrations

within this area are not significantly higher than the rest of the Site. In addition, in-situ chemical oxidation for the treatment of VOCs in groundwater near the Haulaway Building may reduce concentrations in groundwater within this area. Therefore, no further action is anticipated in this area.

4.0 SUMMARY

The investigation results show soil and groundwater concentrations exceeding Part 201 Criteria. It is anticipated that in general, the next steps for the Site will include the following:

- Conditioning, excavation and disposal of soils within PAOC 18 for the remediation of VOC and PCB impacts summarized in the PAOC 18 IMWP (CRA, February 2013)
- Evaluation of paint sludge mitigation methods near the Haulaway Building for reducing VOCs contributing to soil gas and groundwater impacts
- Installation of SSDS to prevent VOCs from migrating into the building from the subsurface
- In-Situ Chemical Oxidation for the treatment of VOCs in groundwater near the Haulaway Building
- Site Deed Restrictions prohibiting the use of water as a potable water supply for the Site, requiring maintenance of existing cover in defined areas, and specifying some guidelines for excavation in certain areas of the Site
- Groundwater monitoring program

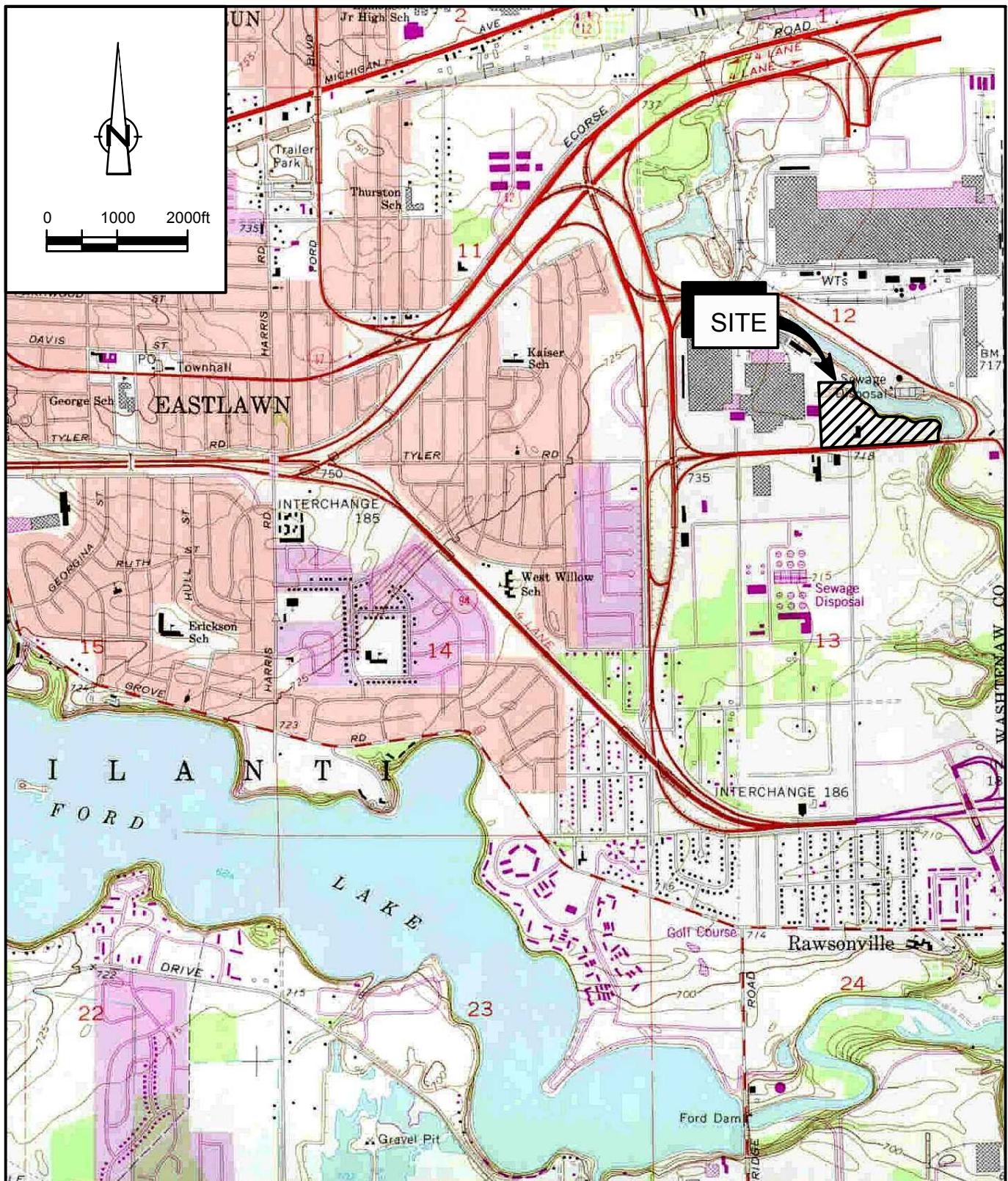
Details on proposed next steps will be submitted in supplemental work plans under separate cover. It is expected that many of these activities will be completed as Interim Measures.

5.0 REFERENCES

CRA. January 2012. Site Summary Report, Former General Motors Company Vehicle Operations Area, Ypsilanti, Michigan.

CRA. February 2012. RCRA Facility Investigation Work Plan, Willow Run Company Vehicle Operations (CVO) Area, Ypsilanti, Michigan.

CRA. February 2013. PAOC 18 Interim Measures Work Plan, Company Vehicle Operation, Ypsilanti, Michigan



SOURCE: USGS QUADRANGLE MAP;
YPSILANTI EAST, MICHIGAN

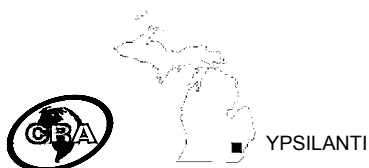
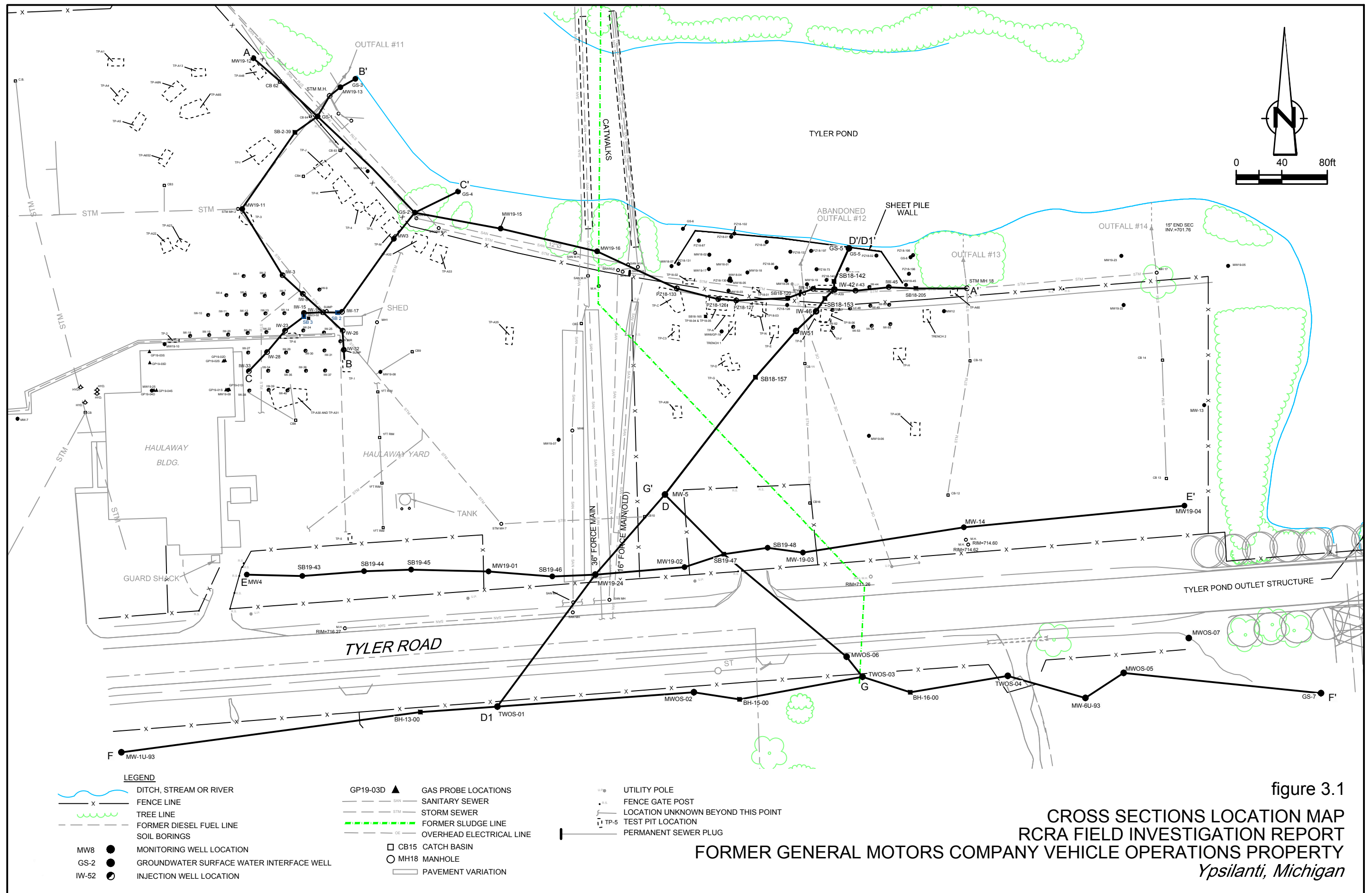


figure 1.1
SITE LOCATION
RCRA FIELD INVESTIGATION REPORT
FORMER GENERAL MOTORS
COMPANY VEHICLE OPERATIONS PROPERTY
Ypsilanti, Michigan



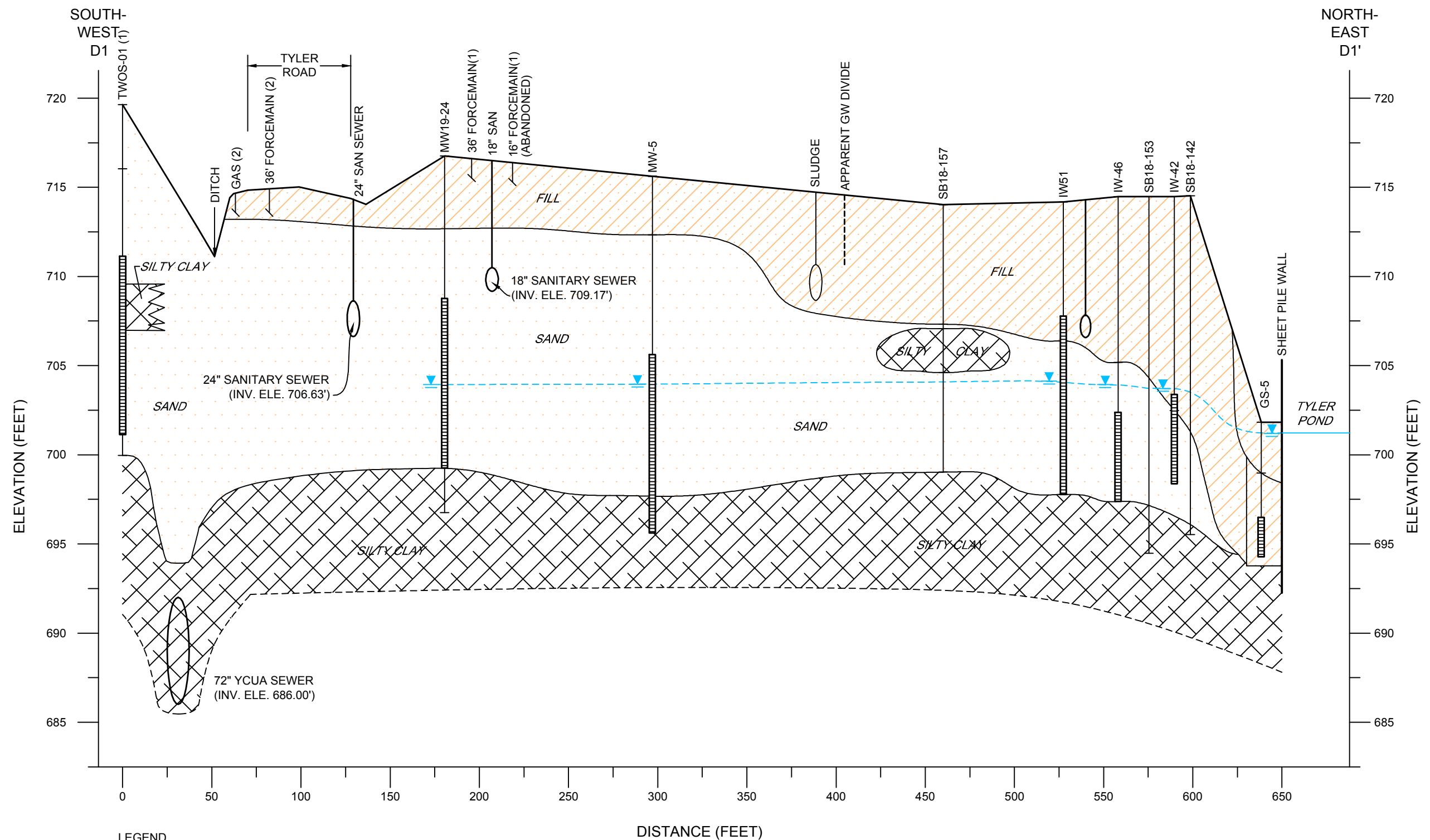
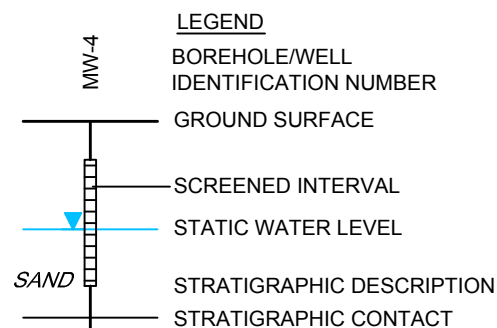
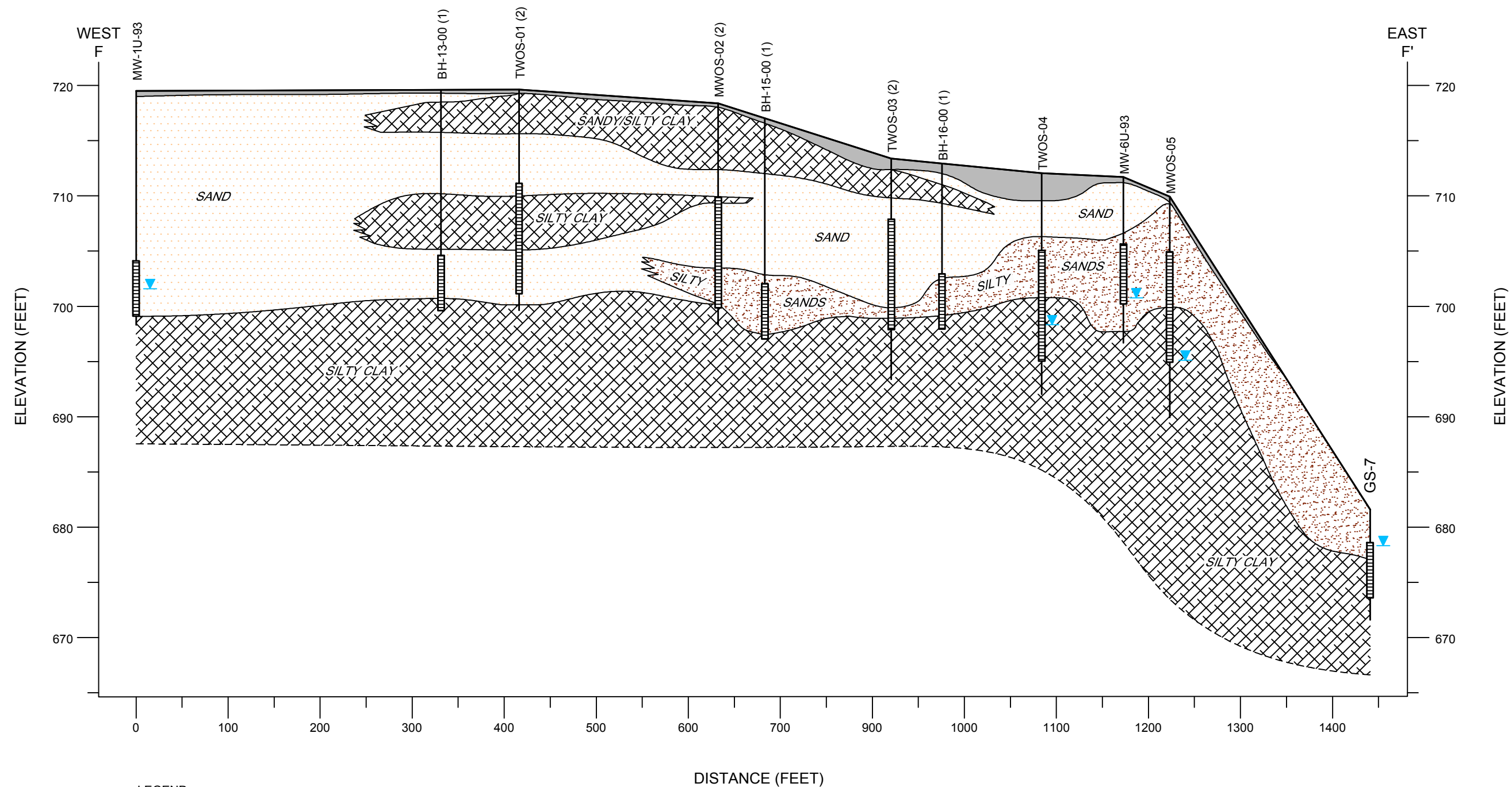


figure 3.2

GEOLOGIC CROSS SECTION D1 - D1'
RCRA FIELD INVESTIGATION REPORT
FORMER GENERAL MOTORS COMPANY VEHICLE OPERATIONS PROPERTY
Ypsilanti, Michigan





NOTES:

- (1) CONTINUOUS SAMPLES FOR LITHOLOGIC DESCRIPTION NOT COLLECTED. TEMPORARY WELLS WERE INSTALLED AT THESE LOCATIONS.
- (2) DRY WELL
- (3) GROUNDWATER ELEVATIONS WERE RECORDED FALL 2011.
- (4) COULD NOT ACCESS MW-1U-93,
- (5) TEMPORARY WELLS TWOS-01, TWOS-03 AND TWOS-04, WERE ABANDONED IN NOVEMBER 2011.

