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Supplemental RCRA Facility Investigation (RFI) Report No. 1

Pontiac North Campus

PDF has been modified to decrease the size and only include Metal Fabrication Division (AOI M-#) and Demolition Area (AOI W-#) Area's of Interest (AOI)

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General Motors Corporation
Pontiac, Michigan

MID 005356910, MID 085470102
MID 005356886, MID 076331289

November 26, 2003

ENCORE
Environmental Corporate Remediation

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Acronyms

AOI	Area of interest
AST	Aboveground storage tank
BCa	Bias Corrected and accelerated
Bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and xylene
CCR	Current Conditions Report
CMP	Corrective Measures Proposal
COC	Constituents of Concern
CPC	Chevrolet-Pontiac-Canada Group
DA	Demolition Area
DNAPL	Dense non-aqueous phase liquid
DO	Dissolved Oxygen
DUSR	Data Usability Summary Reports
EEC	Encore Environmental Consortium, LLC
EI	Environmental indicator
ELPO	Electrodeposition
ENCORE	Environmental Corporate Remediation Co. Inc.
FSP	Field Sampling Plan
GM	General Motors Corporation
HI	Hazard Index
HQ	Hazard Quotient
IDC	Industrial Direct Contact Criteria
IDWC	Industrial Drinking Water Criteria
IPSIC	Industrial Particulate Soil Inhalation Criteria
LNAPL	Light non-aqueous phase liquid
MDEQ	Michigan Department of Environmental Quality
MDNR	Michigan Department of Natural Resources
MFD	Metal Fabrication Division
NAPL	Non-aqueous phase liquid
NFA	No Further Action
NRC	National Response Center
NREPA	Natural Resources and Environmental Protection Act
NTU	Nepholometric units
ORP	Oxygen Reduction Potential
OSWER	Office of Solid Waste and Emergency Response
PA/VSI	Preliminary Assessment/Visual Site Inspection
PCB	Polychlorinated biphenyl
PID	Photoionization detector
PNC	Pontiac North Campus
PRC	PRC Environmental Management, Inc.
PRG	Preliminary Remediation Goal
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RDC	Residential Direct Contact Criteria
RDWC	Residential Drinking Water Criteria
RFI	RCRA Facility Investigation

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SPO	Service Parts Operations
SQL	Sample Quantitation Limit
SVOC	Semi-volatile organic compounds
SWDF	Storm Water Detention Facility
SWHI	Site-Wide Hydrogeologic Investigation
SWMU	Solid Waste Management Unit
TAL	Target Analyte List
TCDD	2,3,7,8-Tetrachlorodibenzo-p-dioxin
TCL	Target Compound List
TEQ	Toxicity Equivalent
TSDF	Treatment, Storage, and Disposal Facilities
UCL	Upper Confidence Limit on the Mean
U.S. EPA	United States Environmental Protection Agency
UST	Underground storage tank
VSI	Visual Site Inspection
VOC	Volatile organic compounds
WWTP	Wastewater treatment plant

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1. Introduction

1.1 General

On October 10, 2000, the United States Environmental Protection Agency (U.S. EPA) and General Motors Corporation (GM) entered into a Performance Based Corrective Action Agreement (The Agreement) for the Pontiac North Campus (PNC) located in Pontiac, Michigan (Site). The Agreement calls for GM to work independently and voluntarily to investigate and, as necessary, stabilize and remediate releases of hazardous waste or hazardous constituents at or from the Site in accordance with the Resource Conservation and Recovery Act (RCRA) and relevant U.S. EPA corrective action guidance. The RCRA Facilities Investigation (RFI) Report (Environmental Corporate Remediation Co. Inc. (ENCORE), 2002b) for the Site was prepared by Encore Environmental Consortium, L.L.C. (EEC) for ENCORE; a wholly owned subsidiary of GM, and submitted to the U.S. EPA in April 2002.

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This Supplemental RFI Report No. 1 (Report) presents the results of additional RFI activities that were conducted at the Site following the preparation of the RFI Report (ENCORE, 2002b). In general, this Report presents the results of investigations completed pursuant to RFI Work Plan Addenda Nos. 4, 5, 6, 7, 8, 8A, and 9 (ENCORE, 2003a-g) plus other activities at the Site to address U.S. EPA comments on the RFI Report (ENCORE, 2002b) or provisions in The Agreement documents. These activities include additional groundwater sampling, pit and sump investigations, the investigation of three newly identified Areas of Interest (AOIs), additional investigations to address U.S. EPA comments on the CA750/CA725 determination, and free product delineation activities.

The Site encompasses approximately 595 acres in the northwest quadrant of the City of Pontiac, Michigan (Figure 1-1). The Site consists of four facilities (Figure 1-2), including:

- Chevrolet-Pontiac-Canada Group (CPC) Pontiac Fiero Assembly Plant (formerly GM Fisher Body Division); GMNA Property Management Fiero Facility; Baldwin Ave; Pontiac, Michigan 48340; (U.S. EPA ID No. MID 005356910);
- GM Central Foundry Division - Pontiac Plant; One Pontiac Plaza; Pontiac, Michigan 48340 (U.S. EPA ID No. MID 085470102);
- CPC – Pontiac; GM Metal Fabricating Division Pontiac; 220 E. Columbia Ave; Pontiac, Michigan 48340 (U.S. EPA ID No. MID 005356886); and
- GM Warehousing and Distribution Division; Service Parts Operations (SPO); 9251 Joslyn Rd; Pontiac, Michigan 48340 (U.S. EPA ID No. MID 076331289).

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Because Site operations have changed significantly over time, the RFI grouped operations according to current activities. Figure 1-3 shows each of the Site operational areas while Figure 1-4 shows an overlay of the operational areas and the facility boundaries. The operational areas at the Site include:

- Fiero;
- Demolition Area (DA);
- Metal Fabrication Division (MFD);
- Powertrain; and
- Service Parts Operation (SPO).

A total of 64 AOIs were identified as part of the Current Conditions Report (CCR (ENCORE, 2001a)) of those 64 AOIs, 35 AOIs were determined to warrant investigation and were investigated during the initial RFI activities. The results of those investigations are summarized in the RFI Report (ENCORE, 2002b). Since the RFI Report (ENCORE, 2002b) was completed, three additional AOIs and one additional area (Storm Water Detention Facility (SWDF)) have been identified at the Site. Sixteen AOIs previously discussed in the RFI Report (ENCORE, 2002b), three recently identified AOIs, and the SWDF are discussed in this Report. Summaries of the investigative activities completed at each AOI are presented in Table 4-1. Figure 1-5 presents the location of all AOIs, while Figure 1-6 presents the location of the AOIs and other areas discussed in this Report.

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1.2 Purpose

GM performed the RFI pursuant to The Agreement to determine whether the AOIs identified in the CCR (ENCORE, 2001a) as warranting Further Action have released hazardous waste or hazardous constituents that may pose an unacceptable risk to human health and the environment. The CCR (ENCORE, 2001a) and CCR Addendum No. 1 (ENCORE, 2002a) were prepared in part to provide details of historical and current operations at the Site, previous investigations and remedial activities, RCRA regulatory history, historical and current waste management practices, and specific areas targeted for investigation.

The RFI field investigations were conducted in accordance with an RFI Work Plan (ENCORE, 2001b) and RFI Work Plan Addenda Nos. 1-9 (ENCORE, 2001c-d, 2002c, 2003a – g). The RFI Report (ENCORE, 2002b) presented the results of the field investigations conducted between June 2001 and February 2002 according to the RFI Work Plan (ENCORE, 2001b), and Work Plan Addenda Nos. 1-3 (ENCORE, 2001c-d, 2002c).

The information in this Report describes the procedures, methods, and results of the field investigations conducted following preparation of the RFI Report (ENCORE, 2002b). The information includes a comparison of the analytical data with Michigan Part 201 generic cleanup criteria

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(screening criteria) (Michigan Department of Environmental Quality (MDEQ), 2002) to identify whether a potential release of hazardous waste or hazardous constituents has occurred from each AOI where supplemental RFI field work was conducted. Where a potential release is identified, the nature and extent of hazardous constituents in the environmental media characterized during the supplemental RFI activities are discussed. A human health risk evaluation is included in this Report to provide a basis for evaluating whether the presence of these hazardous constituents pose an unacceptable risk to human health.