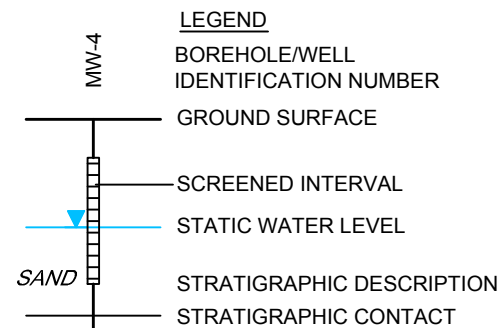
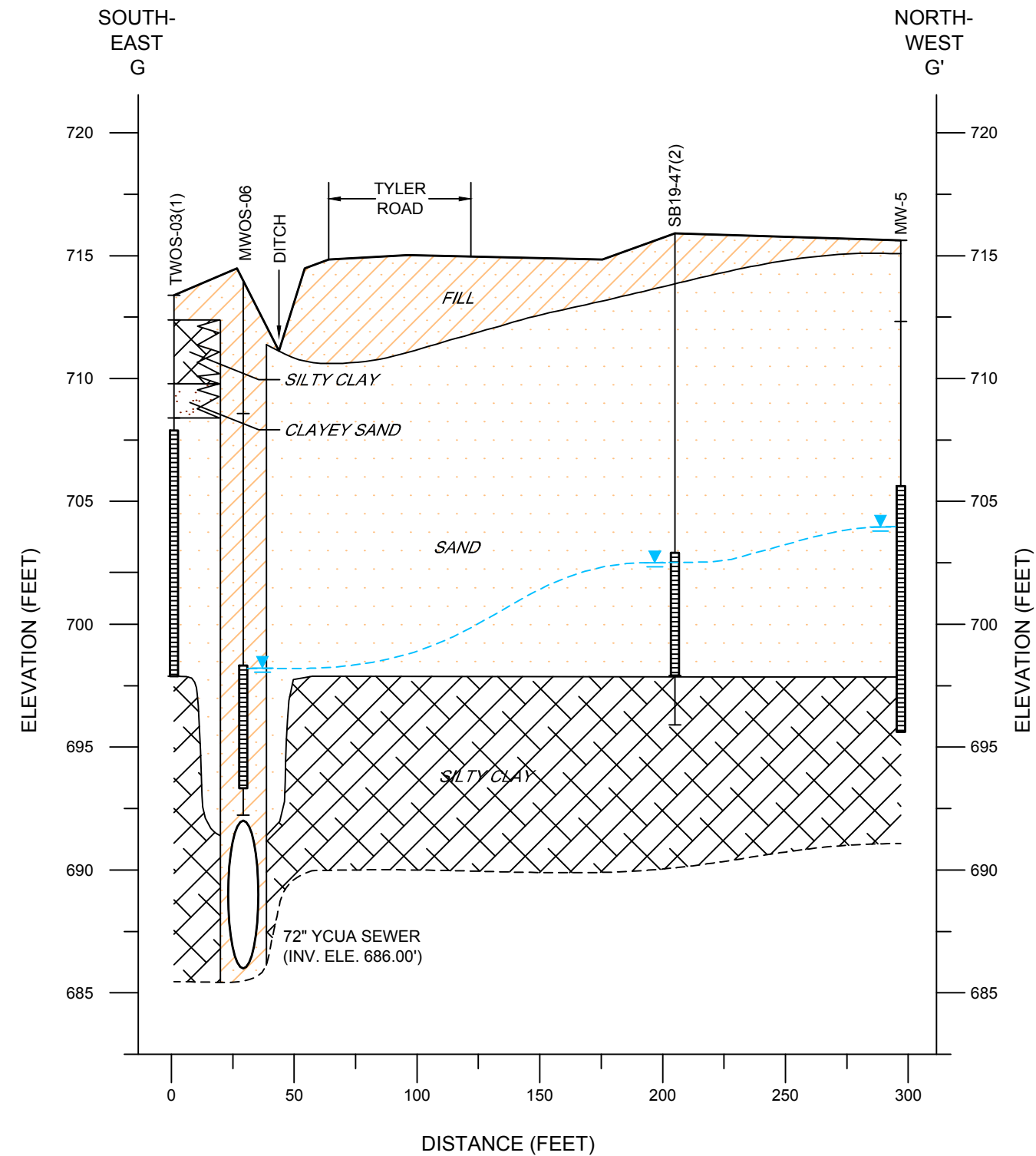
SCALES:

HOR. 1" = 120'
VER. 1" = 10'

figure 3.3

GEOLOGIC CROSS SECTION F - F'
RCRA FIELD INVESTIGATION REPORT
FORMER GENERAL MOTORS COMPANY VEHICLE OPERATIONS PROPERTY
Ypsilanti, Michigan





NOTES:

- (1) TEMPORARY WELL TWOS-03 WAS DRY AND WAS ABANDONED IN NOVEMBER 2011.
- (2) TEMPORARY WELL WAS INSTALLED.

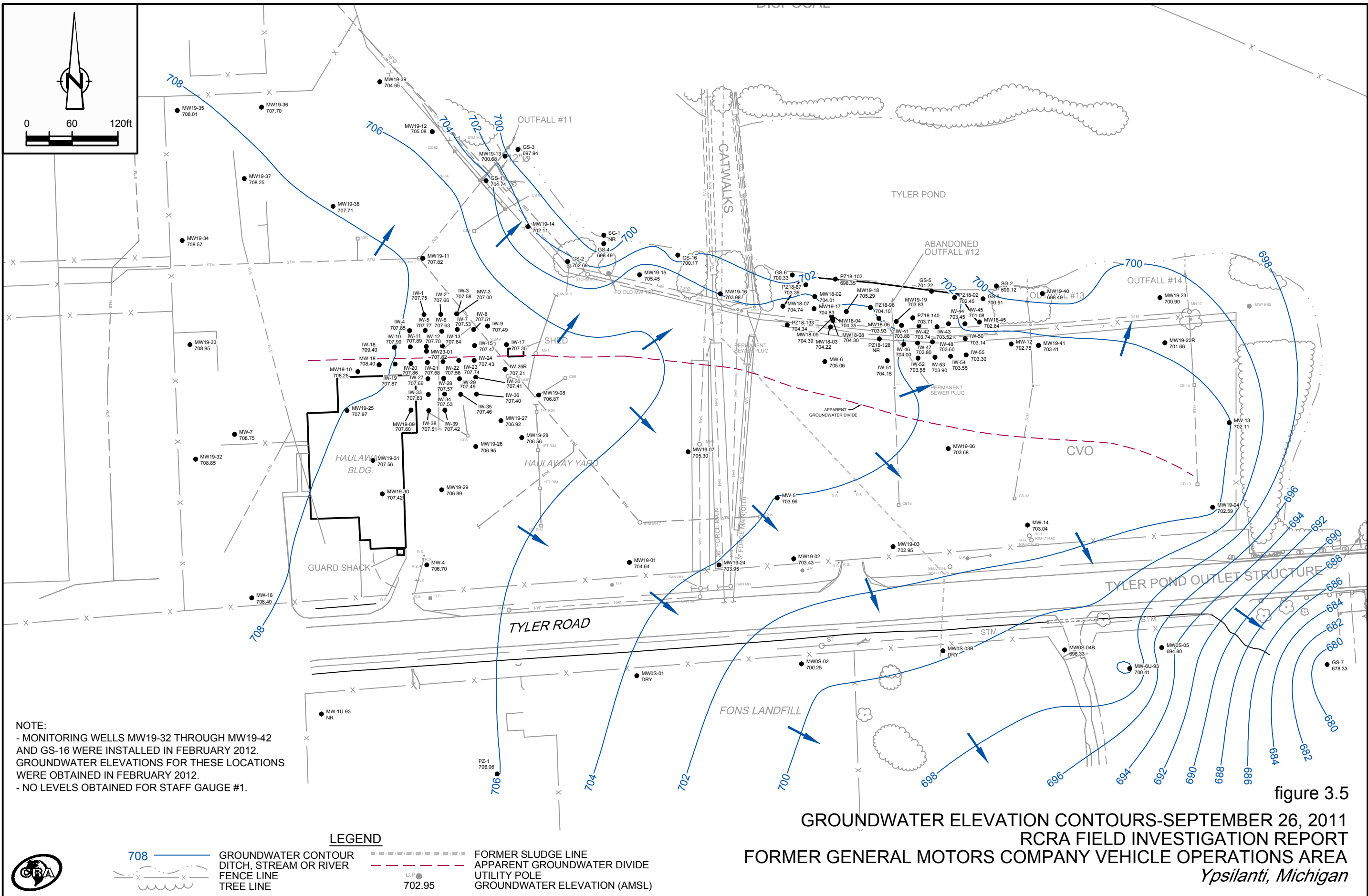
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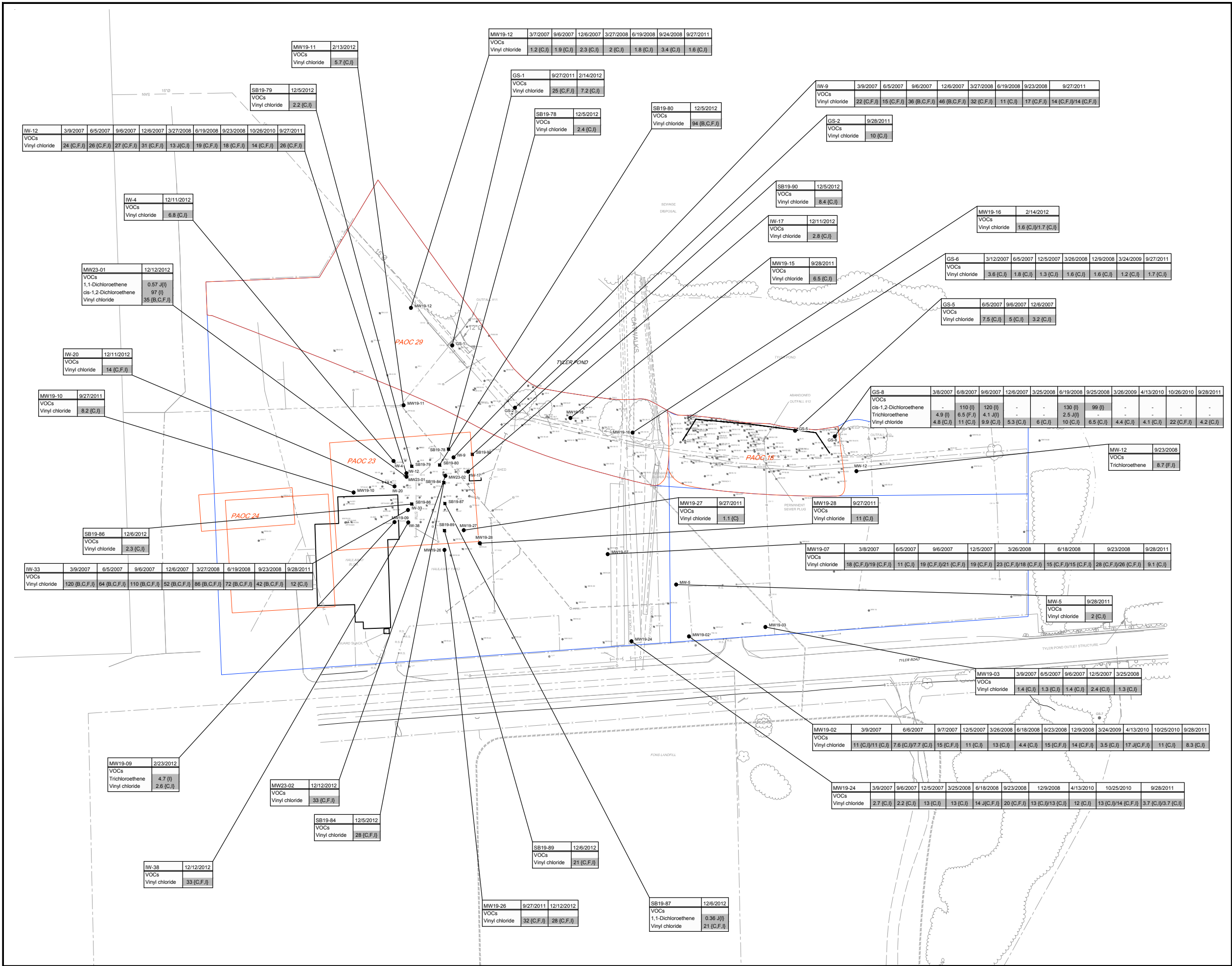
HOR. 1" = 60'
VER. 1" = 6'

figure 3.4

GEOLOGIC CROSS SECTION G - G'
RCRA FIELD INVESTIGATION REPORT
FORMER GENERAL MOTORS COMPANY VEHICLE OPERATIONS PROPERTY
Ypsilanti, Michigan







LEGEND

- TREE LINE
- FENCE LINE
- DITCH, STREAM OR RIVER
- FORMER SLUDGE LINE
- STORM SEWER
- PAOC BOUNDARY
- MONITORING WELL
- SOIL BORING
- GAS PROBE
- PIEZOMETER
- TEST PIT
- ABANDONED MONITORING WELL

NOTES

DATA PRESENTED IN THE DATABOXES ARE ONLY FOR THE CONSTITUENTS OF CONCERN (COC) AS DEFINED IN THE REPORT TEXT. IF A COC WAS NEVER SAMPLED AT A LOCATION, THAT COC IS NOT SHOWN IN THE DATABOX AT THAT LOCATION.

ALL CONSTITUENTS OF CONCERN CONCENTRATIONS IN mg/L.

NS - NOT SAMPLED

U - THE ANALYTE WAS ANALYZED FOR, BUT WAS NOT DETECTED ABOVE THE REPORTED SAMPLE QUANTIFICATION LIMIT

J - THE ASSOCIATED VALUE IS QUALIFIED AS AN ESTIMATED QUANTITY

MULTIPLE EXCEEDANCES ARE PRESENT IN PAOC 18; REMEDIATION ACTIVITIES ARE SCHEDULED IN THIS AREA, THEREFORE, EXCEEDANCES IN THIS AREA ARE NOT SHOWN ON THIS FIGURE.

GROUNDWATER CRITERIA

Criteria	Acute Inhalation Screening Level
A	Acute Inhalation Screening Level
B	Flammability and Explosivity Screening Level
C	Groundwater Contact Criteria & RSLs
D	Groundwater Surface Water Interface Criteria & RSLs
E	Non-residential Drinking Water Criteria & RSLs
F	Non-residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RSLs
G	Water Solubility
H	Residential Drinking Water Criteria & RSLs
I	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RSLs

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

KEY MAP

GROUNDWATER SELECTED PATHWAY SUMMARY-SITEWIDE

RCRA FIELD INVESTIGATION REPORT

FORMER GENERAL MOTORS COMPANY

VEHICLE OPERATIONS PROPERTY, YPSILANTI, MICHIGAN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:
B. LANDALE	A. BAINS	SEPTEMBER 2013

Scale:	Project N°:	Report N°:	Drawing N°:
AS SHOWN	17303-T05	023	3.7

17303-T05(023)GN-W060 SEP 24/2013

MW19-35	2/9/2012 0-2 ft BGS	2/9/2012 7.5-9.5 ft BGS
Metals	-	250 J(E,I,O,P)
Antimony	-	19 (E,I,O,P)
Arsenic	8.8 (E,I,O,P)	1800 (E,I,P)
Barium	-	100 (E,I,P)
Cadmium	-	11 (I)
Chromium	770 (E,G,I,N,P)	2700 (D,E,O,P)
Cobalt	2.0 (P)	1800 (E,G,I,P)
Copper	-	15000 (E,I,P)
Lead - coarse fraction	-	35000 (D,E,O,P)
Lead - fine fraction	-	15000 (D,E,O,P)
Lead - total (calculated by fine/coarse fraction)	-	27000 (D,E,O,P)
Manganese	220 (E,I,P)	1900 (E,G,I,P)
Mercury	-	0.12 (I)
Nickel	-	370 (E,I,P)
Selenium	0.50 (I)	1.4 (I)
Silver	0.11 (I)	83 (E,I,P)
Zinc	-	4200 (I,P)
SVOCs	-	-
Benzo(a)pyrene	3.7 (O)	-
Fluoranthene	11 (I)	-
Phenanthrene	5.8 (I)	-
VOCs	-	-
Trichloroethene	-	0.18 (E,P)

MW19-36	2/9/2012 0-2 ft BGS	2/9/2012 3.5-4.75 ft BGS	2/9/2012 7.5-9.5 ft BGS
Metals	-	21 J(E,P)	-
Antimony	-	15 (E,I,O,P)	-
Arsenic	-	1300 (I)	-
Barium	-	7.8 (E,I,P)	10 (E,I,P)
Cadmium	-	93 (E,I,P)	180 (E,I,P)
Chromium	-	8.7 (E,I,P)	39 (E,I,P)
Cobalt	-	500 (I)	1600 (I)
Copper	-	1400 (D,E,O,P)	760 (E,O,P)
Lead - coarse fraction	-	1300 (D,E,O,P)	1300 (D,E,O,P)
Lead - fine fraction	-	1400 (D,E,O,P)	910 (D,E,O,P)
Lead - total (calculated by fine/coarse fraction)	-	830 (E,I,P)	930 (E,I,P)
Manganese	-	0.28 (I)	0.36 (I)
Mercury	-	1.1 (I)	0.91 (I)
Selenium	-	1.4 (I)	5.9 (I,P)
Silver	-	1000 (I)	1400 (I)
Zinc	-	-	-
SVOCs	-	-	-
Benzo(a)pyrene	-	8.9 J(D,O)	-
Carbazole	-	1.6 J(I)	-
Fluoranthene	-	28 (I)	-
Phenanthrene	-	18 (I)	-
VOCs	-	-	-
Trichloroethene	-	0.45 (E,P)	-