1.3 Supplemental RFI Objectives

The objectives of supplemental RFI activities were to complete investigations necessary to:

- Determine hydrogeologic conditions, as necessary, to properly investigate releases from the new AOIs;
- Characterize the nature and extent of potential releases of hazardous waste and/or hazardous constituents in environmental media at the new AOIs;
- Assess potential risk to human health and the environment associated with potential releases of hazardous waste and/or hazardous constituents at the new AOIs;
- Provide sufficient data to support the RCRA corrective action environmental indicators (EI) determination for the new AOIs;
- Determine whether interim corrective measures are necessary to control current unacceptable risks, if any, to human health at the new AOIs;
- Determine whether corrective measures are necessary to mitigate current and future unacceptable risks, if any, to human health and the environment for the new AOIs;
- Determine the impact, if any, from discharges from the new AOIs to off-Site areas;
- Determine the impact, if any, below several on-Site sumps and pits;
- Fulfill provisions for a second round of groundwater sampling, as described in the RFI Work Plan (ENCORE, 2001b);
- Provide further characterization of groundwater quality at existing AOIs based on U.S. EPA comments on the CA750/CA725 determination;
- Monitor Site-wide groundwater conditions by completing two semi-annual sampling events (November 2002 and May 2003); and
- Delineate free product plumes.

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1.4 Report Organization

This Report is organized as follows:

- Section 2 provides an overview of the supplemental RFI activities conducted since preparation of the RFI Report (ENCORE, 2002b); including a summary of the various investigations;
- Section 3 provides an update to the geology, hydrogeology, and investigation procedures presented in the RFI Report (ENCORE, 2002b) and the RFI Work Plan (ENCORE, 2001b);
- Section 4 presents a summary and discussion of the supplemental RFI results for each of the AOIs and other areas investigated. The discussion for each area investigated includes a summary of the scope of the field investigation, a summary and evaluation of the supplemental RFI data, and a discussion of whether a potentially significant release above screening criteria has been identified;
- Section 5 presents a human health risk evaluation that evaluates the potential releases at areas identified in Section 4 to determine whether interim measures or corrective measures are warranted;
- Section 6 provides the summary and conclusions of this Report;
- Section 7 provides a list of references cited in this Report;
- Tables;
- Figures;
- Appendix A contains the complete analytical compound lists;
- Appendix B provides the soil boring logs and monitoring well construction diagrams;
- Appendix C contains the analytical data summaries;
- Appendix D contains the Data Usability Summary Reports (DUSR);
- Appendix E provides the LNAPL fingerprinting reports; and
- Appendix F presents the supporting risk calculations.

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2. Supplemental Field Investigation Overview

The RFI Report (ENCORE, 2002b) presented the results of the RFI investigations conducted at the Site between June 2001 and February 2002. Supplemental RFI activities were conducted at existing and recently discovered AOIs between February 2002 and October 2003. This Section provides an overview of the investigations, summarizes the operational areas investigated and introduces three new light non-aqueous phase liquid (LNAPL) areas identified during the supplemental RFI activities performed between February 2002 and November 2003.

2.1 Investigation Overview

The supplemental RFI field investigations and results summarized in this Report include:

- Second round groundwater sampling;
- Pit and sump investigative activities;
- Soil sampling in a void below the floor in the Electrodeposition (ELPO) building;
- Investigation of the SWDF;
- Semi-annual groundwater sampling;
- Investigation of three newly identified AOIs associated with Former Plant 18 (RFI Work Plan Addenda Nos. 5, 6, and 7 (ENCORE, 2003b-d));
- Additional characterization activities to address the U.S. EPA comments related to the CA750/CA725 EI determination (RFI Work Plan Addendum No. 8 (ENCORE, 2003e));
- LNAPL delineation activities (RFI Work Plan Addenda Nos. 4, 8A, and 9 (ENCORE, 2003a,g,f));
- Delineation of potential subsurface impacts (RFI Work Plan Addendum No. 9 (ENCORE, 2003f)); and
- Data collection to support the evaluation of corrective measures options.

A summary of the field investigations performed and the associated AOI is provided in Table 1-1.

2.1.1 Second Round Groundwater Sampling

The RFI Work Plan (ENCORE, 2001b) provided for the collection of two rounds of groundwater samples from each monitoring well installed as part of the RFI. At the time the RFI Report (ENCORE, 2002b) was prepared, the second round of groundwater samples for some monitoring wells had not been completed. This Report presents the second round groundwater sampling results for these monitoring wells.

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2.1.2 Pit and Sump Investigations

Comments received from the U.S. EPA recommended that GM repair/rehabilitate as necessary sumps or pits that would remain active at the Site and properly abandon sumps or pits that will no longer be active. Several sumps and pits were investigated as part of the RFI. Before any of these pits or sumps were abandoned, a soil sample was collected from immediately beneath the pit or sump (after any tanks or machinery was removed) to support decommissioning of the pit or sump. The results of the soil samples collected from under the pits and sumps at AOIs M-9 and F-8 are summarized in this Report.

2.1.3 Soil Sample from Below ELPO Plant Floor

A 4-inch diameter hole in the concrete floor in the ELPO building was created when a concrete protective post was removed from the floor. A visual inspection of the subsurface conditions beneath the floor and the results of the soil sample are discussed in this Report.

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2.1.4 Storm Water Detention Facility (SWDF)

During a routine cleaning and inspection of the SWDF completed during September and October 2002, cracks in the concrete floor were observed as well as missing or degraded Sections of rubber seals between the concrete slabs. On the basis of these observations, a subsurface investigation was completed to determine if any potentially impacted storm water from the storm water basin had infiltrated into the subsurface, and if so, the possible impacts to soil and/or groundwater.

2.1.5 Semi-Annual Groundwater Sampling

The RFI Report (ENCORE, 2002b), included a groundwater monitoring plan that provided for semi-annual sampling of certain monitoring wells. Since the RFI Report (ENCORE, 2002b) was prepared, two semi-annual sampling events have been conducted at the Site, November 2002 and May 2003. The analytical results for these sampling events are summarized in the November 2002 Semi-Annual Groundwater Monitoring Event Summary Report (ENCORE, 2003h) and the May 2003 Semi-Annual Groundwater Monitoring Event Summary Report (ENCORE, 2003i). The Risk Evaluation presented in this Report will evaluate the analytical data results from these sampling events. Table 2-1 lists the monitoring wells sampled during the two semi-annual sampling events.

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2.1.6 New AOIs

Three AOIs were identified after preparation of the RFI Report (ENCORE, 2002b) in the vicinity of Former Plant 18. Field investigations were completed at each AOI to determine if a significant release exceeding applicable Part 201 criteria has occurred for each AOI. Soil was investigated at each AOI, while groundwater was encountered at only two of the three new AOIs.

The initial investigation approach for each AOI is described in the following work plans:

- RFI Work Plan Addendum No. 5, Pipeline Release Investigation – AOI P-9 (ENCORE, 2003b);
- RFI Work Plan Addendum No. 6, Former Plant 18 Investigation – AOI P-10 (ENCORE, 2003c); and
- RFI Work Plan Addendum No. 7, Trestle Pipeline Release Investigation – AOI P-11 (ENCORE, 2003d).

Additional investigative activities were completed at AOI P-9 that were not in provided for RFI Work Plan Addendum No. 5 (ENCORE, 2003b). These activities are discussed in Section 4.4.2.

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2.1.7 Environmental Indicators (EIs) CA750/CA725 Determination

The EI Report (ENVIRON, 2002) addressed the following EI determinations:

- CA725: Current Human Exposures Under Control; and
- CA750: Migration of Contaminated Groundwater Under Control.

During implementation of the RFI field investigation, groundwater samples collected at several AOIs had concentrations that were higher than the conservative screening criteria used for identifying "contaminated" groundwater used in the RFI Report (ENCORE, 2002b). Risk-based evaluations of the groundwater quality data collected during the RFI using realistic scenarios of potential non-potable exposures to groundwater determined that there are no unacceptable exposures to groundwater at and around the Site. The U.S. EPA concurred with the determination that no significant exposures to groundwater exist at and around the Site, but requested additional groundwater characterization around select AOIs to provide a more precise boundary of areas where groundwater quality may be affected by a release (U.S. EPA, 2002b).

A meeting was held on February 26, 2003 between the U.S. EPA, ENCORE, and EEC. In this meeting, ENCORE agreed to evaluate and perform additional characterization of groundwater quality at the following AOIs to meet the intent of the CA750 EI determination:

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- F-7 – Wastewater Collection Sumps at Fiero Powerhouse;
- M-1 – Wastewater Treatment Plant (WWTP);
- M-4 – Plant 25 Former Gasoline underground storage tank (UST) and Current Gasoline above-ground storage tank (AST);
- M-5 – Former A-2 Fill Area;
- M-16 – Plant 25 Basement Sump Area;
- M-25 – Plant 33 Basement Sump Area; and
- P-6 – Emissions Control Building Former UST Farm and Former Stoddard Solvent AST.

In addition, ENCORE agreed to complete additional soil delineation at AOI F-15 to support the CA725 EI soil determination. RFI Work Plan Addendum No. 8 (ENCORE, 2003e) was prepared to address the additional characterization to meet the intent of the CA750/CA725 determination.

2.1.8 LNAPL Delineation Activities

Three new LNAPL areas (LNAPL Areas Nos. 4, 5, and 6) were identified and investigated during the supplemental RFI activities.

During the collection of groundwater levels at the Site in August 2002, LNAPL was detected in two monitoring wells at AOI M-2. RFI Work Plan Addendum No. 4 (ENCORE, 2003a) was prepared to direct the additional subsurface investigation to delineate the LNAPL. This LNAPL area is identified as LNAPL Area No. 4.

During installation of monitoring wells at AOI M-4 and AOI M-16, LNAPL was also encountered. RFI Work Plan Addendum No. 8A (ENCORE, 2003g) describes the initial delineation activities. This LNAPL area is identified as LNAPL Area No. 5.

During follow up activities to a geotechnical borehole investigation in the DA, which was completed as part of an industrial redevelopment proposal, stained soils and potential free product was observed in the soil. RFI Work Plan Addendum No. 9 (ENCORE, 2003f) describes the initial investigation to determine if LNAPL exists. This LNAPL area is identified as LNAPL Area No. 6.

2.1.9 Subsurface Impact Delineation

Potential subsurface impacts were observed during the implementation of a geotechnical borehole investigation, which was completed as part of an industrial redevelopment proposal that was prepared by GM. The geotechnical investigation consisted of the completion of 36 soil borings that were located within the vicinity of the footprint of the proposed industrial redevelopment area.

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During the geotechnical investigation, odors, stained soil, and/or elevated photoionization detector (PID) readings were observed in 16 of the 36 soil borings. RFI Work Plan Addendum No. 9 (ENCORE, 2003f) was prepared to further investigate these 16 soil borings.

2.1.10 Remedial Options Evaluation

Additional wells (monitoring and recovery) and soil borings were installed in LNAPL Area No. 3 to evaluate groundwater and LNAPL levels and properties for evaluating and determining corrective measures. Proposed corrective measures are presented in the Corrective Measures Proposal (CMP) (ENCORE, 2003j). Any samples (soil or groundwater) collected during or following the installation of these new wells are discussed in Section 4.2.2 of this Report.

Groundwater samples were collected at AOI M-4 and AOI P-6 to evaluate groundwater treatment techniques at each of these areas. The groundwater analytical results from these AOIs are discussed in Section 4.3.3 and 4.4.1 of this Report. The remedial options are presented in the CMP (ENCORE, 2003j).

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2.2 Operational Areas

Supplemental RFI activities were completed at four of the five operational areas at the Site. Further Action AOIs in the SPO operational area were not identified in the CCR (ENCORE, 2001a) or the RFI Report (ENCORE, 2002b), therefore the SPO operational area will not be discussed further in this Report. The SWDF is also discussed in this Report but does not fall within any of the Site operational areas. The following subsections present a brief summary of the four operational areas and the AOIs within each operational area investigated during supplemental RFI activities.

2.2.1 Fiero

The Fiero operational area consists of approximately 81 acres located at the southwestern portion of the Site (Figure 1-3) and includes Plant 17. Currently, this area is used for prototyping, storage, and other non-production purposes. Current and historical wastes generated from car assembly operations at Fiero may have included scrap metal and metalworking fluids and oils (petroleum-based, oil-water emulsions, or synthetic emulsions), paints, paint solvents, and plasticizers. A WWTP was in operation at Fiero from 1973 to 1983 and managed wastewater, wastewater treatment sludge, paint sludge, and bonderite sludge. This WWTP operated until 1983. The area was paved over as a driveway.

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The Fiero AOIs investigated during the supplemental RFI activities include:

- AOI F-7: Wastewater Collection Sumps
  - CA750 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)
  - Pit and sump investigation

- AOI F-8: Paint Sludge Storage Area Form
  - Pit and sump investigation

- AOI F-15: Oil/Solvent Catch Basin
  - CA725 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)

2.2.2 Demolition Area (DA)

The DA consists of approximately 48 acres of the south-central portion of the Site. There are currently no buildings or operations within the DA portion of the Site. A large portion of the DA is involved in an industrial redevelopment proposal. Since 1996, the DA has been the subject of ongoing soil and groundwater investigations. The former Plant locations are shown on Figure 1-3.

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The DA AOIs investigated during the supplemental RFI activities include:

- AOI W-1: West Yard
  - Second round groundwater sampling
  - Subsurface impact delineation - RFI Work Plan Addendum No. 9 (ENCORE, 2003f)

- AOI W-8: Former Plant 9 Basement AST Area
  - Second round groundwater sampling
  - Remedial options evaluation
  - Subsurface impact delineation - RFI Work Plan Addendum No. 9 (ENCORE, 2003f)

- AOI W-9: Former Central Foundry (Plant 6) Resin Spill and UST
  - Subsurface impact delineation - RFI Work Plan Addendum No. 9 (ENCORE, 2003f)

- AOI W-10: Railroad Marshalling Area Drainage System
  - Second round groundwater sampling

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2.2.3 Metal Fabrication Division (MFD)

The MFD area consists of approximately 236 acres in the central portion of the Site (Figure 1-3), and contains the only current active manufacturing operations at the Site. Plants currently located in the MFD area include Plants 5, 11, 12, 14, 15, 23, 25, 33, 49, 56, and ELPO. Also present in the MFD area is a WWTP, which is located directly west of Plants 5 and 23. The locations of each of these Plants and the WWTP are shown on Figure 1-3.

The MFD AOIs investigated during the supplemental RFI activities include:

- AOI M-1: WWTP
  - CA750 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)

- AOI M-2: Former Plating Operations Area
  - Second round groundwater sampling
  - LNAPL delineation activities - RFI Work Plan Addendum No. 4 (ENCORE, 2003a)

- AOI M-4: Plant 25 Former Gasoline UST and Current Gasoline UST Location
  - Second round groundwater sampling
  - Remedial options evaluation
  - CA750 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)
  - LNAPL delineation activities - RFI Work Plan Addendum No. 8A (ENCORE, 2003g)
  - Remedial Options Evaluation

- AOI M-5: Former A-2 Fill Area
  - CA750 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)

- AOI M-7: ELPO Building
  - Soil sample below Plant floor

- AOI M-9: Heat Treat Oil Storage Area
  - Pit and sump investigation
  - Second round groundwater sampling

- AOI M-16: Plant 25 Basement Sump Area
  - Second round groundwater sampling
  - CA750 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)
  - LNAPL delineation activities - RFI Work Plan Addendum No. 8A (ENCORE, 2003g)

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- AOI M-25: Plant 33 Basement Sump Area
  - CA750 determination - RFI Work Plan Addendum No. 8 (ENCORE, 2003e)

2.2.4 Powertrain

The Powertrain area consists of approximately 150 acres located along the eastern portion of the Site (Figure 1-3). The area primarily consists of office space contained within the Powertrain Headquarters Building and the Powertrain Engineering Building. A gasoline UST farm and fueling station occupy the southwest corner of the Powertrain Headquarters Building. Test laboratories and office space are located in the Emissions Control Building. Paved parking areas and roadways occupy much of the land. Glenwood Avenue was recently extended north of Montcalm Avenue, and runs through the western portion of the Powertrain operational area.