MW19-39	2/9/2012 0-2 ft BGS	2/9/2012 8-10 ft BGS
Metals	-	-
Antimony	40 J(E,P)	-
Arsenic	14 (E,I,O,P)	-
Barium	1700 (E,I,P)	-
Cadmium	31 (E,I,P)	-
Chromium	94 (E,I,P)	11 (I)/10 (I)
Chromium VI (hexavalent)	4.8 (I)	-
Cobalt	8.2 (E,I,P)	3.6 (E,I,P)/3.2 (E,I,P)
Copper	210 (I)	-
Lead - coarse fraction	4500 (D,E,O,P)	-
Lead - fine fraction	2100 (D,E,O,P)	-
Lead - total (calculated by fine/coarse fraction)	3300 (D,E,O,P)	-
Manganese	430 (E,I,P)	260 (E,I,P)/250 (E,I,P)
Mercury	0.97 (I)	-
Nickel	130 (E,P)	-
Selenium	5.3 (E,I,P)	-
Silver	1.7 (I)	-
Zinc	1600 (I)	-
SVOCs	-	-
Acenaphthene	-	29 J(I)
Anthracene	-	48 J(E,I,P)
Benzo(a)anthracene	-	120 (D,O)/21 (O)
Benzo(a)pyrene	-	19 (D,O)/100 (D,O)
Benzo(b)fluoranthene	-	25 (I)/130 (D,O)
Carbazole	-	1.9 J(I)/30 J(I,P)
Dibenz(a,h)anthracene	-	3.3 J(O)/15 J(D,O)
Dibenzofuran	-	19 J(I)
Fluoranthene	-	370 (I)/53 (I)
Fluorene	-	31 J(I)
Indeno(1,2,3-cd)pyrene	-	57 J(O)
Naphthalene	-	7.8 J(I)
Phenanthrene	-	30 (I)/310 (A,B,C,E,I,K,L,M,P)
VOCs	-	-
Trichloroethene	0.22 (E,P)	0.31 (E,P)/0.27 (E,P)

SB18-71	5/24/2004 0-2 ft BGS
Metals	-
Aluminum	10900 (E,P)
Chromium	18.4 J(I)
Cobalt	10.7 (E,I,P)
Iron	18700 (E,P)
Magnesium	19200 (P)
Manganese	409 J(E,I,P)
SVOCs	-
cis-1,2-Dichloroethene	5.6 (E,P)
Trichloroethene	1.1 (E,P,Q)

MW19-40	2/7/2012 0-2 ft BGS
Metals	-
Chromium	7.3 (I)
Cobalt	2.5 (E,I,P)
Manganese	270 (E,I,P)

MW19-34	2/9/2012 0-2 ft BGS	2/9/2012 7-9 ft BGS
Metals	-	-
Antimony	5.2 J(E,P)/9.3 J(E,P)	-
Arsenic	5.2 (E,I,P)	5.6 (E,I,P)
Chromium	72 (E,I,P)/32 (E,I,P)	14 (I)
Cobalt	2.8 (E,I,P)/3.2 (E,I,P)	6.3 (E,I,P)
Manganese	400 (E,I,P)/260 (E,I,P)	500 (E,I,P)
Mercury	0.055 (I)	-
Selenium	0.49 (I)	0.68 (I)
Silver	0.54 (I)/0.33 (I)	-
SVOCs	-	-
Benzo(a)pyrene	10 (D,O)	-
Carbazole	2.9 J(I)	-
Fluoranthene	36 (I)	-
Phenanthrene	27 (I)	-

SB19-05	11/13/2003 6-8 ft BGS
General Chemistry	-
Cyanide (total)	1.6 (I)
Metals	-
Aluminum	6780 (E,P)
Antimony	8.2 (E,P)
Arsenic	5.9 (E,I,P)
Cadmium	65.0 (E,I,P)
Chromium	4.9 (E,I,P)
Cobalt	12000 (E,P)
Iron	683 (O)
Lead	218 (E,I,P)
Manganese	0.16 (I)
Mercury	1.9 (I)
Selenium	1.2 (I)
Silver	-
SVOCs	-
2-Methylnaphthalene	9.2 (I)
Naphthalene	1.6 J(I)
Phenanthrene	2.5 J(I)

SB22-02	5/18/2004 8-10 ft BGS
General Chemistry	-
Cyanide (total)	2.3 (I)
Metals	-
Aluminum	6200 (E,P)
Antimony	30.5 J(E,P)
Arsenic	13.6 J(E,I,O,P)
Cadmium	83.1 J(E,I,P)
Chromium	66.7 J(E,I,P)
Cobalt	10.2 (E,I,P)
Iron	23600 (E,P)
Lead	2500 (D,E,O,P)
Manganese	342 (E,I,P)
Mercury	0.067 J(I)
Selenium	22.9 J(E,I,P)
Silver	0.83 (I)
Zinc	9030 (E,I,P)
SVOCs	-
Benzo(a)pyrene	5.5 J(O)
Carbazole	2.1 J(I)
Fluoranthene	25 (I)
Naphthalene	1.6 J(I)
Phenanthrene	17 (I)

GS-6	5/24/2005 2.5-3 ft BGS
Metals	-
Antimony	8.0 J(E,P)
Arsenic	12.3 J(E,I,O,P)
Barium	10100 (E,I,P)
Cadmium	613 (E,I,O,P)
Chromium	536 (E,G,I,N,P)
Cobalt	80.6 J(E,I,P)
Lead - coarse fraction	10800 (D,E,O,P)
Lead - fine fraction	11900 (D,E,O,P)
Lead - total (calculated by fine/coarse fraction)	10800 (D,E,O,P)
Manganese	471 (E,I,P)
Mercury	0.23 J(I)
Selenium	14.8 J(E,I,P)
Silver	0.39 J(I)
Zinc	1570 (I)
SVOCs	-
2,4-Dimethylphenol	89 J(E,I,P)
2-Methylnaphthalene	1300 (E,I,P)
Acenaphthene	73 J(I)
Anthracene	68 J(E,H,P)
Di-n-butylphthalate (DBP)	26 J(I)
Fluoranthene	29 (I)
Naphthalene	330 (E,I,K,L,M,P,Q)
Phenanthrene	170 J(E,I,K,L,M,P)
VOCs	-
Ethylbenzene	76 (E,I,P)
Isopropyl benzene	44 (I)
Toluene	49 (E,I,P)
Xylenes (total)	400 (D,E,F,H,I,J,O,P,Q)

MW19-32	2/8/2012 0-2 ft BGS	2/8/2012 8-10 ft BGS
Metals	-	-
Arsenic	9.2 (I)	5.8 (E,I,P)
Chromium	2.0 (P)	6.9 (I)
Cobalt	-	3.6 (E,I,P)
Manganese	150 (E,I,P)	400 (E,I,P)

MW19-33	2/8/2012 0-2 ft BGS	2/8/2012 7.5-9.5 ft BGS
Metals	-	-
Chromium	20 (I)	8.4 (I)
Cobalt	3.7 (E,I,P)	3.5 (E,I,P)
Manganese	320 (E,I,P)	220 (E,I,P)
Mercury	0.070 (I)	-

LEGEND

TREE LINE
FENCE LINE
DITCH, STREAM OR RIVER
FORMER SLUDGE LINE
STORM SEWER
PAOC BOUNDARY
MONITORING WELL
SOIL BORING
GAS PROBE
PIEZOMETER
TEST PIT
ABANDONED MONITORING WELL

NOTES

DATA PRESENTED IN THE DATABASES ARE ONLY FOR THE CONSTITUENTS OF CONCERN (COC) AS DEFINED IN THE REPORT TEXT. IF A COC WAS NEVER SAMPLED AT A LOCATION, THAT COC IS NOT SHOWN IN THE DATABASE AT THAT LOCATION.

ALL CONSTITUENTS OF CONCERN CONCENTRATIONS IN mg/kg.

NS - NOT SAMPLED

U - THE ANALYTE WAS ANALYZED FOR, BUT WAS NOT DETECTED ABOVE THE REPORTED SAMPLE QUANTIFICATION LIMIT

J - THE ASSOCIATED VALUE IS QUALIFIED AS AN ESTIMATED QUANTITY

METAL CONCENTRATIONS EXCEEDING THE SITE SPECIFIC BACKGROUND LEVEL ARE FLAGGED AS EXCEEDANCES

MULTIPLE EXCEEDANCES ARE PRESENT IN PAOC 18/ REMEDIATION ACTIVITIES ARE SCHEDULED IN THIS AREA. THEREFORE, EXCEEDANCES IN THIS AREA ARE NOT SHOWN ON THIS FIGURE.

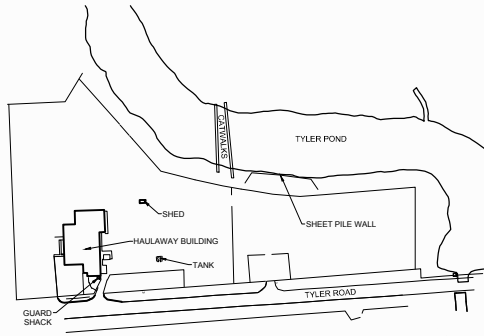
SOIL CRITERIA (NON-RESIDENTIAL)

A Finite VSIC for 2 Meter Source Thickness
B Finite VSIC for 5 Meter Source Thickness
C Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs
D Direct Contact Criteria & RBSLs
E Non-residential Drinking Water Protection Criteria & RBSLs
F Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs
G Particulate Soil Inhalation Criteria & RBSLs
H Groundwater Contact Protection Criteria & RBSLs
I Groundwater Surface Water Interface Protection Criteria & RBSLs
J Soil Saturation Concentration Screening Levels
K Finite VSIC for 2 Meter Source Thickness
L Finite VSIC for 5 Meter Source Thickness
M Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs
N Particulate Soil Inhalation Criteria & RBSLs
O Direct Contact Criteria & RBSLs
P Drinking Water Protection Criteria & RBSLs
Q Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

KEY MAP



SOIL SELECTED PATHWAY SUMMARY PROPERTY BOUNDARY

RCRA FIELD INVESTIGATION REPORT

FORMER GENERAL MOTORS COMPANY VEHICLE OPERATIONS PROPERTY, YPSILANTI, MICHIGAN



CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: B. LANDALE	Reviewed By: A. BAINS	Date: SEPTEMBER 2013
Scale: AS SHOWN	Project N°: 17303-T05	Report N°: 023 Drawing N°: 3.8

GS-3	3/7/2007	6/6/2007	9/7/2007	12/7/2007	3/27/2008	6/19/2008	9/25/2008	12/10/2008	3/27/2009	4/13/2010	10/26/2010
Metals					0.445 (E,H)	-	0.0157 (E,H)	-	0.266 (E,H)	-	-
Aluminum	-	-	-	-	-	-	-	-	-	-	-
Lead	0.401 (E,H)	0.301 (E,H)	0.26 (E,H)	0.34 (E,H)	0.166 (E,H)	-	0.292 (E,H)	-	-	-	-
Manganese	-	-	-	-	-	-	0.0063 (H)	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-	-
VOCs											
Benzene	-	0.0051 J(E,H)	-	-	-	-	-	-	0.0076 (E,H)	-	-
Vinyl chloride	0.62 (D,E,H)	0.61 (D,E,H)	0.46 (D,E,H)	0.3 (D,E,H)	0.025 (D,E,H)	0.51 (D,E,H)	0.14 (D,E,H)	0.061 (D,E,H)	0.09 (D,E,H)	0.034 (D,E,H)	0.017 (D,E,H)

GS-1	9/27/2011	2/14/2012
Metals		
Manganese	-	0.66 (E,H)
VOCs		
Benzene	0.14 J(E,H)	0.11 J(E,H)
cis-1,2-Dichloroethene	0.21 J(E,H)	0.5 (E,H)
Vinyl chloride	25 (C,D,E,F,H,I,J)	7.2 (C,D,E,H)

MW19-36	2/16/2012
Metals	
Aluminum	0.11 (E,H)
Manganese	0.74 (E,H)

MW19-35	2/21/2012	5/23/2012
Metals		
Aluminum	-	0.076 (E,H)
Arsenic	-	0.015 (D,E,H)
Chromium	-	0.016 (D)
Iron	-	5.3 (E,H)
Manganese	1.8 (E,H)	2.4 (E,H)
Sodium	-	170 (H)

MW19-34	2/22/2012	5/23/2012
Metals		
Aluminum	0.2 (E,H)/0.18 (E,H)	0.12 (E,H)
Iron	-	0.58 (E,H)
Manganese	0.49 (E,H)/0.48 (E,H)	0.48 (E,H)
Sodium	-	1600 (E,H)
VOCs		
Trichloroethene	0.012 (E,H)/0.013 (E,H)	-

GS-2	9/28/2011
VOCs	
cis-1,2-Dichloroethene	2.5 (D,E,H)
Methylene chloride	0.19 J(E,H)
Vinyl chloride	10 (C,D,E,H,J)

MW19-33	2/22/2012	5/23/2012
Metals		
Aluminum	0.062 (E,H)	0.088 (E,H)
Arsenic	-	0.014 (D,E,H)
Iron	-	8.4 (E,H)
Manganese	0.73 (E,H)	1 (E,H)
Sodium	-	890 (E,H)
VOCs		
Benzene	0.091 (E,H)	-
Chlorobenzene	0.027 (D)	-
Vinyl chloride	0.0046 (E,H)	-

MW19-32	2/22/2012	5/23/2012
Metals		
Aluminum	0.19 (E,H)	-
Manganese	0.27 (E,H)	0.12 (E,H)
Sodium	-	1200 (E,H)

MW-18	2/13/2012
Metals	
Manganese	0.057 (E,H)

MW-4	3/6/2007	6/6/2007	9/6/2007	12/6/2007	3/27/2008	9/23/2008
Metals						
Iron	-	-	-	0.41 (E,H)	-	-
Manganese	0.385 (E,H)	0.392 (E,H)	0.339 (E,H)	0.418 (E,H)	0.344 (E,H)	0.339 (E,H)

MW19-01	3/6/2007	9/6/2007	12/5/2007	3/26/2008	6/18/2008	9/23/2008	9/27/2011
Metals							
Iron	-	-	4.4 (E,H)/4.45 (E,H)	0.408 (E,H)	-	-	-
Manganese	0.0555 (E,H)	-	0.162 (E,H)/0.148 (E,H)	-	-	-	-
VOCs							
Vinyl chloride	-	0.007 (E,H)	0.024 (D,E,H)/0.024 (D,E,H)	0.0053 (E,H)	0.021 (D,E,H)	0.035 (D,E,H)	0.0045 (E,H)

MW19-39	2/16/2012
Metals	
Manganese	0.47 (E,H)
VOCs	
cis-1,2-Dichloroethene	0.087 (E,H)
Trichloroethene	0.032 (E,H)
Vinyl chloride	0.08 (D,E,H)

GS-4	3/7/2007	6/6/2007	9/7/2007	12/7/2007	3/26/2008	6/19/2008	9/24/2008	12/10/2008	3/27/2009	4/13/2010	10/25/2010	9/28/2011
Metals												
Aluminum	-	-	-	-	0.273 (E,H)	-	-	-	-	-	-	-
Iron	-	-	-	-	0.585 (E,H)	-	-	-	-	-	-	-
Manganese	1.39 (E,H)	1.26 (E,H)	1.62 (E,H)	1.25 (E,H)	0.663 (E,H)	-	0.796 (E,H)	-	-	-	-	-
VOCs												
Vinyl chloride	0.099 (D,E,H)	0.2 (D,E,H)	0.0065 (E,H)	-	0.039 (D,E,H)	0.12 (D,E,H)	0.0038 (E,H)	0.0023 (E,H)	0.037 (D,E,H)	0.06 (D,E,H)	0.0048 (E,H)	0.0044 (E,H)

GS-16	2/21/2012	12/12/2012
General Chemistry		
Cyanide (total)	-	0.026 (D)
Metals		
Aluminum	0.25 (E,H)	-
Manganese	1.2 (E,H)	-
VOCs		
cis-1,2-Dichloroethene	0.078 (E,H)	-
Vinyl chloride	0.57 (D,E,H)	-

GS-6	3/12/2007	6/5/2007	9/5/2007	12/5/2007	3/26/2008	6/19/2008	9/24/2008	12/9/2008	3/24/2009	4/13/2010	10/25/2010	9/27/2011
Metals												
Iron	-	-	-	-	1.21 (E,H)	1.08 (E,H)	-	-	-	-	-	-
Manganese	0.0669 (E,H)	0.0652 (E,H)	0.0577 (E,H)	-	0.0635 (E,H)	0.054 (E,H)	-	-	-	-	-	-
Mercury	-	-	-	-	-	0.00012 J(D)	-	-	-	-	-	-
VOCs												
cis-1,2-Dichloroethene	4.6 (D,E,H)	4.9 (D,E,H)	4.5 (D,E,H)	4.8 (D,E,H)	3.1 (D,E,H)	3.6 (D,E,H)	3.9 (D,E,H)	4.3 (D,E,H)	3.1 (D,E,H)	2.9 (D,E,H)	3.4 (D,E,H)	2.5 (D,E,H)
trans-1,2-Dichloroethene	0.22 (E,H)	0.25 (E,H)	0.22 (E,H)	0.22 (E,H)	0.16 (E,H)	0.18 (E,H)	0.2 (E,H)	0.2 (E,H)	0.16 (E,H)	0.17 (E,H)	0.15 (E,H)	0.11 (E,H)
Vinyl chloride	3.6 (C,D,E,H,J)	1.8 (C,D,E,H,J)	0.99 (D,E,H)	1.3 (C,D,E,H,J)	1.6 (C,D,E,H,J)	0.97 (D,E,H)	0.98 (D,E,H)	1.6 (C,D,E,H,J)	1.2 (C,D,E,H,J)	0.79 (D,E,H)	1 (D,E,H)	1.7 (C,D,E,H,J)