The Powertrain AOIs investigated during the supplemental RFI activities include:

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- AOI P-6: Former UST Farm and Stoddard Solvent AST
  - Second round groundwater sampling
  - Remedial options evaluation

- AOI P-9: Pipeline Release;
  - New AOI investigation - RFI Work Plan Addendum No. 5 (ENCORE, 2003b)

- AOI P-10: Former Plant 18
  - New AOI investigation - RFI Work Plan Addendum No. 6 (ENCORE, 2003c)

- AOI P-11: Trestle Pipeline Release
  - New AOI investigation - RFI Work Plan Addendum No. 7 (ENCORE, 2003d)

2.2.5 Storm Water Detention Facility (SWDF)

The SWDF for the Site is located on the south side of Montcalm Avenue. The SWDF became operational in May 1982, intercepting and treating the Site storm water prior to being discharged to Outfall 001.

The SWDF is composed of two elements: a storm water treatment facility, and a 2,000,000-gallon storm water detention basin. The SWDF was originally designed to eliminate free oil and reduce the amount of solids present in the effluent originating from dry weather flow, and to minimize free oils and solids concentrations in the effluents originating from wet weather flow. In June 1999, the

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SWDF was retrofitted with granular activated carbon units to include a treatment process for polychlorinated biphenyl (PCB) removal.

2.3 New LNAPL Areas

2.3.1 LNAPL Area No. 4

LNAPL Area No. 4 is located within AOI M-2. LNAPL was originally observed in two monitoring wells located within AOI M-2 (MWM2-04 and MWM2-06) during groundwater monitoring activities. The area of AOI M-2 where the LNAPL is located is directly beneath an active production area. The storm sewer line, located in the vicinity of AOI M-2, is oriented north to south and is located immediately east of monitoring wells MWM2-06 and MWM2-07. Figure 2-1 presents the horizontal extent of the current LNAPL Area No. 4 plume. This LNAPL Area is further discussed in Section 4.6.3.

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2.3.2 LNAPL Area No. 5

LNAPL Area No. 5 is located within AOI M-16 and just downgradient of AOI M-4. During implementation of RFI Work Plan Addendum No. 8 (ENCORE, 2003e) activities, LNAPL was observed in two monitoring wells located in the basement of Plant 25. Approximately 0.5 feet of LNAPL was measured in MWM4-06 and indications of LNAPL (globules on the water level probe) have been observed at MWM16-03. Delineation activities have not been completed and are currently ongoing. This LNAPL Area is further discussed in Section 4.6.4.

2.3.3 LNAPL Area No. 6

LNAPL Area No. 6 is located along the storm sewer line in AOI W-9. The possible presence of LNAPL was detected during a geotechnical investigation completed as part of an industrial redevelopment proposal for the DA. RFI Work Plan Addendum No. 9 (ENCORE, 2003f) was prepared and implemented to investigate the potential presence of LNAPL in the area. A sheen (less than 0.1 feet) of LNAPL was observed in MWW9-02 for several weeks following installation. During groundwater level monitoring along the sewer line through the DA in October 2003, 0.25 feet of LNAPL was detected in MWW9-02. Delineation has been completed at this LNAPL Area. Figure 2-2 presents the horizontal extent of the current LNAPL Area No. 6 plume. This LNAPL Area is further discussed in Section 4.6.5.

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2.4 Investigation Procedures

The RFI Report (ENCORE, 2002b) presented a detailed discussion of field and laboratory procedures of the RFI investigations conducted at the Site between June 2001 and February 2002. This Section summarizes and documents any changes to the field or laboratory procedures during the supplemental RFI activities.

All RFI sampling methodologies and analytical procedures were conducted in accordance with those presented in the RFI Work Plan (ENCORE, 2001b), including the Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP), except as noted in Sections 2.4.1 and 2.4.2 and the individual AOI investigation discussions. Samples were submitted for an AOI specific list of analytes and may have included analysis for target compound list (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), target analyte list (TAL) inorganics, PCBs, total cyanide (cyanide), and dioxins. The AOI specific constituent list was developed based on historical knowledge of the activities at each of the AOIs. Complete compound lists for TCL VOCs, TCL SVOCs, TAL inorganics (here after referred to as VOCs, SVOCs, and inorganics, respectively), PCBs, and dioxins are provided in Appendix A.

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2.4.1 Field Procedures

Consistent with soil sampling procedures presented in the FSP (ENCORE, 2001b), soil samples were collected at the 0 to 2 foot below ground surface (bgs), 8 to 10 foot bgs and the two-foot interval directly above the water table for AOIs P-9, P-10, and P-11.

Soil samples from other AOIs investigated during the supplemental RFI activities were generally not collected unless specified in the RFI Work Plan Addenda. These work plan addenda specified that soil samples would be collected if soil delineation was specific to that RFI work plan addendum or the soil exhibited staining, odors or elevated PID readings.

Two monitoring wells installed in the basement of Plant 25 were installed using a Geoprobe® due to access issues.

Groundwater samples were collected using low-flow purge and sample approach in accordance to the guidelines presented in the FSP (ENCORE, 2001b). As groundwater was purged from each of the monitoring wells, field parameters (temperature, specific conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP) and pH) were recorded. Sampling was initiated when all parameters stabilized and the turbidity stabilized below 5 nepholometric turbidity units (NTUs). A summary of groundwater sampling field parameters is provided in Table 2-2.

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The RFI Work Plan (ENCORE, 2001b) states that filtered and unfiltered groundwater samples will be collected for inorganic analysis. Following the initial sampling completed at the Site, filtering (i.e. dissolved) of inorganic samples was discontinued as the results between the filtered and unfiltered samples did not differ significantly.

Groundwater was collected through temporary well points from boreholes installed through the bottom of the detention basin at the SWDF. The temporary well points consisted of a slotted section of Geoprobe® rod. Tubing was lowered into the rod and a peristaltic pump was used to collect the groundwater samples from the rod. After the groundwater sample was collected from the temporary well point, the well was pulled and the boring was backfilled with bentonite pellets.

Six monitoring wells at the Site have been abandoned since the submittal of the RFI Report (ENCORE, 2002b). Monitoring wells MWP6-05 and MWP6-08 were removed because a new structure is currently being constructed at AOI P-6, and these monitoring wells would likely be damaged during construction. Two historical wells, installed by others prior to RFI activities, identified during the construction activities at AOI P-6 were also abandoned. Monitoring wells MWM5 and MWM9 were abandoned prior to the extension of Glenwood Avenue north through the Site. These wells were located within the right of way to be deeded to the City and would have been damaged during construction. Monitoring wells were abandoned by overdrilling with 4.25-inch augers (i.e., drilling to a point lower in elevation than the monitoring well was set), and backfilling with bentonite chips (hydrated).

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2.4.2 Laboratory Procedures

The analytical parameters for all samples that were submitted to the laboratory were specific to each AOI and are summarized in Table 1-1. All methods and procedures for the analysis are presented in the QAPP (ENCORE, 2001b) and summarized in Table 2-2 of the RFI Report (ENCORE, 2002b).

The only variation to the methods presented in the QAPP (ENCORE, 2001b) was for the analysis of thallium in groundwater samples. The method was modified during the RFI sampling activities from Method SW846-6010B to Method SW846-6020 to lower the detection and the reporting limits.

2.4.3 Data Validation

A data validation assessment was completed on all final laboratory analytical data. Several analytical results reviewed during data validation were rejected. A DUSR was prepared for each AOI or other area, summarizing the data validation assessment. All DUSRs are provided in Appendix D.

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3. Environmental Setting

The RFI Report (ENCORE, 2002b) presented a detailed discussion of regional and Site-specific geology and hydrogeology. The subsurface information obtained during the supplemental RFI activities was reviewed to determine if the new information was consistent with the current understanding of the Site-specific geology and hydrogeology. This Section provides summaries of the understanding of the Site-specific geology and hydrogeology based on additional subsurface information collected during the supplemental RFI activities.

3.1 Site Geology/Hydrogeology

Soil boring logs that were prepared and groundwater elevations collected during supplemental RFI activities were reviewed to determine if new data were consistent with the Site-specific geology and hydrogeology discussions presented in the RFI Report (ENCORE, 2002b). The following subsections discuss the results.

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3.1.1 Site Geology

The subsurface data collected during the supplemental RFI investigation is consistent with and supports the information presented in the RFI Report (ENCORE, 2002b). For additional Site-specific geological information, refer to Section 3.8 of the RFI Report (ENCORE, 2002b). Soil boring logs for recently completed soil borings are presented in Appendix B of this Report. Subsurface stratigraphic data collected from the supplemental RFI activities is summarized in Table 3-1.

3.1.2 Site Hydrogeologic Setting

A complete round of groundwater levels from all monitoring wells was collected prior to each semi-annual groundwater sampling event. Groundwater contour maps prepared from data collected in November 2002 and May 2003 show general groundwater flow patterns that are consistent with those presented in the RFI Report (ENCORE, 2002b). Figures 3-1 and 3-2 present the November 2002 and May 2003 groundwater flow contour maps.

A complete list of groundwater levels for November 2002 and May 2003, is included in the November 2002 Semi-Annual Groundwater Monitoring Event Summary Report (ENCORE, 2003h) and the May 2003 Semi-Annual Groundwater Monitoring Event Summary Report, (ENCORE, 2003i), respectively.

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The Site-wide groundwater flow maps indicate that several localized anomalies exist in the groundwater flow patterns. Groundwater flow at AOIs W-8, W-9, and M-2 are influenced by the presence of storm sewers within those AOIs. Localized groundwater flow maps for these AOIs are presented on Figure 3-3 (AOI W-8), Figure 3-4 (AOI W-9), and Figure 3-5 (AOI M-2). Table 3-2 presents the groundwater levels used to prepare Figures 3-3, 3-4, and 3-5.

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4. Supplemental Investigation Results and Discussion

The results of the field investigations completed during the supplemental RFI activities are discussed in this Section. The discussion is divided into subsections corresponding to the AOIs that were investigated. Each subsection includes a description of the areas investigated, the scope of the field investigations, a summary of the results, and discussion of the results with respect to whether a potentially significant release of hazardous constituents has been identified and if so, the nature and extent of the release. The identification of a potentially significant release at an area is based on screening of the characterization data collected during the RFI with generic screening criteria (i.e. Natural Resources and Environmental Protection Act (NREPA), Michigan Act 451, Part 201 Generic Cleanup Criteria). The approach for evaluating the soil, groundwater, sediment, and surface water data is discussed below.

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Soil

The specific Michigan Part 201 generic industrial cleanup criteria was used as screening criteria for identifying potential soil impacts are direct contact, inhalation of soil vapor and particulate in ambient air, and inhalation of soil vapor in indoor air (MDEQ, 2002). These criteria are appropriate based on current and reasonably expected future land use at the Site, as discussed in the RFI Report (ENCORE, 2002b). Both the industrial and residential Part 201 criteria were derived by the MDEQ based on a cancer risk of 10^{-5} and a hazard quotient (HQ) of 1. They are also derived from exposure factors that reflect conservative assumptions about the magnitude, frequency, and duration of exposures, which in combination are intended to provide estimates of exposures that are higher than actual exposures to a large portion (90% to 99%) of the population.

A potentially significant release is identified at an area where the highest concentrations of the constituents detected in soil at the area are higher than these screening criteria. It should be noted that an area with constituents at concentrations in soil that are higher than these screening criteria does not mean that it necessarily poses an unacceptable risk; it only means that the potential for the area to pose an unacceptable risk should be evaluated considering Site-specific factors. The Site-specific evaluation of potential risks posed by constituents in an area where a potentially significant release is identified is addressed by further risk-based evaluations that are discussed in Section 5.

Site-specific background soil concentrations for metals were calculated and presented in the RFI Report (Section 3.9, ENCORE, 2002b). As discussed in Section 3.9 of the RFI Report (ENCORE, 2002b), a concentration of a metal lower than or equal to its upper prediction limit is considered to be within background levels; a concentration higher than its upper prediction limit is

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considered to be higher than background levels. Table 3-4 of the RFI Report (ENCORE, 2002b) summarizes the calculated background metal concentrations including statistical prediction limits.

Section 4 Tables and Figures evaluate metals data in soil collected at the Site against the industrial screening criteria adjusted to reflect the Site-specific background metals concentrations. The text presented in Section 4 evaluates the metals data against generic industrial screening criteria that does not account for the background metals adjustment.

Groundwater

In a manner similar to that discussed above for screening soil characterization data, the groundwater monitoring data collected during the RFI are compared with generic screening criteria to identify whether a potentially significant release from an area to groundwater has occurred. The groundwater monitoring data are compared with screening criteria based on the Part 201 Generic Residential and Industrial Drinking Water Criteria (IDWC), although none of these saturated zones serve as a drinking water supply for the Site or the surrounding areas. In addition, the Part 201 criteria based on inhalation of groundwater vapor to indoor air and direct contact by workers conducting excavations (MDEQ, 2002) are also used to identify potential impacts in the shallow saturated zone, which is within approximately 10 ft of the ground surface at some parts of the Site.

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It should be noted that the groundwater screening criteria described above include criteria that are designed to be protective of potential exposures via drinking water use and represent highly conservative screening criteria for evaluating groundwater that is not a current or reasonably expected future drinking water supply. Therefore, the presence of groundwater with constituent concentrations higher than these generic screening criteria does not mean that the groundwater necessarily poses an unacceptable risk; it only means that the potential for the groundwater to pose an unacceptable risk should be evaluated considering Site-specific factors. The Site-specific evaluation of potential risks posed by constituents in groundwater where a potentially significant release is identified is addressed by further risk-based evaluations that are discussed in Section 5.

Discussion of the supplemental RFI field investigations in the following subsections begins with data collected at the AOIs located at the Fiero Plant, followed by discussion of the data collected at the DA, MFD, Powertrain, SWDF, and LNAPL areas. Each subsection includes Tables comparing the RFI characterization data for an area with the screening criteria discussed above. In addition, the tables also compare the RFI data with more conservative screening criteria based on the Part 201 criteria for residential soil. These additional comparisons are provided as another point of reference only, and are not used as the basis for identifying the presence of a potentially significant release because these criteria are unnecessarily conservative for this Site, as discussed above. Each subsection also includes Figures that show the spatial distribution of the RFI data for constituents

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having at least one concentration higher than the most conservative screening criteria in any media at any AOI. These constituents are the constituents of concern (COC) for the Site.

Since the issuance of the RFI Report (ENCORE, 2002b), the Part 201 criteria have been amended (December 21, 2002). Table 4-1 presents a listing of the Part 201 amended 2002 criteria for the Site-specific COCs. All data collected following the preparation of the RFI Report (ENCORE, 2002b) presented in this Report is evaluated against the amended 2002 screening criteria.

Figures 4-1 through 4-5 provide a summary of all sample locations within each operational area.

4.1 Fiero

This Section summarizes the investigations and results completed at three Fiero AOIs during the supplemental RFI activities.

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4.1.1 Wastewater Collection Sumps (AOI F-7)

AOI F-7 consists of a series of six wastewater collection sumps located in the Powerhouse, south of Plant 17 (Figure 1-5). These sumps were identified as Solid Waste Management Unit (SWMU) 7 in the Fiero Preliminary Assessment / Visual Site Inspection (PA/VSI) Report (PRC Environmental Management (PRC), 1992); therefore, the sumps are considered an AOI.

There have been no known releases from the wastewater collection sumps. The Fiero PA/VSI Report (PRC, 1992) stated that during the VSI the condition of the sumps was good. However, during the walkthrough completed as part of the preparation of the CCR (ENCORE, 2001a), these sumps were noted to be full of liquids and could not be inspected.

As part of the RFI activities the sumps were cleaned and inspected in June 2001. of the six sumps, two were associated with alkali-oily activities. Upon inspection, both of these sumps were observed to have cracked and broken sections of concrete. The remaining four sumps are associated with lime, fly-ash, and neutralization processes and therefore were not considered for subsequent investigation. These sumps were inspected and showed signs of pitting. Two monitoring wells were installed from which soil and groundwater samples were collected during the initial RFI activities. Soil and groundwater samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The Site personnel determined that the two sumps associated with the alkali-oily activities will be repaired and will remain in active use. As discussed in Section 2.1.2, the U.S. EPA requested that

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4.1.3.2 Discussion of Results

The concentrations of constituents detected in the soil boring samples were compared with the screening criteria as discussed in Section 4.0.