GS-8	3/8/2007	6/8/2007	9/6/2007	12/6/2007	3/25/2008	6/19/2008	9/25/2008	3/26/2009	4/13/2010	10/26/2010	9/28/2011
General Chemistry											
Sulfate	-	-	-	-	-	-	-	261 (E,H)	-	-	-
Metals											
Aluminum	-	-	-	-	0.28 (E,H)	-	-	-	-	-	-
Arsenic	-	-	-	0.0136 (D,E,H)	-	-	-	-	-	-	-
Iron	2.53 (E,H)	1.41 J(E,H)	-	4.43 (E,H)	1.37 (E,H)	-	-	2.61 (E,H)	-	-	-
Iron (dissolved)	0.653 (E,H)	-	-	-	0.47 (E,H)	-	-	1.18 (E,H)	-	-	-
Manganese	2.47 (E,H)	1.93 (E,H)	1.4 (E,H)	1.99 (E,H)	2.09 (E,H)	1.29 (E,H)	0.916 (E,H)	1.95 (E,H)	-	-	-
Manganese (dissolved)	2.55 (E,H)	1.94 (E,H)	1.74 (E,H)	1.71 (E,H)	2.22 (E,H)	1.18 (E,H)	1.35 (E,H)	2.02 (E,H)	-	-	-
VOCs											
cis-1,2-Dichloroethene	40 (D,E,H,J)	110 (D,E,H,J)	120 (D,E,H,J)	71 (D,E,H,J)	64 (D,E,H,J)	130 (D,E,H,J)	99 (D,E,H,J)	61 (D,E,H,J)	54 (D,E,H,J)	48 (D,E,H,J)	31 (D,E,H)
Methylene chloride	-	-	-	-	0.5 J(E,H)	0.47 J(E,H)	0.7 J(E,H)	-	0.52 J(E,H)	-	0.26 J(E)
trans-1,2-Dichloroethene	-	-	-	-	1.6 J(D,E,H)	1.9 J(D,E,H)	2.5 J(D,E,H)	0.95 J(D,E,H)	0.6 J(D,E,H)	-	0.24 J(D,E)
Trichloroethene	4.9 (D,E,H,I,J)	6.5 (D,E,F,H,I,J)	4.1 J(D,E,H,I,J)	5.3 (C,D,E,H,J)	6 (C,D,E,H)	10 (C,D,E,H)	6.5 (C,D,E,H,J)	4.4 (C,D,E,H)	4.1 (C,D,E,H)	22 (C,D,E,F,H,I,J)	4.2 (C,D,E)
Vinyl chloride	4.8 (C,D,E,H,J)	11 (C,D,E,H,J)	9.9 (C,D,E,H,J)	5.3 (C,D,E,H,J)	6 (C,D,E,H)	10 (C,D,E,H)	6.5 (C,D,E,H,J)	4.4 (C,D,E,H)	4.1 (C,D,E,H)	22 (C,D,E,F,H,I,J)	4.2 (C,D,E)

MW19-23	2/14/2012
VOCs	
Trichloroethene	0.033 (E,H)

MW19-40	2/22/2012
Metals	
Aluminum	0.16 (E,H)
Manganese	0.25 (E,H)

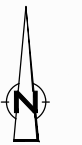
MW19-04	5/23/2012
Metals	
Aluminum	0.093 (E,H)
Iron	0.38 J(E,H)
Manganese	0.068 (E,H)

MW-14	6/5/2007	9/6/2007	12/5/2007	3/25/2008	9/23/2008
Metals					
Manganese	0.0956 (E,H)	-	0.0781 (E,H)	0.0954 (E,H)	0.0906 (E,H)
Mercury	-	0.00015 J(D)	-	-	-

MW19-03	3/9/2007	6/5/2007	9/6/2007	12/5/2007	3/25/2008	9/28/2011
Metals						
Iron	-	-	-	1.2 (E,H)	0.638 (E,H)	-
Manganese	0.28 (E,H)	0.2 (E,H)	0.188 (E,H)	0.253 (E,H)	0.249 (E,H)	-
Mercury	-	-	0.000098 J(D)	-	-	-
VOCs						
cis-1,2-Dichloroethene	0.83 (D,E,H)	0.67 (D,E,H)	0.84 (D,E,H)	1.3 (D,E,H)	0.81 (D,E,H)	0.93 (D,E,H)/0.94 (D,E,H)
Vinyl chloride	1.4 (C,D,E,H,J)	1.3 (C,D,E,H,J)	1.4 (C,D,E,H,J)	2.4 (C,D,E,H,J)	1.3 (C,D,E,H,J)	0.98 (D,E,H)/0.96 (D,E,H)

MW19-02	3/9/2007	6/6/2007	9/7/2007	12/5/2007	3/26/2008	6/18/2008	9/23/2008	12/9/2008	3/24/2009	4/13/2010	10/25/2010	9/28/2011
Metals												
Iron	-	-	-	1.36 (E,H)	0.979 (E,H)	-	-	-	-	-	-	-
Manganese	0.204 (E,H)/0.183 (E,H)	0.0898 (E,H)/0.0895 (E,H)	0.174 (E,H)	0.184 (E,H)	0.125 (E,H)	-	0.179 (E,H)	-	-	-	-	-
Mercury	0.00012 J(D)	-	-	-	-	-	-	-	-	-	-	-
VOCs												
cis-1,2-Dichloroethene	8 (D,E,H)/8.2 (D,E,H)	6.5 (D,E,H)/6.4 (D,E,H)	12 (D,E,H)	11 (D,E,H)	6.8 (D,E,H)	4.9 (D,E,H)	8.6 (D,E,H)	7.5 (D,E,H)	2.6 (D,E,H)	8.4 (D,E,H)	10 (D,E,H)	4.7 (D,E,H)
Methylene chloride	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	0.25 J(E,H)/0.25 J(E,H)	0.21 (E,H)/0.21 (E,H)	0.37 J(E,H)	0.37 J(E,H)	0.22 J(E,H)	0.17 J(E,H)	0.27 J(E,H)	0.25 J(E,H)	-	0.31 J(E,H)	0.3 J(E,H)	0.14 J(E,H)
Vinyl chloride	11 (C,D,E,H,J)/11 (C,D,E,H,J)	7.6 (C,D,E,H,J)/7.7 (C,D,E,H,J)	15 (C,D,E,H,J)	11 (C,D,E,H,J)	13 (C,D,E,H,J)	4.4 (C,D,E,H,J)	14 (C,D,E,F,H,J)	3.5 (C,D,E,H,J)	17 J(C,D,E,F,H,J)	11 (C,D,E,H,J)	8.3 (C,D,E,H,J)	-

MW19-24	3/9/2007	6/6/2007	9/6/2007	12/5/2007	3/25/2008	6/18/2008	9/23/2008	12/9/2008	3/24/2009	4/13/2010	10/25/2010	9/28/2011
Metals												
Iron	-	-	-	11.7 (E,H)	7.96 (E,H)	-	-	-	-	-	-	-
Manganese	0.552 (E,H)	0.327 (E,H)	0.303 (E,H)	0.367 (E,H)	0.284 (E,H)	-	0.241 (E,H)	-	-	-	-	-
VOCs												
Benzene	-	0.034 (E,H)	0.061 J(E,H)	0.1 J(E,H)	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	0.37 (E,H)	0.27 (E,H)	0.27 (E,H)	0.35 J(E,H)	0.25 J(E,H)	0.29 J(E,H)	0.35 J(E,H)	0.17 J(E,H)/0.18 J(E,H)	-	0.17 J(E,H)	0.23 J(E,H)/0.24 J(E,H)	-
Methylene chloride	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2.7 (C,D,E,H,J)	0.75 (D,E,H)	2.2 (C,D,E,H,J)	13 (C,D,E,H,J)	13 (C,D,E,H,J)	14 J(C,D,E,F,H,J)	20 (C,D,E,F,H,J)	13 (C,D,E,H,J)/13 (C,D,E,H,J)	0.067 (D,E,H)	12 (C,D,E,H,J)	14 (C,D,E,F,H,J)/13 (C,D,E,H,J)	3.7 (C,D,E,H,J)/3.7 (C,D,E,H,J)



LEGEND	
	TREE LINE
	FENCE LINE
	DITCH, STREAM OR RIVER
	FORMER SLUDGE LINE
	STORM SEWER
	PAOC BOUNDARY
	MONITORING WELL
	SOIL BORING
	GAS PROBE
	PIEZOMETER
	TEST PIT
	ABANDONED MONITORING WELL

NOTES

DATA PRESENTED IN THE DATABASES ARE ONLY FOR THE CONSTITUENTS OF CONCERN (COC) AS DEFINED IN THE REPORT TEXT. IF A COC WAS NEVER SAMPLED AT A LOCATION, THAT COC IS NOT SHOWN IN THE DATABASE AT THAT LOCATION.

ALL CONSTITUENTS OF CONCERN CONCENTRATIONS IN mg/L

NS - NOT SAMPLED

U - THE ANALYTE WAS ANALYZED FOR, BUT WAS NOT DETECTED ABOVE THE REPORTED SAMPLE QUANTITATION LIMIT

J - THE ASSOCIATED VALUE IS QUALIFIED AS AN ESTIMATED QUANTITY

METAL CONCENTRATIONS EXCEEDING THE SITE SPECIFIC BACKGROUND LEVEL ARE FLAGGED AS EXCEEDANCES

GROUNDWATER CRITERIA	
A	Acute Inhalation Screening Level
B	Flammability and Explosivity Screening Level
C	Groundwater Contact Criteria & RBSLs
D	Groundwater Surface Water Interface Criteria & RBSLs
E	Non-residential Drinking Water Criteria & RBSLs
F	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs
G	Water Solubility
H	Residential Drinking Water Criteria & RBSLs
I	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs
J	Final Acute Value

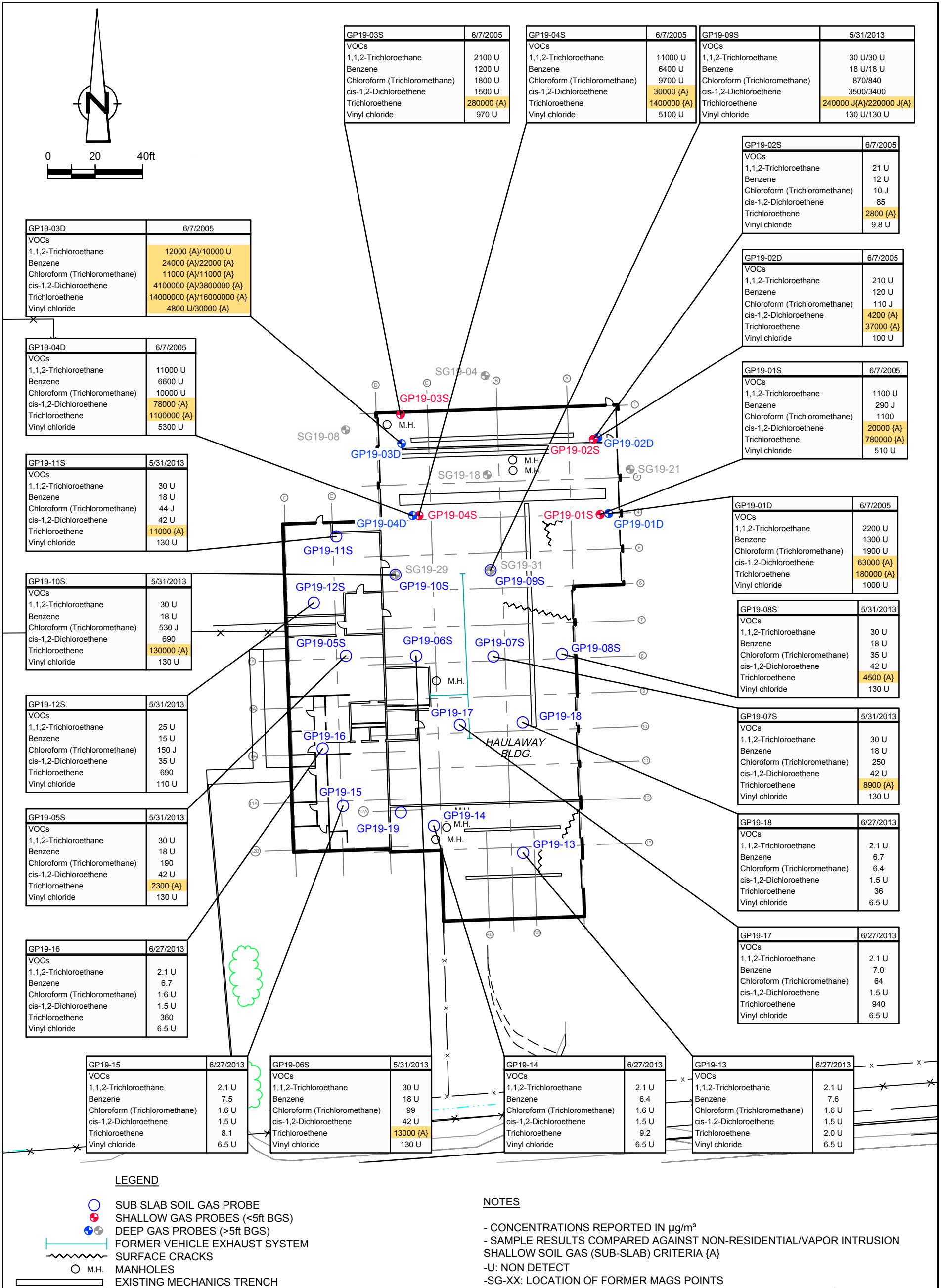
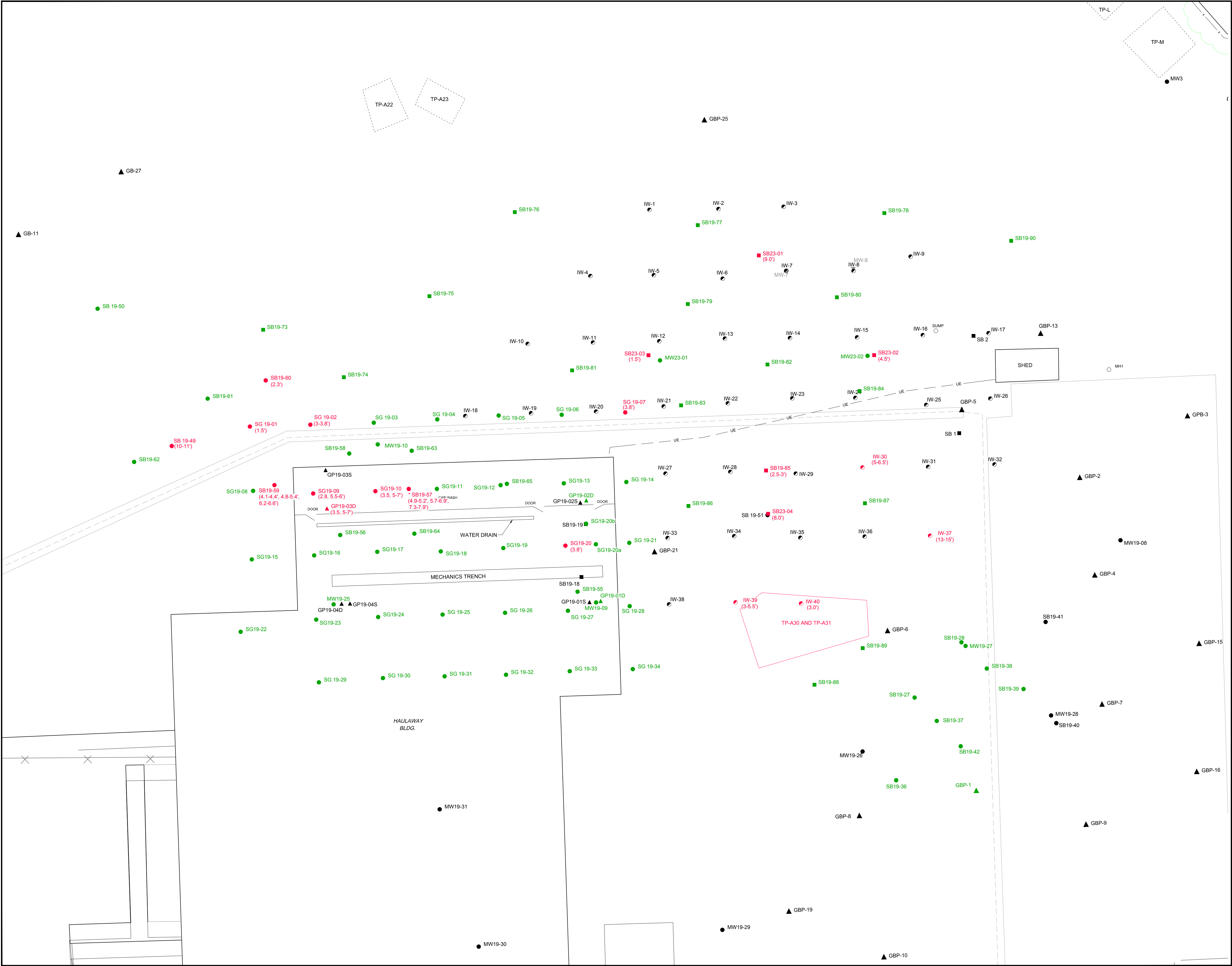


figure 3.10
SOIL GAS SAMPLING RESULTS
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
Ypsilanti, Michigan



No	Revision	Date	Initial

LEGEND

SB 19-49 (10-11) ● LOCATIONS WHERE PAINT SLUDGE OBSERVED (DEPTH OBSERVED)

SG 19-29 ● LOCATIONS WHERE NO PAINT SLUDGE OBSERVED

SB19-18 ■ NO BORING LOG

— UE — UNDERGROUND ELECTRIC

□ TEST PITS

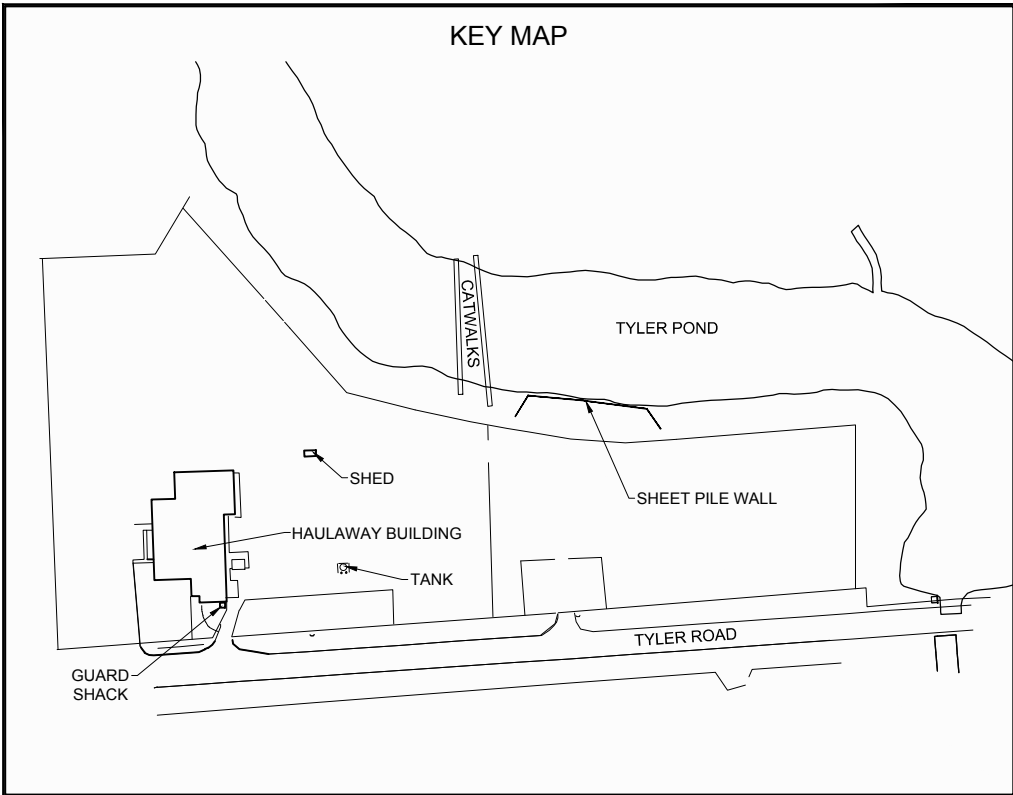
EXPECTED EXCAVATION AREAS

AREA	DIMENSIONS	DEPTH	INTERVAL TO BE REMOVED
A	10' x 10'	11"	10' - 11'
B	35' x 25'	4'	1.5' - 4'
C	10' x 10'	4'	3.5' - 4'
D	55' x 20'	8'	2' - 8'
E	15' x 10'	4'	3.5' - 4'

* FREE PRODUCT AT 6.0' - 6.9'

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.



PAINT SLUDGE DELINEATION

RCRA FIELD INVESTIGATION REPORT

**FORMER GENERAL MOTORS COMPANY
VEHICLE OPERATIONS PROPERTY, YPSILANTI, MICHIGAN**



CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: B. LANDALE	Reviewed By: A. BAINS	Date: SEPTEMBER 2013
Scale: 1:15	Project N°: 17303-T05	Report N°: 023
		Drawing N°: 3.11

RECALCULATED GSI CRITERIA
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS PROPERTY
YPSILANTI, MI

Calculation of Generic Facility-Specific Part 201 Groundwater Surface Water
Interface (GSI) Criteria for {G} Footnoted Hazardous Substances

Directions for calculating generic facility-specific GSI criteria:

1. Enter "**hardness**" (Column C) or "**pH**" (Column D). Click the green check mark to the left of the Excel formula bar or press the "Enter" key.
2. The GSI criteria for surface water **not** protected as a source of drinking water are the lower of the final chronic value (FCV), wildlife value (WV), and the surface water human non-drinking water value (HNDV). These criteria are presented in Column L.
3. The GSI criteria for surface water protected as a source of drinking water are the lower of the FCV, WV, and surface water human drinking water value (HDV). Surface water protected as a source of drinking water includes the Great Lakes and their connecting waters, and inland surface water in close proximity to a water supply intake. These criteria are presented in Column M. Refer to Part 201 Criteria Application Guidesheet #3 for further guidance on selecting the applicable GSI criterion.
4. The final acute values (FAV) protective of aquatic life are presented in column E. The calculation of the FAV is provided to allow the identification of any exceedance of an acute GSI criterion. Where an exceedance of an acute GSI criterion exists, an evaluation must be done to determine appropriate action in accordance with provisions of R 299.5716, R 299.5526(4) and RRD Operational Memorandum No. 5.

Calculate GSI in ug/L (ppb)												
Hazardous Substance	Chemical Abstract Service Number (CAS #)	* ENTER Hardness in mg CaCO3/L	* ENTER pH	Final Acute Value (FAV)	FAV Conversion Factor	Final Chronic Value (FCV)	FCV Conversion Factor	Wildlife Value (WV)	Surface Water Human Non-Drinking Water Value (HNDV)	Surface Water Human Drinking Water Value (HDV)	GSI Criteria for Surface Water Not Protected for Drinking Water Use	GSI Criteria for Surface Water Protected for Drinking Water Use
Acetate	71501	NA	7.25	148330.7713	NA	8.2E+3	NA	NA	1.3E+6	16,000	8.2E+3	8.2E+3
Acetic acid	64197	NA	7.25	148330.7713	NA	8.2E+3	NA	NA	1.3E+6	16,000	8.2E+3	8.2E+3
Barium	7440393	391.25	NA	10650.03707	NA	1.9E+3	NA	NA	1.6E+5	1,900	1.9E+3	1.9E+3
Beryllium	7440417	391.25	NA	1354.803398	NA	7.5E+1	NA	NA	1,200	160	7.5E+1	7.5E+1
Cadmium	7440439	391.25	NA	37.33247712	0.886914532	6.1E+0	0.851915	NA	130	3	6.1E+0	2.5E+0
Chromium (III)	16065831	391.25	NA	3482.929736	NA	2.3E+2	0.86	NA	9,400	120	2.3E+2	1.2E+2
Copper	7440508	391.25	NA	97.18765393	NA	2.9E+1	0.96	NA	38,000	470	2.9E+1	2.9E+1
Lead	7439921	391.25	NA	1146.967612	0.592236486	6.0E+1	0.592236	NA	190	14	6.0E+1	1.4E+1
Manganese	7439965	391.25	NA	28115.44021	NA	6.5E+3	NA	NA	59,000	1,300	6.5E+3	1.3E+3
Nickel	7440020	391.25	NA	2969.689027	NA	1.6E+2	0.997	NA	2.1E+5	2,600	1.6E+2	1.6E+2
Zinc	7440666	391.25	NA	744.5120713	NA	3.8E+2	0.986	NA	16,000	3,300	3.8E+2	3.8E+2
Pentachlorophenol	87865	NA	7.25	22.42995137	NA	8.6E+0	NA	NA	2.8	1.8	2.8E+0	1.8E+0

NA = Criterion or value is not available or not applicable.
* The formulas in this spreadsheet depend upon appropriate entries in these cells. Do not leave these cells blank. If numeric hardness or pH values are not available, enter the word "hardness" or "pH" in the appropriate cell.

Calculation of Generic Facility-Specific
Part 201 Soil GSI Protection Criteria (GSI PC)

Directions for calculating a generic facility-specific soil GSI PC:

1. Manually type in the "**GSI**" criterion calculated on the previous page, rounded to 2 significant figures. DO NOT CUT AND PASTE as this will enter the unrounded value and generate a different value. Click the green check mark to the left of the Excel formula bar or press the "Enter" key.
2. The GSI PC will calculate and appear in Column W. The GSI PC are the higher of the Soil-Water Partition Value for GSI (Column U) and the 20 X GSI value (Column V).

Calculate Soil GSI PC in ug/Kg (ppb)								
Hazardous Substance	Chemical Abstract Service Number (CAS #)	* ENTER GSI	Soil-Water Distribution Coefficients (Kd) L/Kg	Henry's Law Constant (HLC) atm-m3/mol	Soil Organic Carbon-Water Partition Coefficient (Koc) L/Kg	Soil-Water Partition Value for GSI ug/Kg	20 X GSI ug/Kg	Soil GSI PC ug/Kg
Acetate	71501	8200	NA	NA	NA	NA	1.6E+5	1.6E+5
Acetic acid	64197	8200	NA	NA	NA	NA	1.6E+5	1.6E+5
Barium	7440393	1900	41	NA	NA	1.2E+6	3.8E+4	1.2E+6
Beryllium	7440417	75	790	NA	NA	9.5E+5	1.5E+3	9.5E+5
Cadmium	7440439	6.1	75	NA	NA	7.3E+3	1.2E+2	7.3E+3
Chromium (III)	16065831	230	1.8E+6	NA	NA	6.6E+9	4.6E+3	6.6E+9
Copper	7440508	29	360	NA	NA	1.7E+5	5.8E+2	1.7E+5
Lead	7439921	60	11,000	NA	NA	1.1E+7	1.2E+3	1.1E+7
Manganese	7439965	6500	NA	NA	NA	NA	1.3E+5	1.3E+5
Nickel	7440020	160	65	NA	NA	1.7E+5	3.2E+3	1.7E+5
Zinc	7440666	380	62	NA	NA	3.8E+5	7.6E+3	3.8E+5
Pentachlorophenol	87865	2.8	NA	2.44E-8	592	2.7E+4	5.6E+1	2.7E+4

NA = Criterion or value is not available or not applicable.
* The formulas in this spreadsheet depend upon appropriate entries in these cells. Do not leave these cells blank. If numeric GSI values are not available, enter "GSI" in the appropriate cell.

NOTE

In comparison to SS criteria in Site Summary Report: the only constituents which values changed are lead and manganese.
For GSI Criteria - the values went up for both.
For GSI PC - the value for lead went up and the value for manganese stayed the same.

TABLE 3.2

SUMMARY OF CHROMIUM SPECIATION IN SOILS
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS PROPERTY
YPSILANTI, MI

PAOC		PAOC 18	PAOC 19	PAOC 19	PAOC 29	PAOC 29	PAOC 18	PAOC 29	PAOC 29	PAOC 19	PAOC 29	PAOC 19	PAOC 19	PAOC 23	PAOC 29	PAOC 29	PAOC 19	PAOC 29	PAOC 18
Location		SB18-278	SB19-49	MW19-35	SB19-53	MW19-36	SB18-279	MW19-39	MW19-36	MW19-34	SB19-52	MW19-34	SB19-50	SB19-51	MW19-38	SB19-54	MW19-33	MW19-37	SB18-276
Depth (ft bgs)		8-10	10-11.25	7.5-9.5	1-3	3.5-4.75	7-9 ft	0-2	0-2	0-2	0-2	0-2	0-2	3-6	0-2	7-9	0-2	0-2	0-2
Date Sampled		02/07/2012	02/08/2012	02/09/2012	02/07/2012	02/09/2012	02/07/2012	02/09/2012	02/09/2012	02/09/2012	02/07/2012	02/09/2012	02/08/2012	02/07/2012	02/09/2012	02/07/2012	02/08/2012	02/09/2012	02/07/2012
Duplicate																			
Chromium (total)	mg/kg	860 ^{fhj}	820 ^{fhj}	770 ^{fhj}	620 ^{fhj}	180 ^{fi}	130 ^{fi}	94 ^{fi}	93 ^{fi}	72 ^{fi}	63 ^{fi}	32 ^{fi}	31 ^{fi}	27 ^j	26 ⁱ	26 ⁱ	20 ^j	18 ⁱ	17 ^j
Chromium III	mg/kg	560	660	770	340	180	130	89	92	72	61	31	29	27	25	24	20	16	15
Chromium VI	mg/kg	310 ^{fhj}	160 ^{fi}	0.45 J	280 ^{fhj}	1.3	3.2	4.8 ⁱ	1.2	0.87 U	2.8	1.5	2.5	0.71 J	0.57 J	1.9	0.91 U	1.2	1.6
Chromium III	%	65	80	100	55	100	100	95	99	100	97	97	94	100	96	92	100	89	88
Chromium VI	%	36	20	0	45	1	2	5	1	1	4	5	8	3	2	7	5	7	9
		PAOC 18	PAOC 19	PAOC 29	PAOC 19	PAOC 19	PAOC 29	PAOC 19	PAOC 19	PAOC 29	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 29	PAOC 19	PAOC 29	PAOC 29	PAOC 19
		SB18-277	MW19-34	MW19-38	MW19-35	SB19-50	MW19-39	SB19-49	SB19-50	MW19-39	MW19-32	MW19-33	MW19-41	MW19-40	MW19-38	MW19-32	MW19-36	MW19-37	MW19-41
		0-2	7-9	0-2	0-2	9-11	8-10	0-2	9-11	8-10	0-2	7.5-9.5	8-10	0-2	5-7	8-10	7.5-9.5	7.5-9.5	0-2
		02/07/2012	02/09/2012	02/09/2012	02/09/2012	02/08/2012	02/09/2012	02/08/2012	02/08/2012	02/09/2012	02/08/2012	02/08/2012	02/08/2012	02/08/2012	02/07/2012	02/09/2012	02/08/2012	02/09/2012	02/08/2012
Duplicate																			
Chromium (total)	mg/kg	17 ^j	14 ^j	13 ^j	11 ^j	11 ^j	11 ^j	10 ^j	10 ^j	10 ^j	9.2 ^j	8.4 ⁱ	8.4 ⁱ	7.3 ^j	7.0 ^j	6.9 ^j	6.7 ^j	5.7 ^j	5.0 ^j
Chromium III	mg/kg	16	14	13	9.9	10	9.6	9.3	8.9	9.6	7.9	8.4	8.0	6.5	6.4	6.4	6.7	5.7	4.0
Chromium VI	mg/kg	0.71 J	0.95 U	0.94 U	1.4	0.94	0.92	1.1	1.3	0.63 J	1.3	0.91 U	0.49 J	0.82 J	0.67 J	0.51 J	0.88 U	0.89 U	1.0
Chromium III	%	94	100	100	90	91	87	93	89	96	86	100	95	89	91	93	100	100	80
Chromium VI	%	4	7	0	13	9	8	11	13	6	14	11	0	11	10	7	13	16	20
		Overall (%)	PAOC 18	PAOC 19	PAOC 23	PAOC 29													
Chromium III	%	92	87	93	100	93													
Chromium VI	%	9	13	9	3	9													
# of samples		36	4	17	1	14													

Notes

##	Denotes exceedance of Part 201 Criteria
f	Nonresidential Drinking Water Protection Criteria
h	Nonresidential Particulate Soil Inhalation Criteria
j	Groundwater Surface Water Interface Protection Criteria
J	Estimated Concentration
U	Not present at or above the associated value

SUMMARY OF CHROMIUM SPECIATION IN GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS PROPERTY
YPSILANTI, MI

PAOC		PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Location		MW-13	MW19-04	MW19-32	MW19-33	MW19-34	MW19-34	MW19-35
Date Sampled		02/13/2012	02/13/2012	02/22/2012	02/22/2012	02/22/2012	02/22/2012	02/21/2012
		Duplicate						
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0043 J
Chromium III (trivalent)	mg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Chromium VI (hexavalent)	mg/L	0.010 U	0.010 U	0.010 U	0.0033 J	0.010 U	0.010 U	0.010 U

J Estimated Concentration
U Not present at or above the associated value

TABLE 3.4

**BACKGROUND METALS IN GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS PROPERTY
YPSILANTI, MI**

<i>Metals</i> <i>Sample Elevation Range</i>	<i>Units</i>	<u>Site Specific</u>	<u>Shallow Aquifer Regional</u>		
		<i>CVO</i> ~AMSL 710-695	<i>Willow Run Creek</i> ~ AMSL 705 - 695	<i>Powertrain</i> ~ AMSL 720 -705	<i>Fons/ Old Wayne</i> ~ AMSL 705 - 690
Aluminum	mg/L	0.256	2.9	0.59	0.4
Antimony	mg/L	0.002 U	0.0062	0.002 U	0.06
Arsenic	mg/L	0.015	0.0091	0.025	0.09
Barium	mg/L	0.412	0.1	0.661	0.31
Beryllium	mg/L	0.001 U	NA	0.001 U	0.0025
Cadmium	mg/L	0.001 U	0.0002	0.001 U	0.0025
Calcium	mg/L	328	140	217	532
Chromium	mg/L	0.016	NA	0.01 U	0.005
Chromium III (trivalent)	mg/L	0.016	--	0.01 U	--
Chromium VI (hexavalent)	mg/L	0.010 U	--	0.01 U	--
Cobalt	mg/L	0.007 U	NA	0.02 U	0.025
Copper	mg/L	0.0029 U	0.014	0.010	0.0125
Iron	mg/L	13.1	3.6	9.59	50
Lead	mg/L	0.003 U	0.0078	0.006	0.009
Magnesium	mg/L	174	25	53.9	123
Manganese	mg/L	2.76	0.87	0.701	2
Mercury	mg/L	0.0002 U	--	0.04 U	0.00052
Nickel	mg/L	0.02 U	--	0.011	0.061
Potassium	mg/L	102	6.4	3.73	43
Selenium	mg/L	0.005 U	--	0.005 U	0.0015
Silver	mg/L	0.0002 U	0.00025	0.0002 U	0.005
Sodium	mg/L	2666	170	390	874
Thallium	mg/L	0.001 U	--	0.002 U	0.0038
Vanadium	mg/L	0.004 U	0.01	0.014	0.025
Zinc	mg/L	0.02 U	0.046	0.05 U	0.10

Notes:

U - Not present at or above the associated value

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				DMW1	DMW2	GS-7	GS-7	GS-7	GS-7	GS-7
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne		GW-17303-042412-CB-315	GW-17303-042412-CB-314	WG-17303-031006-NR-0954	GW-17303-062806-EV-005	WG-17303-100306-LA-042	WG-17303-120706-EV-028	WG-17303-031207-EV-030
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		04/24/2012	04/24/2012	03/10/2006	06/28/2006	10/03/2006	12/07/2006	03/12/2007
Sample Type:												
Parameters	Units											
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	1.6 U	1.4 U	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.002 U	0.002 U	0.00033 J	0.00075 J	0.002 U	0.00027 J	0.00021 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.0127 {D,E}	0.0069	0.016 {D,E}	0.0118 {D,E}	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.092 J	0.071 J	0.319	0.0826 J	0.288	0.32	0.167
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.0027 J	0.0023 J	0.005 U	0.005 U	0.005 U	0.0017 J	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.0033 J	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.0024 U	0.002 U	0.002 U	0.0025 U	0.0033 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.037	0.021	6.81 {D,E}	1.08 {E}	4.33 {E}	5.33 {E}	3.19 {E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.003 J	0.0065 J	0.0015 J	0.0024 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0011 J
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.000053 J	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.0013 J	0.0009 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0078 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0138 U

- Background Level for Site
- ##

Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteria)
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter					N	N	N	N	N	N	Y
Sample Location:	Site Specific	Shallow Aquifer Regional			GS-7	GS-7	GS-7	GS-7	GS-7	GS-7	MW-4
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-060607-EV-017	WG-17303-090707-EV-029	GW-17303-120607-DR-028	WG-17303-032708-MC-031	WG-17303-061908-DR-027	WG-17303-092408-DR-046	WG-17303-030906-NR-0973
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/06/2007	09/07/2007	12/06/2007	03/27/2008	06/19/2008	09/24/2008	03/09/2006
Sample Type:											