Soil Samples

The concentrations of constituents detected in the soil boring samples collected from AOI F-15 during the supplemental RFI activities do not exceed the screening criteria. Figure 4-6 provides a summary of sample locations and analytical results for soil. As discussed in the RFI Report (ENCORE, 2002b), tetrachloroethene and 1,1-dichloroethene were detected at concentrations in soil exceeding screening criteria.

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4.1.3.3 Conclusions

The supplemental RFI soil data from AOI F-15 confirm that the soil samples collected during the original RFI activities have adequately characterized the extent of affected soil at AOI F-15. The additional soil borings delineate VOC impacted soils at AOI F-15 to the north, east and west of the catch basin, satisfying the intent of the CA725 determination. Based on the RFI soil results, AOI F-15 is further discussed in the Risk Evaluation presented in Section 5.

Table 1-1 presents a summary of the data and conclusions for this AOI.

4.2 Demolition Area (DA)

This Section summarizes the investigations and results completed at four DA AOIs during the supplemental RFI activities.

4.2.1 West Yard (AOI W-1)

AOI W-1 consists of the West Yard, an area of approximately 20 acres located in the southwest corner of the DA (Figure 1-5). LNAPL Area No. 1 is located in AOI W-1. During the original RFI investigation activities, 11 soil borings were completed and 11 monitoring wells were installed. Soil, groundwater, and LNAPL samples were submitted for laboratory analysis for select analytes, which included VOCs, SVOCs, PCBs, inorganics, hexavalent chromium and/or dioxins.

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Potential impacts, in the vicinity of AOI W-1, were observed during the implementation of a geotechnical borehole investigation conducted by McDowell & Associates. The geotechnical investigation consisted of the completion of 36 soil borings located within the vicinity of the footprint of the proposed industrial redevelopment area. This footprint includes areas within AOIs W-1, W-8, and W-9. During this geotechnical investigation odors, stained soil, and/or elevated PID readings were observed in 16 of the 36 soil borings. The additional investigations (RFI (Work Plan Addendum No. 9 (ENCORE, 2003f)) related to the area of industrial redevelopment to further assess the geotechnical observations for AOI W-8 and W-9 are discussed in Sections 4.2.2 and 4.2.3, respectively.

4.2.1.1 Scope and Results

The scope of the supplemental field investigations at AOI W-1 involved the collection of second round groundwater samples to fulfill the groundwater sampling requirements discussed in Section 2.1.1, and soil samples to investigate conditions observed during the geotechnical investigation (as described in RFI Work Plan Addendum No. 9 (ENCORE, 2003f)).

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The following is a summary of the supplemental RFI sampling activities completed for each medium at AOI W-1. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Soil Samples

One soil boring was completed during the installation of monitoring well MWW1-06 on the southwest corner of Montcalm Avenue and Saginaw Street to provide a downgradient groundwater monitoring location to MWW1-04. Two soil samples were collected and submitted for laboratory analysis for VOCs, SVOCs, PCBs and inorganics.

As proposed in RFI Work Plan Addendum No. 9 (ENCORE, 2003f), one soil boring (BW1-11a) was completed in the vicinity of geotechnical soil boring location B-28 where odors and staining was observed. The samples were submitted for analysis for VOCs, SVOCs, PCBs, and inorganics. The well and boring locations are shown on Figures 4-8a and 4-8b. The soil boring logs for MWW1-06 and BW1-11a are provided in Appendix B.

Groundwater Samples

Groundwater samples were collected from three monitoring wells (DWD13, MWW1-04 and MWW1-05) to fulfill groundwater sampling requirements as discussed in Section 2.1.1. Monitoring well locations are shown on Figure 4-9. Monitoring well MWW1-05 was sampled for the first time in August 2002 to delineate PCB impacts from LNAPL Area No. 1. The sample collected from DWD13 was submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics. The sampled collected from MWW1-04 was sampled only for PCBs.

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Groundwater samples were collected from well MWW1-06 during the two semi-annual groundwater monitoring events and the results were discussed in the associated summary reports.

A groundwater sample was collected from MWW1-04, in November 2003 to verify groundwater quality with respect to methylene chloride detected during the May 2003 semi-annual groundwater sampling event. The November 2003 sample was analyzed for methylene chloride only.

The number of locations from which supplemental RFI samples were collected for each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	2	4	4	4	4
Shallow Groundwater	2	1*	0	2	0
Deep Groundwater	1	1	1	1	1

*Methylene chloride only.

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Summaries of the analytical data for all AOI W-1 soil and groundwater (shallow and deep) samples collected during the RFI are shown in Tables 4-6, 4-7a and 4-7b, respectively. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.2.1.2 Discussion of Results

The concentrations of constituents detected in soil were compared with the screening criteria as discussed in Section 4.0.

Soil Boring Samples

The concentrations of constituents detected in the soil boring BW1-11a samples collected from AOI W-1 exceed the screening criteria for total chromium and manganese. The concentrations of constituents detected in MWW1-06 do not exceed the industrial screening criteria, although arsenic was detected at concentration above the Residential Direct Contact Criteria (RDC).

Total chromium exceeds the Industrial Particulate Soil Inhalation Criteria (IPSIC) of 240 mg/kg for hexavalent chromium with a concentration of 340 mg/kg in the 6 to 8foot interval. Manganese exceeds the IPSIC of 1,500 mg/kg in the 6 to 8 foot interval (7,260 mg/kg) and the 0 to 2 foot interval (1,750 mg/kg). The residential screening criteria are relevant at MWW1-06 as the well is located in an area off-Site. Although the arsenic concentrations detected in the 0 to 2 (9 mg/kg) and 2 to 4 (8.2 mg/kg) foot intervals exceed the RDC, both concentrations are below the Site-specific

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background concentration for arsenic in soils (13.2 mg/kg). As discussed in the RFI Report (ENCORE, 2002b), several other constituents have concentrations in soil that are higher than the screening criteria.

Figures 4-8a and 4-8b provide a summary of the sample location and analytical results for soil.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI W-1 exceed the screening criteria for PCBs and methylene chloride. Total PCBs concentration at MWW1-04 was detected at a concentration of 0.00051 mg/L, which marginally exceeds the IDWC and RDWC of 0.0005 mg/L. Downgradient monitoring well MWW1-06 delineates the PCB impacts in groundwater, as PCBs have not been detected at concentrations exceeding screening criteria at this well.

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As presented in the May 2003 Semi-Annual Groundwater Monitoring Event Summary Report (ENCORE, 2003i) methylene chloride was detected in monitoring well MWW1-04. The concentration of methylene chloride was detected at 0.007 mg/L, which exceeds the IDWC and RDWC of 0.005 mg/L. Monitoring well MWW1-04 has been sampled three times for VOCs (including methylene chloride). Methylene chloride has not been detected above reporting limits (0.001 mg/L) in the two previous sampling rounds. Methylene chloride is a common laboratory contaminant, and a small amount of methylene chloride was detected in the laboratory blank associated with the May 2003 sample from MWW1-04. The methylene chloride concentration from the confirmation sample collected in November 2003 from MWW1-04 was non-detect.

Figure 4-9 provides a summary of sample locations and analytical results for groundwater.

4.2.1.3 Conclusions

The supplemental RFI soil and groundwater data from AOI W-1 confirm similar impacts discussed in the RFI Report (ENCORE, 2002b). Concentrations of manganese and total chromium in soil samples exceed the IPSIC and PCBs in groundwater exceed the IDWC and RDWC. Concentrations of arsenic in soil exceed the RDC but are below the Site-specific background concentration at a location just southwest of the Site. Based on these results, AOI W-1 is further discussed in the Risk Evaluation presented in Section 5.

Table 1-1 presents a summary of the data, conclusions, and proposed activity for this AOI.

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4.2.2 Former Plant 9 Basement (AOI W-8)

AOI W-8 consists of 12 ASTs formerly located in the Plant 9 basement (Figure 1-5). Kerosene, coolants, and other unknown materials were historically stored in the ASTs. All tanks have been removed and Plant 9 has been decommissioned and demolished. No documentation on the closure of the ASTs is available. Kerosene-like odors have historically been reported in the storm sewers in this area. AOI W-8 is also part of the existing investigation at LNAPL Area No. 3.