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.05 U	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00017 J	0.002 U	0.002 U	0.00017 J	0.002 U	0.00014 J	0.00025 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.0156 {D,E}	0.0138 {D,E}	0.0133 {D,E}	0.005 U	0.0103 U	0.0087	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.249	0.233	0.29	0.184	0.205	0.196	0.272
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.00034 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0017 J	0.002 U	0.002 U	0.00093 J	0.002 U	0.0013 J	0.0027 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	30.2 {E}	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	3.28 {E}	3.62 {E}	4.73 {E}	1.99 {E}	2.9 {E}	1.88 {E}	0.436 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00014 J{D}	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.0015 J	0.02 U	0.02 U	0.02 U	0.02 U	0.0046 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.000027 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.008 J	0.01 U	0.01 U	0.0049 J	0.01 U	0.01 U	0.02 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional				MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-062906-NRS-007	WG-17303-100306-LA-043	WG-17303-100306-LA-044	WG-17303-120606-JJ-025	WG-17303-030807-JJ-009	WG-17303-060607-EV-020	WG-17303-090607-EV-019	
Sample Date:	~ AMSL 710-695 ~ AMSL 705 - 695 ~ AMSL 720 -705 ~ AMSL 705 - 690					06/29/2006	10/03/2006	10/03/2006	12/06/2006	03/08/2007	06/06/2007	09/06/2007
Sample Type:								Duplicate				

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00041 J	0.00025 J	0.00024 J	0.002 U	0.00033 J	0.00034 J	0.00031 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.312	0.365	0.372	0.362	0.373	0.327	0.298
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.00018 J	0.00038 J	0.00015 J
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.003 J	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.0016 J	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.0032 U	0.0031 U	0.002 U	0.0036 U	0.0035	0.0027 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.394 {E,H}	0.412 {E,H}	0.422 {E,H}	0.392 {E,H}	0.385 {E,H}	0.392 {E,H}	0.339 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0044 J	0.0058 J	0.005 J	0.0048 J	0.02 U	0.0053 J	0.0045 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0036 J	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.00014 J	0.00014 J	0.001 U	0.00015 J	0.000064 J	0.00014 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0111 J	0.0105 J	0.007 J	0.02 U	0.0251 U	0.0498	0.017 U

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						Y	Y	Y	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW-4	MW-4	MW-4	MW-5	MW-12	MW-12	MW-12	MW-12	MW-12
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	GW-17303-120607-DR-030	WG-17303-032708-MC-027	WG-17303-092308-DR-036	MW-5	MW-12	WG-17303-100506-NRS-061	WG-17303-120706-DK-029	WG-17303-030807-NRS-012		
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	12/06/2007	03/27/2008	09/23/2008	03/21/1997	03/21/1997	10/05/2006	12/07/2006	03/08/2007		
Sample Type:														

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	0.0241 J	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00021 J	0.00014 J	0.002 U	-	-	0.00046 J	0.00025 J	0.00017 J	
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	-	-	0.005 U	0.005 U	0.005 U	
Barium	mg/L	0.412	0.31	0.661	0.1	0.37	0.332	0.386	-	-	0.0352 J	0.0397 J	0.0313 J	
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	-	-	0.001 U	0.001 U	0.001 U	
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.00016 J	0.0005 U	0.00018 J	-	-	0.001 U	0.001 U	0.0005 U	
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-	-	
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.0023 J	-	-	0.005 U	0.005 U	0.005 U	
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-	-	
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-	-	
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	-	-	0.0022 J	0.0012 J	0.007 U	
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0024 U	0.00042 J	0.0015 J	-	-	0.002 U	0.002 U	0.002 U	
Iron	mg/L	13.1	50	9.59	3.6	0.41 [E,H]	-	-	-	-	-	-	-	
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-	-	
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.0050 U	0.0050 U	0.003 U	0.003 U	0.003 U	
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	0.0050 U	0.0050 U	-	-	-	
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-	-	
Manganese	mg/L	2.76	2	0.701	0.87	0.418 [E,H]	0.344 [E,H]	0.339 [E,H]	-	-	0.0807 [E]	0.0617 [E]		0.0046 J
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-	-	
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	-	-	0.0002 U	0.0002 U	0.0002 U	
Nickel	mg/L	0.02 U	0.061	0.011		0.0065 J	0.02 U	0.0065 J	-	-	0.0017 J	0.0026 J	0.02 U	
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-	-	
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.002 U	-	-	0.005 U	0.005 U	0.002	
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	-	-	0.0002 U	0.0002 U	0.0002 U	
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-	-	
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.00014 J	0.001 U	0.001 U	-	-	0.00012 J	0.001 U	0.000069 J	
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	-	-	0.004 U	0.004 U	0.004 U	
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.014 U	0.0088 J	0.0076 J	-	-	0.0094 J	0.0282 U	0.01 U	

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-13
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-060507-EV-010	WG-17303-090507-DR-005	WG-17303-120407-DR-001	WG-17303-032508-CB-014	WG-17303-061808-DR-007	WG-17303-092308-CB-033	WG-17303-080805-DR-0836	
Sample Date:	~ AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/05/2007	09/05/2007	12/04/2007	03/25/2008	06/18/2008	09/23/2008	08/08/2005	
Sample Type:												

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.05 U	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00018 J	0.002 U	0.00017 J	0.002 U	0.002 U	0.002 U	0.00013 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.0375 J	0.0325 J	0.0392 J	0.0323 J	0.0389 J	0.0345 J	0.0263 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.00033 J	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00074 J	0.00052 J
Iron	mg/L	13.1	50	9.59	3.6	-	-	0.1 U	0.1 U	0.1 U	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.0391	0.0335	0.0438	0.0059 J	0.0507 {E}	0.0371	0.0089 J
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.00013 J{D}	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0018 J	0.0024 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0024 U	0.0011 J	0.0014 J	0.002 U	0.002 U	0.002 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.000038 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.01 U	0.01 U	0.01 U	0.0044 J	0.01 U	0.0065 J	0.02 U

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter					N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			MW-13	MW-13	MW-14	MW-14	MW-14	MW-14	MW-14
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	GW-17303-021312-CB-045	GW-17303-052312-CB-322	WG-17303-030706-NR-0949	WG-17303-070606-EV-026	WG-17303-100406-NRS-058	WG-17303-120606-DK-017	WG-17303-030807-NRS-011
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	02/13/2012	05/23/2012	03/07/2006	07/06/2006	10/04/2006	12/06/2006	03/08/2007
Sample Type:											

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.05 U	0.05 U	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00016 J	0.002 U	0.00029 J	0.00051 J	0.00031 J	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.025 J	0.015 J	0.047 J	0.0429 J	0.0532 J	0.047 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	110	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		0.010 U	0.010 U	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		0.010 U	0.010 U	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0029 U	0.002 U	0.002	0.0017 J	0.0023 U	0.0026 U
Iron	mg/L	13.1	50	9.59	3.6	-	0.11	-	0.1 U	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	0.1 U	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	21	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.031	0.0062 J	0.0316	0.0074 J	0.109 {E}	0.0937 {E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	0.015 U	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.0022 J	0.02 U	0.02 U	0.0022 J
Potassium	mg/L	102	43	3.73	6.4	-	1 U	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.0033 J	0.0033 J	0.005 U	0.0033 J
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	21	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.000057 J	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.0202 U	0.0102 J	0.017 J	0.02 U

- Background Level for Site
- ##

Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter					N	N	N	N	N	Y	Y	
Sample Location:	Site Specific	Shallow Aquifer Regional			MW-14	MW-14	MW-14	MW-14	MW-14	MW19-01	MW19-01	
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-060507-EV-012	WG-17303-090607-NRS-017	WG-17303-120507-DR-014	WG-17303-032508-MC-009	WG-17303-092308-CB-035	WG-17303-030706-LA-0945	WG-17303-062906-NRS-008	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/05/2007	09/06/2007	12/05/2007	03/25/2008	09/23/2008	03/07/2006	06/29/2006	
Sample Type:												

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.0312 J	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00027 J	0.00023 J	0.00019 J	0.00013 J	0.002 U	0.00041 J	0.00038 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.0407 J	0.0455 J	0.0642 J	0.0485 J	0.0547 J	0.135	0.131
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.00013 J	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.00043 J
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.0016 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.006 U	0.002 U	0.0019 J	0.00071 J	0.0015 J	0.0023	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	0.1 U	-	-	0.174
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	0.0326 J
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.0956 {E}	0.0499	0.0781 {E}	0.0954 {E}	0.0906 {E}	0.0084 J	0.0088 J
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	0.0071 J
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.00015 J{D}	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0025 J	0.02 U	0.02 U	0.02 U	0.0033 J	0.0028 J	0.0035 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0029 U	0.0011 J	0.002 U	0.0024	0.002 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.000046 J	0.001 U	0.001 U	0.001 U	0.00018 J	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.01 U	0.01 U	0.0108	0.0094 J	0.0103	0.02 U	0.0082 J

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter					Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-01	MW19-01	MW19-01	MW19-01	MW19-01	MW19-01	MW19-01
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-100406-LA-051	WG-17303-120606-LA-024	WG-17303-030807-JJ-008	WG-17303-060607-DR-019	WG-17303-090607-EV-021	WG-17303-120507-DR-017	WG-17303-120507-DR-018
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	10/04/2006	12/06/2006	03/08/2007	06/06/2007	09/06/2007	12/05/2007	12/05/2007
Sample Type:											Duplicate

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00048 J	0.002 U	0.00026 J	0.00024 J	0.00027 J	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.222	0.132	0.154	0.112	0.147	0.286
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0029 U	0.002 U	0.0028 U	0.0028	0.0028	0.0012 J
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	4.45 [E,H]
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.0867 [E,H]	0.0148 J	0.0555 [E,H]	0.0193	0.0288	0.148 [E,H]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0021 J	0.0033 J	0.02 U	0.0028 J	0.0019 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.002 U	0.00072 J	0.00082 J	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.00021 J	0.001 U	0.00019 J	0.00012 J	0.00034 J	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.0138 U	0.0071 J	0.0111 U	0.0098 J

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						Y	Y	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-01	MW19-01	MW19-02	MW19-02	MW19-02	MW19-02	MW19-02
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-032608-MC-022	WG-17303-092308-DR-038	WG-17303-030706-AB-0947	WG-17303-063006-LA-014	WG-17303-063006-LA-015	WG-17303-070506-LA-015	WG-17303-100406-NRS-054	
Sample Date:	~AMSL 710-695 ~ AMSL 705 - 695 ~ AMSL 720 -705 ~ AMSL 705 - 690					03/26/2008	09/23/2008	03/07/2006	06/30/2006	06/30/2006	07/05/2006	10/04/2006
Sample Type:	Duplicate											

Parameters Units

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.05 U	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.002 U	0.002 U	0.0001 J	0.00012 J	0.002 U	-	0.00023 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.118	0.239	0.0816 J	0.0641 J	0.0676 J	-	0.213
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	-	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L		0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	-	0.0017 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.0016 J	0.0014 J	0.002 U	0.002 U	-	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	0.408 [E,H]	-	-	0.615 [E]	0.597 [E]	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	0.593 [E]	-	0.578 [E]	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	-	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.0151	0.0418	0.133 [E]	0.169 [E]	0.177 [E]	-	0.304 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	0.163 [E]	-	0.143 [E]	-
Mercury	mg/L	0.0002 U	0.00052	0.004 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000099 J[D]	-	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.0059 J	0.02 U	0.0025 J	0.0025 J	-	0.0019 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0014 J	0.002 U	0.005 U	0.005 U	0.005 U	-	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.00011 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	-	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0037 J	0.0052 J	0.02 U	0.02 U	0.02 U	-	0.02 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-02	MW19-02	MW19-02	MW19-02	MW19-02	MW19-02	MW19-02
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-120606-LA-015	WG-17303-030907-NRS-021	WG-17303-030907-NRS-022	WG-17303-060607-DR-015	WG-17303-060607-DR-016	WG-17303-090707-DR-030	WG-17303-120507-DR-013	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	12/06/2006	03/09/2007	03/09/2007	06/06/2007	06/06/2007	09/07/2007	12/05/2007	
Sample Type:							Duplicate		Duplicate			
Parameters	Units											
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.002 U	0.00038 J	0.00022 J	0.0003 J	0.0002 J	0.002 U	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.14	0.125	0.112	0.0728 J	0.0724 J	0.106	0.129
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00036 J	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.00011 J	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.00076 J	0.00068 J	0.002 U	0.00098 J
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	1.36 [E]
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.14 [E]	0.204 [E]	0.183 [E]	0.0898 [E]	0.0895 [E]	0.174 [E]	0.184 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.00012 J[D]	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0014 J	0.02 U	0.02 U	0.02 U	0.02 U	0.0026 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.002 U	0.002 U	0.0017 J	0.0016 J	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.000091 J	0.000081 J	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.01 U	0.01 U	0.006 J	0.0046 J	0.01 U	0.0065 J

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter												
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-02	MW19-02	MW19-03	MW19-03	MW19-03	MW19-03	MW19-03
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-032608-CB-021	WG-17303-092308-CB-037	WG-17303-030706-NR-0946	WG-17303-070706-EV-033	WG-17303-100406-NRS-057	WG-17303-120606-LA-016	WG-17303-030907-NRS-026	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	03/26/2008	09/23/2008	03/07/2006	07/07/2006	10/04/2006	12/06/2006	03/09/2007	
Sample Type:												

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.05 U	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.002 U	0.002 U	0.00025 J	0.00023 J	0.00016 J	0.002 U	0.00011 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.1	0.136	0.0643 J	0.0685 J	0.075 J	0.0829 J	0.0708 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.00072 J	0.0019 J	0.0014 J	0.0024 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	0.979 [E]	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.125 [E]	0.179 [E]	0.067 [E]	0.183 [E]	0.189 [E]	0.206 [E]	0.28 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.0029 J	0.0019 J	0.0016 J	0.0028 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.00015 J	0.001 U	0.00008 J	0.001 U	0.00009 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.01 U	0.0051 J	0.02 U	0.0069 J	0.02 U	0.02 U	0.01 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter												
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-03	MW19-03	MW19-03	MW19-03	MW19-04	MW19-04	MW19-04
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-060507-DR-011	WG-17303-090607-NRS-020	WG-17303-120507-DR-015	WG-17303-032508-MC-010	WG-17303-080805-DR-0834	WG-17303-080805-DR-0835	GW-17303-021312-CB-046	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/05/2007	09/06/2007	12/05/2007	03/25/2008	08/08/2005	08/08/2005	02/13/2012	
Sample Type:										Duplicate		

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.05 U	-	-	0.05 U
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00015 J	0.00014 J	0.002 U	0.002 U	0.0002 J	0.00015 J	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.0754 J	0.0725 J	0.082 J	0.0782 J	0.0251 J	0.0278 J	0.014 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	0.010 U
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	0.010 U
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.0012 J	0.002 U	0.0008 J	0.00072 J	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	1.2 {E}	0.638 {E}	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.2 {E}	0.188 {E}	0.253 {E}	0.249 {E}	0.015 U	0.015 U	0.031
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.000098 J{D}	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0027 J	0.0016 J	0.02 U	0.02 U	0.0029 J	0.02 U	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.000086 J	0.00044 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.01 U	0.01 U	0.0043 J	0.004 J	0.02 U	0.02 U	0.02 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter								N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-04	MW19-04	MW19-07	MW19-07	MW19-07	MW19-07	MW19-07
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne		GW-17303-052312-CB-323	GW-17303-052312-CB-324	WG-17303-030706-LA-0944	WG-17303-070506-EV-024	WG-17303-100406-NRS-053	WG-17303-120606-LA-023	WG-17303-030807-JJ-015
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		05/23/2012	05/23/2012	03/07/2006	07/05/2006	10/04/2006	12/06/2006	03/08/2007
Sample Type:							Duplicate					

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.093 [E]	0.04 J	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.002 U	0.002 U	0.001 J	0.00039 J	0.00048 J	0.002 U	0.00031 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.0044 J	0.0054	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.017 J	0.016 J	0.264	0.31	0.436	0.197	0.375
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.00046 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U
Calcium	mg/L	328	532	217	140	64	64	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		0.010 U	0.010 U	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		0.010 U	0.010 U	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.0021 J	0.0016 J	0.0022 J	0.007 U	0.0036 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.0015 J	0.002	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	0.38 J[E]	0.17 J	-	2.44 [E]	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	1.34 [E]	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	11	11	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.068 [E]	0.048	0.182 [E]	0.126 [E]	0.145 [E]	0.0766 [E]	0.211 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	0.114 [E]	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.004 J	0.0022 J	0.02 U	0.002 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	1 U	1 U	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.003 J	0.005 U	0.0024 J	0.005 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Sodium	mg/L	2666	874	390	170	53	54	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.00014 J	0.001 U	0.00012 J	0.001 U	0.00012 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0229 U

- Background Level for Site
- ##

Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-07	MW19-07	MW19-07	MW19-07	MW19-07	MW19-07	MW19-07
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-030807-JJ-016	WG-17303-060507-DR-007	WG-17303-090607-EV-023	WG-17303-090607-EV-024	WG-17303-120507-DR-019	WG-17303-032608-MC-017	WG-17303-032608-MC-018	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	03/08/2007	06/05/2007	09/06/2007	09/06/2007	12/05/2007	03/26/2008	03/26/2008	
Sample Type:					Duplicate			Duplicate			Duplicate	
Parameters	Units											
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	0.05 U	0.05 U
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00029 J	0.00048 J	0.00024 J	0.00023 J	0.0002 J	0.00014 J	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.0058	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.386	0.276	0.37	0.35	0.443	0.295	0.306
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0035 J	0.007 U	0.0019 J	0.0017 J	0.003 J	0.0018 J	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.002 U	0.0013 J	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	3.06 [E]	2.41 [E]	2.51 [E]
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.201 [E]	0.1 [E]	0.159 [E]	0.138 [E]	0.268 [E]	0.143 [E]	0.153 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0001 J[D]	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.0021 J	0.0029 J	0.0021 J	0.02 U	0.02 U	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.00071 J	0.002 U	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.00021 J	0.000042 J	0.00016 J	0.00015 J	0.00015 J	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0223 U	0.01 U	0.01 U	0.01 U	0.0148	0.0054 J	0.0046 J

- Background Level for Site
- ## Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						N	N	N	N	N	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-07	MW19-07	MW19-07	MW19-07	MW19-11	MW19-23	MW19-24
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-061808-DR-013	WG-17303-061808-DR-014	WG-17303-092308-CB-039	WG-17303-092308-CB-040	GW-17303-021312-CB-044	GW-17303-021412-CB-050	WG-17303-030706-AB-0948	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/18/2008	06/18/2008	09/23/2008	09/23/2008	02/13/2012	02/14/2012	03/07/2006	
Sample Type:						Duplicate		Duplicate				

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	0.05 U	0.05 U	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00017 J	0.00017 J	0.002 U	0.002 U	0.0041	0.00016 J	0.00023 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.0036 J	0.0047 J	0.0037 J	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.221	0.232	0.249	0.248	0.12	0.033 J	0.387
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.0037 J	0.005 U	0.005 U	0.005 U	0.0075	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.0017 J	0.0018 J	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.00076 J	0.00099 J	0.002 U	0.002 U	0.0021
Iron	mg/L	13.1	50	9.59	3.6	1.9 {E}	2 {E}	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.163 {E}	0.182 {E}	0.132 {E}	0.132 {E}	0.35 {E}	0.012 J	0.237 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.00023 {D}	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.005 J	0.02 U	0.02 U	0.0032 J	0.0099 J	0.02 U	0.003 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.01 U	0.01 U	0.0064 J	0.0049 J	0.02 U	0.02 U	0.02 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-24	MW19-24	MW19-24	MW19-24	MW19-24	MW19-24	MW19-24	MW19-24
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-062906-NRS-009	WG-17303-100406-LA-052	WG-17303-120606-AF-021	WG-17303-120606-AF-022	WG-17303-030907-NRS-020	WG-17303-060607-DR-018	WG-17303-090607-EV-022	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/29/2006	10/04/2006	12/06/2006	12/06/2006	03/09/2007	06/06/2007	09/06/2007	
Sample Type:								Duplicate				
Parameters	Units											
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00037 J	0.0007 J	0.002 U	0.002 U	0.00029 J	0.00025 J	0.00035 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.0066	0.0051	0.005 U	0.005 U	0.0045 J	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.458	0.703	0.61	0.557	0.718	0.465	0.479
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.00051
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0019 J
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0013 J	0.0042
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.263 {E,H}	0.436 {E,H}	0.31 {E,H}	0.281 {E,H}	0.552 {E,H}	0.327 {E,H}	0.303 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0028 J	0.0056 J	0.0042 J	0.0043 J	0.02 U	0.0017 J	0.0033 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.0026 J	0.005 U	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.000089 J	0.001 U	0.001 U	0.000034 J	0.001 U	0.00012 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.003 J
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.02 U	0.0246 U	0.0145	0.0205

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter						Y	Y	Y	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-24	MW19-24	MW19-24	MW19-29	MW19-29	MW19-29	MW19-30	MW19-31
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-120507-DR-016	WG-17303-032508-MC-012	WG-17303-092308-CB-041	GW-17303-093011-CB-042	GW-17303-093011-CB-043	GW-17303-093011-CB-045	GW-17303-093011-CB-044	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	12/05/2007	03/25/2008	09/23/2008	09/30/2011	09/30/2011	09/30/2011	09/30/2011	
Sample Type:									Duplicate			
Parameters	Units											
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	0.0242 J	-	0.035 J	0.027 J	0.05 U	0.028 J
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00015 J	0.002 U	0.002 U	0.00057 J	0.00065 J	0.00034 J	0.00071 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.0059	0.0065	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.561	0.465	0.412	0.15	0.16	0.13	0.074 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0009 J	0.002 U	0.00051 J	0.00082 J	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	11.7 [E,H]	7.96 [E,H]	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.367 [E,H]	0.284 [E,H]	0.241 [E,H]	0.23 [E]	0.24 [E]	0.18 [E]	0.11 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0032 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.002 U	0.0067 [D]	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.0011	0.00085 J	0.00064 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0156	0.0027 J	0.0073 J	0.02 U	0.02 U	0.02 U	0.02 U

- Background Level for Site
- ##

Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19	PAOC 19
Perimeter					N	N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-32	MW19-32	MW19-33	MW19-33	MW19-34	MW19-34	MW19-34	MW19-34
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	GW-17303-022212-CB-067	GW-17303-052312-CB-321	GW-17303-022212-CB-066	GW-17303-052312-CB-320	GW-17303-022212-CB-064	GW-17303-022212-CB-065	GW-17303-052312-CB-319	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	02/22/2012	05/23/2012	02/22/2012	05/23/2012	02/22/2012	02/22/2012	05/23/2012	
Sample Type:										Duplicate		

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.19 [E]	0.049 J	0.062 [E]	0.088 [E]	0.18 [E]	0.2 [E]	0.12 [E]
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00053 J	0.00041 J	0.00025 J	0.002 U	0.00046 J	0.00051 J	0.00042 J
Arsenic	mg/L	0.015	0.09		0.0091	0.005 U	0.005 U	0.0062 U	0.014 [D,E]	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.2	0.09 J	0.26	0.26	0.14	0.14	0.13
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	140	-	230	-	-	190
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		0.010 U	0.010 U	0.0033 J	0.010 U	0.010 U	0.010 U	0.010 U
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.002 J	0.007 U	0.007 U	0.0017 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	0.091 J	-	8.4 [E]	-	-	0.58 [E]
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	19	-	35	-	-	26
Manganese	mg/L	2.76	2	0.701	0.87	0.27 [E]	0.12 [E]	0.73 [E]	1 [E]	0.48 [E]	0.49 [E]	0.48 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0053 J	0.02 U	0.0035 J	0.02 U	0.0041 J	0.0036 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	6	-	11	-	-	12
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	1200 [E]	-	890 [E]	-	-	1600 [E]
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.00015 J	0.001 U	0.001 U	0.001 U	0.001 U	0.00015 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 20	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter						N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW-18	IW-9	IW-9	IW-9	IW-9	IW-9	IW-9
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	GW-17303-021312-CB-043	GW-17303-JH-121301-0100	GW-17303-011402-BN-111	GW-17303-031402-TJ-117	GW-17303-050602-MM-123	GW-072202-MM-130	GW-072202-MM-131	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	02/13/2012	12/13/2001	01/14/2002	03/14/2002	05/06/2002	07/22/2002	07/22/2002	
Sample Type:											Duplicate	

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.05 U	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00014 J	-	-	-	-	-	-
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	-	-	-	-	-	-
Barium	mg/L	0.412	0.31	0.661	0.1	0.093 J	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	-	-	-	-	-	-
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	-	-	-	-	-	-
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	-	-	-	-	-	-
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	-	-	-	-	-	-
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.057 [E]	0.375 [E]	4.92 [E]	20 [D,E]	6.51 [E]	2.2 [E]	2.04 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	-	-	-	-	-	-
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	-	-	-	-	-	-
Potassium	mg/L	102	43	3.73	6.4	-	8.13	591	77.3	619	89	86
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	-	-	-	-	-	-
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	-	-	-	-	-	-
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	-	-	-	-	-	-

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter					N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			IW-9	IW-9	IW-9	IW-9	IW-9	IW-9	IW-9
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	17303-130803-HS-217	WG-17303-030906-EV-0963	WG-17303-030906-NR-0965	WG-17303-070506-EV-021	WG-17303-100306-EV-041	WG-17303-120606-DK-020	WG-17303-030907-EV-023
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	08/13/2003	03/09/2006	03/09/2006	07/05/2006	10/03/2006	12/06/2006	03/09/2007
Sample Type:							Duplicate				

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	-	0.00018 J	0.00016 J	0.0011 J	0.00011 J	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	-	0.0864 J	0.0863 J	0.135	0.0912 J	0.0742 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	-	0.001 U	0.001 U	0.001 U	0.00032 J	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	-	0.001 U	0.001 U	0.001 U	0.001 U	0.00051
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	-	0.007 U	0.007 U	0.007 U	0.007 U	0.0022 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	-	0.002 U	0.002 U	0.0018 J	0.002 U	0.0041 U
Iron	mg/L	13.1	50	9.59	3.6	0.0418	-	-	4.49 [E]	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	0.1 U	-	-	3.61 [E]	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	-	0.003 U	0.003 U	0.0021 J	0.003 U	0.0018 J
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	10.3 {D,E}	6.01 [E]	6.14 [E]	5.75 [E]	5.11 [E]	4.68 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	10.2 {D,E}	-	-	5.85 [E]	-	5.42 [E]
Mercury	mg/L	0.0002 U	0.00052	0.04 U		-	0.00019 J{D}	0.0002 U	0.0002 U	0.0002 U	0.00011 J{D}
Nickel	mg/L	0.02 U	0.061	0.011		-	0.0029 J	0.003 J	0.0034 J	0.0018 J	0.002 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		-	0.005 U	0.005 U	0.005 U	0.0024 J	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	-	0.0002 U	0.0002 U	0.00016 J	0.0002 U	0.0002 UJ
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		-	0.001 U	0.001 U	0.001 U	0.001 U	0.000042 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	-	0.004 U	0.004 U	0.004 U	0.004 U	0.0078
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	-	0.02 U	0.02 U	0.02 U	0.02 U	0.336

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter					N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			IW-9	IW-9	IW-9	IW-9	IW-9	IW-12	IW-12
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-060507-DR-001	WG-17303-090607-EV-018	GW-17303-120607-DR-024	WG-17303-032708-CB-030	WG-17303-092308-DR-032	GW-17303-JH-121301-0101	GW-17303-011402-BN-112
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/05/2007	09/06/2007	12/06/2007	03/27/2008	09/23/2008	12/13/2001	01/14/2002
Sample Type:											

ParametersUnits

Metals											
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.05 U	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00013 J	0.000086 J	0.002 U	0.002 U	0.002 U	-
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.0032 J	0.005 U	-
Barium	mg/L	0.412	0.31	0.661	0.1	0.0839 J	0.111	0.121	0.118	0.0851 J	-
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.00014 J	0.0005 U	0.0005 U	0.0005 U	-
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.0029 J	0.005 U	-
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	-
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.00089 J	0.002 U	0.002 U	0.002 U	0.00038 J	-
Iron	mg/L	13.1	50	9.59	3.6	-	-	3.4 [E]	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	-
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	5.26 [E]	3.95 [E]	4.12 [E]	3.66 [E]	3.4 [E]	0.63 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-
Nickel	mg/L	0.02 U	0.061	0.011		0.0032 J	0.0023 J	0.02 U	0.0065 J	0.02 U	-
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	18.6
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.00077 J	0.002 U	0.002 U	0.002 U	0.002 U	-
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.003 J	0.004 U	-
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0139	0.01 U	0.01 U	0.0807	0.012	-

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter						N	N	N	N	N	N	N
Sample Location:		Site Specific		Shallow Aquifer Regional		IW-12	IW-12	IW-12	IW-12	IW-12	IW-12	IW-12
Sample ID:		CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	GW-17303-031402-TJ-118	GW-17303-050602-MM-124	GW-072202-MM-132	WG-17303-030906-EV-0961	WG-17303-070506-EV-022	WG-17303-100406-LA-056	WG-17303-120606-EV-019
Sample Date:		~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	03/14/2002	05/06/2002	07/22/2002	03/09/2006	07/05/2006	10/04/2006	12/06/2006
Sample Type:												
Parameters		Units										
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	-	-	-	0.0006 J	0.00097 J	0.00054 J	0.002 U
Arsenic	mg/L	0.015	0.09	0.025	0.0091	-	-	-	0.005 U	0.005 U	0.0045 J	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	-	-	-	0.0979 J	0.0316 J	0.0762 J	0.0874 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	-	-	-	0.005 U	0.005 U	0.005 U	0.0036 J
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	-	-	-	0.007 U	0.007 U	0.0015 J	0.0014 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	-	-	-	0.0025 U	0.0034	0.0033 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	0.528 {E}	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	1.28 {E}	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	8.43 {D,E}	160 {D,E}	2 {E}	15.7 {D,E}	12.8 {D,E}	13.9 {D,E}	12.5 {D,E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	11.7 {D,E}	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		-	-	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		-	-	-	0.0167 J	0.0158 J	0.0173 J	0.0162 J
Potassium	mg/L	102	43	3.73	6.4	1110	1340	421	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		-	-	-	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	-	-	-	0.0002 U	0.00014 J	0.0002 U	0.0002 UJ
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		-	-	-	0.001 U	0.000088 J	0.000074 J	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	-	-	-	0.0048	0.0048	0.005	0.0046
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	-	-	-	0.02 U	0.02 U	0.02 U	0.02 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter					N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			IW-12	IW-12	IW-12	IW-12	IW-12	IW-12	IW-20
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-030907-EV-024	WG-17303-060507-DR-002	WG-17303-090607-EV-015	GW-17303-120607-DR-025	WG-17303-032708-CB-029	WG-17303-092308-DR-030	WG-17303-061605-DR-0792
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	03/09/2007	06/05/2007	09/06/2007	12/06/2007	03/27/2008	09/23/2008	06/16/2005
Sample Type:											

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	0.05 U	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00052 J	0.00046 J	0.00081 J	0.001 J	0.00027 J	0.002 U	0.0014 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.0059	0.005 U	0.0048 J	0.0059
Barium	mg/L	0.412	0.31	0.661	0.1	0.133	0.111	0.121	0.175	0.0892 J	0.167	0.69
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.00013 J	0.0005 U	0.00018 J	0.0005 U	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.0024 J	0.005 U	0.0042 J	0.0075	0.005 U	0.005 U	0.004 J
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0018 J	0.0018 J	0.003 J	0.0045 J	0.007 U	0.0023 J	0.0025 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.0014 J	0.0021 U	0.002 U	0.0004 J	0.00097 J	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	7 {E}	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	12.1 {D,E}	11.8 {D,E}	9.09 {D,E}	11.5 {D,E}	8.88 {D,E}	7.58 {D,E}	12.1 {D,E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.00014 J{D}	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.015 J	0.0139 J	0.0125 J	0.0127 J	0.0088 J	0.0101 J	0.0015 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000057 J
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.000079 J	0.001 U	0.000059 J	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.0048	0.0038 J	0.0044	0.0049	0.0023 J	0.0025 J	0.0064
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.01 U	0.0074 J	0.01 U	0.01 U	0.0093 J	0.0063 J	0.02 U

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER

RCRA FIELD INVESTIGATION REPORT

COMPANY VEHICLE OPERATIONS AREA

YPSILANTI, MICHIGAN

PAOC					PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter					N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional			IW-33	IW-33	IW-33	IW-33	IW-33	IW-33	IW-33
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	GW-17303-JH-121301-0102	GW-17303-011402-BN-113	GW-17303-031402-TJ-119	GW-17303-050602-MM-125	GW-17303-050602-MM-126	GW-072202-MM-135	17303-130803-HS-216
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	12/13/2001	01/14/2002	03/14/2002	05/06/2002	05/06/2002	07/22/2002	08/13/2003
Sample Type:									Duplicate		

ParametersUnits

Metals											
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	-	-	-	-	-	-
Arsenic	mg/L	0.015	0.09	0.025	0.0091	-	-	-	-	-	-
Barium	mg/L	0.412	0.31	0.661	0.1	-	-	-	-	-	-
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	-	-	-	-	-	-
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	-	-	-	-	-	-
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	-	-	-	-	-	-
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	-	-	-	-	-	-
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	-	-	-	-	-	-
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	1.51 {E}
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	1.26 {E}
Lead	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	1.07 {E}	3.66 {E}	21 {D,E}	20.6 {D,E}	24.2 {D,E}	9.44 {D,E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	18.1 {D,E}
Mercury	mg/L	0.0002 U	0.00052	0.04 U		-	-	-	-	-	-
Nickel	mg/L	0.02 U	0.061	0.011		-	-	-	-	-	-
Potassium	mg/L	102	43	3.73	6.4	20.7	1020	926	826	857	1270
Selenium	mg/L	0.005 U	0.0015	0.005 U		-	-	-	-	-	-
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	-	-	-	-	-	-
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		-	-	-	-	-	-
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	-	-	-	-	-	-
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	-	-	-	-	-	-

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D}Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E}Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1)Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23	PAOC 23
Perimeter						N	N	N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				IW-33	IW-33	IW-33	IW-33	IW-33	IW-33	IW-33
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne	WG-17303-031006-EV-0962	WG-17303-070506-EV-023	WG-17303-100406-LA-055	WG-17303-120606-EV-018	WG-17303-030907-EV-025	WG-17303-060507-DR-003	WG-17303-090607-EV-016	
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	03/10/2006	07/05/2006	10/04/2006	12/06/2006	03/09/2007	06/05/2007	09/06/2007	
Sample Type:												
Parameters	Units											
Metals												
Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00053 J	0.00073 J	0.00049 J	0.002 U	0.00053 J	0.00034 J	0.00045 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.006	0.0103 {D,E}	0.0066	0.0052	0.0063	0.0084	0.0045 J
Barium	mg/L	0.412	0.31	0.661	0.1	0.371	0.323	0.262	0.24	0.316	0.264	0.164
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.0023 J	0.0022 J	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0026 J	0.0018 J	0.0014 J	0.0022 J	0.0023 J	0.0021 J	0.0022 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0021 U	0.0029	0.0034 U	0.002 U	0.002 U	0.0017 J	0.0025 U
Iron	mg/L	13.1	50	9.59	3.6	-	20.9 {E}	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	19.7 {E}	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	14.2 {D,E}	11.4 {D,E}	10.4 {D,E}	9.03 {D,E}	10.7 {D,E}	8.69 {D,E}	6.35 {E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	10.8 {D,E}	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00015 J{D}
Nickel	mg/L	0.02 U	0.061	0.011		0.0192 J	0.0184 J	0.0247	0.0241	0.0166 J	0.025	0.0238
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.00009 J	0.0002 U	0.0002 UJ	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.0089	0.0062	0.0039 J	0.0037 J	0.0065	0.0034 J	0.0056
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.02 U	0.0142 U	0.0141	0.0111 U

- Background Level for Site
- ## Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 23		PAOC 23		PAOC 23		PAOC 23		PAOC 23		PAOC 23		PAOC 23
Perimeter						N		N		N		N		N		N		N
Sample Location:	Site Specific	Shallow Aquifer Regional				IW-33		IW-33		IW-33		MW-2		MW19-09		MW19-09		MW19-10
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne		GW-17303-120607-DR-026		WG-17303-032708-CB-028		WG-17303-092308-DR-034		MW-2		WG-17303-061605-DR-0794		WG-17303-061605-DR-0795		WG-17303-061605-DR-0793
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		12/06/2007		03/27/2008		09/23/2008		03/21/1997		06/16/2005		06/16/2005		06/16/2005
Sample Type:																Duplicate		