During the original RFI investigation activities at AOI W-8 12 monitoring wells and two soil borings were completed, 12 monitoring wells were installed, and one LNAPL sample and eight surface soil samples were collected. Soil, groundwater and LNAPL samples were submitted for laboratory analysis for select analytes, which included VOCs, SVOCs, PCBs, inorganics, hexavalent chromium, and/or dioxins.

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4.2.2.1 Scope and Results

The scope of the supplemental field investigations at AOI W-8 involved collection of second round groundwater samples to fulfill groundwater sampling requirements discussed in Section 2.1.1 and soil samples to investigate field observations made during completion of geotechnical soil borings (RFI Work Plan Addendum No. 9 (ENCORE, 2003f)) including an LNAPL investigation. Additional monitoring and recovery wells and a soil boring were installed to further evaluate conditions at LNAPL Area No. 3.

The following is a summary of the supplemental RFI sampling activities completed for each medium at AOI W-8. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Soil Samples

A soil boring associated with the installation of monitoring well MWW8-13, was completed adjacent to a geotechnical soil boring location where the potential presence of LNAPL was observed during drilling activities as proposed in RFI Work Plan Addendum No. 9 (ENCORE, 2003f). The location of MWW8-13 is adjacent to a storm sewer line. Four additional soil borings (BW8-03 through BW8-06) were completed and samples were collected to further investigate the odor, staining, and/or elevated PID readings observed during the geotechnical investigation as proposed in RFI Work Plan Addendum No. 9 (ENCORE, 2003f). Additional samples were collected from BW8-03 (3 to 5 feet bgs interval) and BW8-06 (2 to 4 feet bgs interval) due to staining and elevated PID readings, respectively. The samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

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Four additional soil borings (BW8-07 through BW8-10) were completed along the storm sewers, which pass through AOI W-8 to evaluate the condition of the soil and the extent presence of LNAPL using an ultraviolet light. Samples were not collected for laboratory analysis from these borings consistent with the RFI Work Plan Addendum No. 9 (ENCORE, 2003f).

Seven soil borings (SBRWW8-01, RWW8-01, RWW8-02, MWW8-14 through MWW8-16, and SBMWW8-17) associated with the installation of two 6-inch recovery wells and three monitoring wells were completed within AOI W-8 to evaluate LNAPL conditions and collect additional information for the determination of corrective measures at LNAPL Area No. 3. Samples were not collected for laboratory analysis from these borings.

Figure 4-10 presents the locations of soil borings and recovery wells in AOI W-8. Soil boring logs and well construction diagrams are provided in Appendix B.

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Groundwater Samples

One groundwater sample was collected from monitoring well (MWW8-13) where the presence of LNAPL was suspected during the geotechnical drilling activities as proposed in RFI Work Plan Addendum No. 9 (ENCORE, 2003f). The location of the well is shown on Figure 4-11. The sample was submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

Groundwater samples were collected from four additional monitoring wells (MWW8-08, MWW8-10, MWW8-11, and MWW8-12), to fulfill the groundwater sampling requirement as discussed in Section 2.1.1. The samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The number of locations from which supplemental RFI samples were collected for each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	5	13	13	13	13
Groundwater	5	5	5	5	5

Summaries of the analytical data for all AOI W-8 soil and groundwater samples collected during the RFI are shown in Tables 4-8 and 4-9, respectively. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

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4.2.2.2 Discussion of Results

The concentrations of constituents detected in soil and groundwater were compared with the screening criteria as discussed in Section 4.0.

Soil Samples

The concentration of constituents detected in soil boring samples collected from AOI W-8 exceed screening criteria for arsenic, manganese, total chromium, and lead. Arsenic was detected in the 6 to 8 foot interval from BW8-06 at a concentration (54 mg/kg), which exceed the Industrial Direct Contact Criteria (IDC) of 37 m/kg. Manganese was detected at concentrations exceeding the IPSIC (1,500 mg/kg) in the 0 to 2 feet bgs interval from BW8-03 and BW8-06 (1,660 and 1,990 mg/kg, respectively) and the 6 to 8 foot interval at BW8-06 (1,600 mg/kg). Total chromium was detected at concentrations exceeding the IPSIC for hexavalent chromium (240 mg/kg) at BW8-06 in the 0 to 2 foot (726 mg/kg) and the 2 to 4foot (363 mg/kg) intervals. Lead was detected at BW8-06 (2 to 4 and 6 to 8 foot intervals) at concentrations (2,820 and 8,440 mg/kg, respectively), which exceed the IDC of 900 mg/kg. Figure 4-10 provides a summary of sample locations and analytical results for soil. Chromium (total) and manganese also have concentrations in samples collected at this AOI during the original RFI activities that are higher than the screening criteria.

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LNAPL was not observed in soil samples screened using an ultraviolet light.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI W-8 exceed the screening criteria for nine inorganics and two SVOCs.

Manganese was detected in two samples from MWW8-08 and MWW8-11 (5.41 and 3.57 mg/L, respectively) exceeding the IDWC and RDWC (2.5 and 0.86 mg/L). Vanadium was detected in two samples (MWW8-08 and MWW8-12) at concentrations (0.239 and 0.0119 mg/L, respectively) exceeding RDWC of 0.0045 mg/L for both samples and IDWC of 0.062 mg/L for the MWW8-08 sample. Seven additional inorganics were detected at MWW8-08 that exceed screening criteria: arsenic (0.0849 mg/L) exceeds the IDWC and RDWC of 0.05 mg/L; beryllium (0.0054 mg/L) exceeds the IDWC and RDWC of 0.004 mg/L; lead (0.122 mg/L) exceeds the IDWC and RDWC of 0.004 mg/L; total chromium (0.295 mg/L) exceeds the IDWC and RDWC of 0.1 mg/L; cobalt (0.0879 mg/L) exceeds the RDWC of 0.04 mg/L; nickel (0.307 mg/L) exceeds the IDWC and RDWC of 0.1 mg/L; and thallium (0.003 mg/L) exceeds the IDWC and RDWC of 0.002 mg/L. Antimony was also detected at concentrations higher than the screening criteria at this AOI during the original RFI activities.

The groundwater sample collected from MWW8-13 had two SVOC concentrations that exceed screening criteria. 2,4-Dimethylphenol (2.5 mg/L), and total methylphenols (4.6 mg/L) exceed the

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IDWC and RDWC of 1.0 and 0.37 mg/L, respectively. LNAPL was not observed in MWW8-13. PCBs and dioxins were also detected at concentrations higher than the screening criteria during the original RFI activities.

Figure 4-11 provides a summary of sample locations and analytical results for groundwater.

4.2.2.3 Conclusions

The supplemental RFI soil and groundwater data from AOI W-8 indicate that a release has occurred to soil and groundwater at AOI W-8. Concentrations of arsenic, manganese, chromium (total) and lead in soil samples exceed screening criteria. Groundwater concentrations of inorganics and SVOCs exceed IDWC and RDWC. Based on these results, AOI W-8 is further discussed in the Risk Evaluation presented in Section 5.

LNAPL was not observed in MWW8-13 or in soil samples screened for using an ultraviolet light completed as part of RFI Work Plan Addendum No. 9 (ENCORE, 2003f).

Table 1-1 presents a summary of the data, conclusions, and proposed activity for this AOI.

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4.2.3 Former Central Foundry (AOI W-9)

AOI W-9 consists of the Former Central Foundry (Plant 6) located in the southeast corner of the DA (Figure 1-5). Historically, PCBs were utilized in hydraulic and transformer fluids at the Foundry. A former 20,000 - gallon UST containing gasoline was also located at the Foundry. The Former Central Foundry (Plant 6) has been decommissioned and demolished. Previous remedial activities addressed the former resin spill and the presence of PCBs. However, documentation does not exist for closure of the 20,000 - gallon UST.

During the original RFI investigation activities, two soil borings were completed, five monitoring wells were installed, and surface soil samples were collected from 13 locations in AOI W-9. Soil samples were submitted for laboratory analysis of select analytes, which included VOCs, SVOCs, PCBs, inorganics, cyanide, hexavalent chromium and/or dioxins.

4.2.3.1 Scope and Results

The scope of the supplemental field investigation at AOI W-9 involved collection of soil and groundwater to investigate the soil impacts observed during a recent geotechnical investigation and to delineate the LNAPL observed at AOI W-9 (RFI Work Plan Addendum No. 9 (ENCORE, 2003f)).