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-		0.0209 J		-		-		-		-		-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00029 J		0.00037 J		0.002 U		-		0.00039 J		0.00046 J		0.0011 J
Arsenic	mg/L	0.015	0.09		0.0091	0.0095		0.0063		0.0075		-		0.005 U		0.005 U		0.0079
Barium	mg/L	0.412	0.31	0.661	0.1	0.106		0.199		0.129		-		0.238		0.232		0.967
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U		0.001 U		0.001 U		-		0.001 U		0.001 U		0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U		0.0005 U		0.0005 U		-		0.001 U		0.00049 J		0.001 U
Calcium	mg/L	328	532	217	140	-		-		-		-		-		-		-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.0022 J		0.0025 J		0.005 U		-		0.005 U		0.005 U		0.0043 J
Chromium III (trivalent)	mg/L	0.016		0.01 U		-		-		-		-		-		-		-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-		-		-		-		-		-		-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0023 J		0.0018 J		0.0024 J		-		0.0033 J		0.003 J		0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U		0.002 U		0.0011 J		-		0.0039 U		0.0081		0.0023 U
Iron	mg/L	13.1	50	9.59	3.6	10.2 [E]		-		-		-		-		-		-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-		-		-		-		-		-		-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U		0.003 U		0.003 U		0.0050 U		0.003 U		0.003 U		0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-		-		-		0.0050 U		-		-		-
Magnesium	mg/L	174	123	53.9	25	-		-		-		-		-		-		-
Manganese	mg/L	2.76	2	0.701	0.87	7.49 [D,E]		6.3 [E]		5.86 [E]		-		0.245 [E]		0.243 [E]		0.918 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-		-		-		-		-		-		-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U		0.0002 U		0.0002 U		-		0.0002 U		0.0002 U		0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0269		0.0122 J		0.027		-		0.0082 J		0.0087 J		0.02 U
Potassium	mg/L	102	43	3.73	6.4	-		-		-		-		-		-		-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U		0.002 U		0.002 U		-		0.005 U		0.005 U		0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U		0.0002 U		0.0002 U		-		0.0002 U		0.0002 U		0.0002 U
Sodium	mg/L	2666	874	390	170	-		-		-		-		-		-		-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U		0.001 U		0.001 U		-		0.0003 J		0.00037 J		0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.0044		0.0037 J		0.0026 J		-		0.004 U		0.004 U		0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.015 U		0.0113		0.0282		-		0.02 U		0.02 U		0.02 U

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 23	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter						N	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-25	GS-1	GS-3	GS-3	GS-3	GS-3	GS-3
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne		WG-17303-061605-DR-0796	GW-17303-021412-CB-049	WG-17303-031006-EV-0950	WG-17303-062706-EV-001	WG-17303-100306-EV-037	WG-17303-120506-LA-006	WG-17303-030707-DR-002
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		06/16/2005	02/14/2012	03/10/2006	06/27/2006	10/03/2006	12/05/2006	03/07/2007
Sample Type:												

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	0.05 U	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00055 J	0.0003 J	0.0013 J	0.00026 J	0.00063 J	0.00039 J	0.00027 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.0038 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.217	0.22	0.0213 J	0.0637 J	0.0982 J	0.089 J	0.0453 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00028 J
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0026 J	0.007 U	0.007 U	0.007 U	0.007 U	0.0021 J	0.0013 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0025 U	0.002 U	0.0066	0.002 U	0.0032 U	0.003 U	0.0025 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.0019 J	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.151 {E}	0.66 {E,H}	0.0781 {E,H}	0.307 {E,H}	0.224 {E,H}	0.515 {E,H}	0.401 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0061 J	0.02 U	0.0052 J	0.0048 J	0.0192 J	0.0086 J	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0025 J	0.005 U	0.0042 J	0.005 U	0.005 U	0.005 U	0.00068 J
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.00023 J	0.001 U	0.000071 J	0.001 U	0.001 U	0.000046 J	0.00034 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.0226 U	0.0118 J	0.02 U	0.0297 U	0.0182 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter						Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional				GS-3	GS-3	GS-3	GS-3	GS-3	GS-3	GS-4
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne		WG-17303-060607-EV-023	WG-17303-090707-EV-031	WG-17303-120707-DR-033	WG-17303-032708-CB-023	WG-17303-092508-DR-048	WG-17303-032709-LS-096	WG-17303-031006-EV-0951
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		06/06/2007	09/07/2007	12/07/2007	03/27/2008	09/25/2008	03/27/2009	03/10/2006
Sample Type:												

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.445 {E,H}	-	0.266 {E,H}	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00024 J	0.002 U	0.00044 J	0.00029 J	0.00041 J	-	0.00077 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.0056	-	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.0483 J	0.0612 J	0.0626 J	0.0288 J	0.0888 J	-	0.0314 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.00038 J	0.001 U	0.001 U	0.001 U	-	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.00013 J	0.0005 U	0.0005 U	0.0005 U	0.00027 J	-	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.0066	-	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.0015 J	0.007 U	0.007 U	0.0029 J	-	0.0038 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.0026	0.002 U	0.0025	0.0014 J	0.0089	-	0.0043
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.0157 {E,H}	-	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.301 {E,H}	0.26 {E,H}	0.34 {E,H}	0.166 {E,H}	0.292 {E,H}	-	0.86 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.006 J	0.0035 J	0.0065 J	0.0051 J	0.01 J	-	0.0105 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.00098 J	0.002 U	0.0045	0.0043	0.002 U	-	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.000095 J	-	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.0004 J	0.001 U	0.00024 J	0.001 U	0.001 U	-	0.00041 J
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.0063 {H}	-	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0086 J	0.01 U	0.0152 U	0.015	0.0333	-	0.0222 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter						Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional				GS-4	GS-4	GS-4	GS-4	GS-4	GS-4	GS-4
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne		GW-17303-062806-EV-003	WG-17303-100306-EV-036	WG-17303-120506-LA-007	WG-17303-030707-DR-001	WG-17303-060607-EV-022	WG-17303-090707-DR-032	WG-17303-120707-DR-034
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		06/28/2006	10/03/2006	12/05/2006	03/07/2007	06/06/2007	09/07/2007	12/07/2007
Sample Type:												

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00059 J	0.00069 J	0.00086 J	0.0006 J	0.00054 J	0.002 U	0.00021 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.0135 {D,E,H}	0.005 U	0.0047 J	0.005 U	0.0049 J	0.0054	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.242	0.0342 J	0.0527 J	0.0377 J	0.0676 J	0.0622 J	0.0245 J
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00044 J	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.00018 J	0.00011 J	0.0005 U	0.0005 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.0015 J	0.007	0.0051 J	0.0028 J	0.0046 J	0.0048 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.0117	0.0044 U	0.002 U	0.0021	0.0054	0.0037
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	3.74 {E,H}	0.343 {E,H}	2.15 {E,H}	1.39 {E,H}	1.26 {E,H}	1.62 {E,H}	1.25 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.0018 J	0.0145 J	0.0195 J	0.0105 J	0.0062 J	0.0099 J	0.0173 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.005 U	0.00094 J	0.002 U	0.002 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.000095 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.00041 J	0.001 U	0.000058 J	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.01 U	0.0036 J	0.0105 U	0.01 U

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC						PAOC 29		PAOC 29		PAOC 29		PAOC 29		PAOC 29		PAOC 29		PAOC 29		PAOC 29
Perimeter						Y		Y		Y		N		N		N		N		Y
Sample Location:	Site Specific	Shallow Aquifer Regional				GS-4		GS-4		GS-4		GS-16		MW-3		MW-18-46		MW-18-46		MW19-12
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/Old Wayne		WG-17303-032608-MC-024		WG-17303-092408-CB-049		WG-17303-032709-CB-097		GW-17303-022112-CB-059		MW-3		MW-18-46		MW-18-46		GW-17303-012804-MM-279
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		03/26/2008		09/24/2008		03/27/2009		02/21/2012		03/21/1997		12/19/1996		03/21/1997		01/28/2004
Sample Type:																				

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	0.273 [E,H]	-	0.05 U	0.25 [E]	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00033 J	0.0015 J	-	0.00095 J	-	-	-	-
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	-	0.005 U	-	-	-	-
Barium	mg/L	0.412	0.31	0.661	0.1	0.0282 J	0.0554 J	-	0.22	-	-	-	-
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	-	0.001 U	-	-	-	-
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	-	0.001 U	-	-	-	-
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	-	0.005 U	-	-	-	0.0050 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0023 J	0.0097	-	0.007 U	-	-	-	0.0070 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.00037 J	0.0049	-	0.002 U	-	-	-	-
Iron	mg/L	13.1	50	9.59	3.6	0.585 [E,H]	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	-	0.0021 J	0.0030	0.8000 [D,E]	0.0530 [E]	-
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	0.0050 U	0.0050 U	0.0050 U	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.663 [E,H]	0.796 [E,H]	-	1.2 [E]	-	-	-	-
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	-	0.0002 U	-	-	-	-
Nickel	mg/L	0.02 U	0.061	0.011		0.0077 J	0.0313	-	0.02 U	-	-	-	-
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.002 U	0.002 U	-	0.0053 U	-	-	-	0.0020 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	-	0.0002 U	-	-	-	-
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.0016	-	0.001 U	-	-	-	-
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	-	0.004 U	-	-	-	-
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0036 J	0.0154 U	-	0.02 U	-	-	-	-

- Background Level for Site
- ##Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter					Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-12	MW19-12	MW19-12	MW19-12	MW19-12	MW19-12	MW19-12
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-030906-LA-0964	WG-17303-030906-LA-0966	WG-17303-063006-EV-016	WG-17303-063006-EV-017	WG-17303-100306-EV-040	WG-17303-120506-JJ-005	WG-17303-030707-DR-003
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	03/09/2006	03/09/2006	06/30/2006	06/30/2006	10/03/2006	12/05/2006	03/07/2007
Sample Type:						Duplicate		Duplicate			

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	-	-
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00039 J	0.0006 J	0.002 U	0.002 U	0.00079 J	0.00041 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.156	0.207	0.163	0.165	0.122	0.153
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00049 J
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.989 {E,H}	0.828 {E,H}	0.634 {E,H}	0.581 {E,H}	0.776 {E,H}	0.733 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0001 J{D}	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.01 U

- Background Level for Site
- ##

Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter					Y	Y	Y	Y	Y	Y	Y
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-12	MW19-12	MW19-12	MW19-12	MW19-12	MW19-12	MW19-12
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	WG-17303-060607-DR-021	WG-17303-090607-EV-025	GW-17303-120607-DR-029	WG-17303-032708-CB-032	WG-17303-061908-DR-023	WG-17303-092408-DR-044	GW-17303-021412-CB-048
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690	06/06/2007	09/06/2007	12/06/2007	03/27/2008	06/19/2008	09/24/2008	02/14/2012
Sample Type:											

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	0.05 U	-	-	0.29 {E,H}
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.000084 J	0.002 U	0.00035 J	0.002 U	0.002 U	0.002 U	0.0028
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.159	0.208	0.253	0.207	0.201	0.208	0.14
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.00068 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	5.48 {E,H}	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	0.769 {E,H}	0.599 {E,H}	0.55 {E,H}	0.619 {E,H}	0.475 {E,H}	0.514 {E,H}	0.34 {E,H}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0001 J{D}	0.0002 U	0.0002 U	0.001 {D}	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0063 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0011 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.001 U	0.000036 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.00089 J
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.0064 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U

- Background Level for Site
- ##

Least restrictive background level for four adjacent sites
- Concentration exceeds Part 201 and Site Specific Background Level
- Concentration exceeds Part 201 but NOT Site Specific Background Level
- {D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
- {E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
- (1) Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER
RCRA FIELD INVESTIGATION REPORT
COMPANY VEHICLE OPERATIONS AREA
YPSILANTI, MICHIGAN

PAOC					PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter					Y	Y	Y	Y	Y	Y	N
Sample Location:	Site Specific	Shallow Aquifer Regional			MW19-14	MW19-14	MW19-14	MW19-15	MW19-16	MW19-16	MW19-35
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne	GW-17303-012904-MM-290	GW-17303-012904-MM-291	GW-17303-052804-DR-356	GW-17303-012804-MM-284	GW-17303-021412-CB-051	GW-17303-021412-CB-052	GW-17303-022112-CB-061
Sample Date:	~AMSL 710-695 ~ AMSL 705 - 695 ~ AMSL 720 -705 ~ AMSL 705 - 690				01/29/2004	01/29/2004	05/28/2004	01/28/2004	02/14/2012	02/14/2012	02/21/2012
Sample Type:						Duplicate				Duplicate	

ParametersUnits

Metals

Aluminum	mg/L	0.256	0.4	0.59	2.9	-	-	-	-	0.05 U	0.05 U	0.044 J
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.016 [E,H]	0.013 [E,H]	-	-	0.00021 J	0.00024 J	0.00057 J
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.0041 J	0.0075 J	-	-	0.005 U	0.0055	0.0078
Barium	mg/L	0.412	0.31	0.661	0.1	-	-	-	-	0.11	0.11	0.24
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	-	-	-	-	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	-	-	-	-	0.001 U	0.001 U	0.001 U
Calcium	mg/L	328	532	217	140	-	-	-	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.0020 J	0.0038 J	-	0.0050 U	0.005 U	0.005 U	0.0043 J
Chromium III (trivalent)	mg/L	0.016		0.01 U		-	-	-	-	-	-	0.010 U
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		-	-	-	-	-	-	0.010 U
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.0021 J	0.0032 J	-	0.0070 U	0.0026 J	0.0024 J	0.0028 J
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	-	-	-	-	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	-	-	0.0053 [E,H]	-	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	-	-	-	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	-	-	-	-	1.5 [E,H]	1.5 [E,H]	1.8 [E]
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.00020 U	0.00020 U	-	-	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		-	-	-	-	0.02 U	0.02 U	0.0041 J
Potassium	mg/L	102	43	3.73	6.4	-	-	-	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.0020 U	0.0020 U	-	0.0017 J	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.00050 U	0.00050 U	-	0.00050 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	-	-	-	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		-	-	-	-	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	-	-	-	-	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	-	-	-	-	0.02 U	0.02 U	0.0053 J

	Background Level for Site
##	Least restrictive background level for four adjacent sites
	Concentration exceeds Part 201 and Site Specific Background Level
	Concentration exceeds Part 201 but NOT Site Specific Background Level
{D}	Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri
{E}	Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)
(1)	Perimeter Status -N-Non-perimeter, Y- Perimeter

TABLE 3.5

COMPARISON TO SITE-SPECIFIC BACKGROUND LEVELS - GROUNDWATER

RCRA FIELD INVESTIGATION REPORT

COMPANY VEHICLE OPERATIONS AREA

YPSILANTI, MICHIGAN

PAOC						PAOC 29	PAOC 29	PAOC 29	PAOC 29	PAOC 29
Perimeter						N	N	N	N	N
Sample Location:	Site Specific	Shallow Aquifer Regional				MW19-35	MW19-36	MW19-37	MW19-38	MW19-39
Sample ID:	CVO	Willow Run Creek	Powertrain	Fons/ Old Wayne		GW-17303-052312-CB-318	GW-17303-021612-CB-055	GW-17303-021612-CB-054	GW-17303-021612-CB-057	GW-17303-021612-CB-056
Sample Date:	~AMSL 710-695	~ AMSL 705 - 695	~ AMSL 720 -705	~ AMSL 705 - 690		05/23/2012	02/16/2012	02/16/2012	02/16/2012	02/16/2012
Sample Type:										
Parameters	Units									
Metals										
Aluminum	mg/L	0.256	0.4	0.59	2.9	0.076 {E}	0.11 {E}	0.029 J	0.05 U	0.034 J
Antimony	mg/L	0.002 U	0.06	0.002 U	0.0062	0.00033 J	0.0024	0.00095 J	0.00045 J	0.003
Arsenic	mg/L	0.015	0.09	0.025	0.0091	0.015 {D,E}	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.412	0.31	0.661	0.1	0.19	0.25	0.077 J	0.05 J	0.12
Beryllium	mg/L	0.001 U	0.0025	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.0025	0.001 U	0.0002	0.001 U	0.001 U	0.001 U	0.001 U	0.00073 J
Calcium	mg/L	328	532	217	140	170	-	-	-	-
Chromium	mg/L	0.016	0.005	0.01 U	NA	0.016 {D}	0.005 U	0.005 U	0.005 U	0.005 U
Chromium III (trivalent)	mg/L	0.016		0.01 U		0.016	-	-	-	-
Chromium VI (hexavalent)	mg/L	0.010 U		0.01 U		0.010 U	-	-	-	-
Cobalt	mg/L	0.007 U	0.025	0.02 U	NA	0.007 U	0.003 J	0.0028 J	0.007 U	0.007 U
Copper	mg/L	0.0029 U	0.0125	0.010	0.014	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	mg/L	13.1	50	9.59	3.6	5.3 {E}	-	-	-	-
Iron (dissolved)	mg/L	13.1	50	9.59	3.6	-	-	-	-	-
Lead	mg/L	0.003 U	0.009	0.006	0.0078	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (dissolved)	mg/L	0.003 U	0.009	0.006	0.0078	-	-	-	-	-
Magnesium	mg/L	174	123	53.9	25	130	-	-	-	-
Manganese	mg/L	2.76	2	0.701	0.87	2.4 {E}	0.74 {E}	0.34 {E}	0.19 {E}	0.47 {E}
Manganese (dissolved)	mg/L	2.76	2	0.701	0.87	-	-	-	-	-
Mercury	mg/L	0.0002 U	0.00052	0.04 U		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.02 U	0.061	0.011		0.02 U	0.0049 J	0.0071 J	0.02 U	0.02 U
Potassium	mg/L	102	43	3.73	6.4	74	-	-	-	-
Selenium	mg/L	0.005 U	0.0015	0.005 U		0.005 U	0.005 U	0.032 {D}	0.0056 {D}	0.005 U
Silver	mg/L	0.0002 U	0.005	0.0002 U	0.00025	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Sodium	mg/L	2666	874	390	170	170	-	-	-	-
Thallium	mg/L	0.001 U	0.0038	0.002 U		0.00034 J	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	mg/L	0.004 U	0.025	0.014	0.01	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc	mg/L	0.02 U	0.10	0.05 U	0.046	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

Background Level for Site

Least restrictive background level for four adjacent sites

Concentration exceeds Part 201 and Site Specific Background Level

Concentration exceeds Part 201 but NOT Site Specific Background Level

{D} Groundwater Surface Water Interface Criteria & RBSLs (MDEQ Part 201 criteri

{E} Non-residential Drinking Water Criteria & RBSLs (MDEQ Part 201 criteria)

(1) Perimeter Status -N-Non-perimeter, Y- Perimeter