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The following is a summary of the supplemental RFI sampling activities completed for each medium at AOI W-9. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Soil Samples

A total of eighteen soil borings, seven associated with installations of monitoring wells, were completed in AOI W-9 as proposed in RFI Work Plan Addendum No. 9 (ENCORE, 2003f). Boring and well locations are shown on Figure 4-12. Soil boring logs and well construction diagrams are provided in Appendix B.

Seven of the soil borings (BW9-03 through BW9-06, BW9-11, BW9-12, and BW9-16) were completed to further investigate the general Site conditions at the geotechnical soil boring locations where odors, stained soils, and/or elevated PID readings were observed. An additional sample was collected from BW9-03 (3 to 5 feet bgs interval) due to staining. These samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

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Two monitoring wells (MWW9-01 and MWW9-02) were installed, and four soil borings (BW9-07 through BW9-10) were completed to determine if LNAPL was present near the storm sewer. Soil samples were collected during the installation of MWW9-01 and MWW9-02 and submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics. The four soil borings (BW9-07 through BW9-10) installed were not sampled for laboratory analysis but were screened for LNAPL using an ultraviolet light. LNAPL was visually observed in the soil boring and a sheen was observed in MWW9-02. To delineate LNAPL impacts in this area four additional monitoring wells (MWW9-03, and MWW9-05 through MWW9-07), and one temporary well (TWW9-01) were installed, and two soil borings (BW9-14 and BW9-15) were completed. No soil samples were collected from these wells or borings.

Groundwater Samples

Groundwater samples were collected from four monitoring wells (MWW9-01, MWW9-03, MWW9-06, and TWW9-01) installed during work proposed in RFI Work Plan Addendum No. 9 (ENCORE, 2003f). Well locations are shown on Figure 4-11. A groundwater sample was not collected from MWW9-02 due the presence of an LNAPL sheen, or from MWW9-05 and MWW9-07 because natural recharge at these wells did not occur. The samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

A groundwater sample was collected from DWD12, located within AOI W-9, in October 2003 to verify groundwater quality with respect to methylene chloride detected during the May 2003 semi-annual groundwater sampling event. The October sample was analyzed for methylene chloride only.

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LNAPL Sample

An LNAPL sheen was observed in MWW9-02. A sample was collected in November 2003 for fingerprint and chemical (VOCs, SVOC, PCBs, and inorganics) analysis. Additional wells were installed to delineate the presence of LNAPL (MWW9-03 and MWW9-05 through MWW9-07).

The number of locations from which supplemental RFI samples were collected for each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	9	23	23	23	23
Shallow Groundwater	4	4	4	4	4
Deep Groundwater	1	1*	0	0	0
LNAPL	1	1	1	1	1

*Methylene chloride only.

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Summaries of the analytical data for all AOI W-9 soil and groundwater (shallow and deep) samples collected during the RFI are shown in Tables 4-10, 4-11a, and 4-11b, respectively. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.2.3.2 Discussion of Results

The concentrations of constituents detected in soil were compared with the screening criteria as discussed in Section 4.0.

Soil Samples

The concentrations of constituents detected in the soil boring samples collected from AOI W-9 exceed the screening criteria for manganese. Soil boring samples collected from BW9-03 (3,680 mg/kg, 0 to 2-foot interval) and BW9-11 (1,690 mg/kg, 5 to 7-foot interval) exceed the IPSIC of 1,500 mg/kg. Figure 4-12 provides a summary of sample locations and analytical results for soil. Benzo(a)pyrene, PCBs, chromium also had concentrations in samples collected during the original RFI activities that are higher than the screening criteria.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI W-9 exceed the screening criteria for lead. Lead was detected at a concentration of 0.0391 mg/L at MWW9-01, which exceeds the IDWC and RDWC of 0.004 mg/L. Figure 4-11 provides a summary of sample locations and analytical results for groundwater.

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As presented in the May 2003 Semi-Annual Groundwater Monitoring Event Summary Report (ENCORE, 2003i) methylene chloride was detected in deep monitoring well DWD12. The concentration of methylene chloride was detected at 0.018 mg/L, which exceeds the IDWC and RDWC of 0.005 mg/L. Monitoring well DWD12 has been sampled five times since it was installed. Methylene chloride has not been detected above reporting limits (0.001 mg/L) in the three previous sampling rounds. Methylene chloride is a common laboratory contaminant, and a small amount of methylene chloride was detected in the laboratory blank associated with the May 2003 sample from DWD12. The methylene chloride concentration from the confirmation sample collected in October 2003 from DWD12 was non-detect.

LNAPL Sample

During a groundwater level monitoring event conducted in October 2003 to evaluate groundwater flow conditions along the storm sewer that runs north/south through the DA, 0.25 feet of LNAPL was detected in MWW9-02. This area is now identified as LNAPL Area No. 6 and is delineated by existing AOI W-9 wells. The analytical results from the LNAPL sample collected from MWW9-02 in November 2003 were not available at the time this Report was published. When these data become available, they will be evaluated and provided to the U.S. EPA under separate cover.

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4.2.3.3 Conclusions

The supplemental RFI soil data from AOI W-9 indicate similar impacts as those presented for AOI W-9 in the RFI Report (ENCORE, 2002b). Concentrations of manganese in soil exceed the screening criteria for IPSIC. The supplemental RFI groundwater data indicates lead impacts to groundwater, not observed during the original RFI activities. Concentrations of lead in groundwater samples exceed screening criteria for IDWC and RDWC. Based on these results, AOI W-9 is further discussed in the Risk Evaluation presented in Section 5. LNAPL also has been identified to be present at AOI W-9.

Table 1-1 presents a summary of the data, conclusions, and proposed activity for the AOI.

4.2.4 Railroad Marshalling Area Drainage System (AOI W-10)

AOI W-10 consists of a Railroad Marshalling Area that extends the entire length of the western boundary of the West Yard (Figure 1-5). Historical operations at the Railroad Marshalling Area included the temporary storage of railcars loaded with scrap metal and grinding waste to be shipped off-Site. Waste oil from the waste metal chips drained out of the railcars and into the railway ballast/soil immediately beneath the tracks. As a result of the oily discharge, the Railroad Marshalling

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Area Drainage System was installed in November 1972. The drainage system was designed to collect and covey the oily discharge from the railcars to the WWTP. The Railroad Marshalling Area Drainage System remains at the Site.

Twelve catch basins and a pit/tunnel structure in the Railroad Marshalling Area were cleaned and inspected. A black sludge and/or oily sheen were noted in most of the catch basins. Deterioration ranged from none observed to heavily deteriorated concrete and pipes. During the original RFI investigation activities, nine soil borings and six monitoring wells were completed. Soil, groundwater and LNAPL samples were submitted for laboratory analysis of select analytes, which included VOCs, SVOCs, PCBs, inorganics, and/or dioxins. LNAPL was observed in two wells installed during the RFI. This LNAPL area is identified as LNAPL Area No. 2.

4.2.4.1 Scope and Results

The scope of the supplemental field investigation at AOIW-10 involved collection of second round groundwater samples, to fulfill the groundwater sampling requirements discussed in Section 2.1.1.

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The following is a summary of the supplemental RFI groundwater sampling activities conducted for groundwater at AOIW-10. The samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Groundwater Samples

Groundwater samples were collected from four monitoring wells (MWW10-02 through MWW10-04 and MWW10-06). Groundwater samples were not collected from MWW10-01 and MWW10-05 due to the presence of LNAPL. Well locations are shown on Figure 4-9. The samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The number of locations from which supplemental RFI groundwater samples were collected and the number of samples analyzed for each analyte group is as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Groundwater	4	4	4	4	4

Summaries of the analytical data for all AOIW-10 groundwater samples collected during the RFI are shown in Tables 4-12. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

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4.2.4.2 Discussion of Results

The concentrations of constituents detected in groundwater were compared with the screening criteria as discussed in Section 4.0.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected during the supplemental RFI activities at AOI W-10 do not exceed the screening criteria. Figure 4-9 provides a summary of sample locations and analytical results for groundwater. These data show that bis(2-ethylhexyl)phthalate and PCBs, which had concentrations that were higher than the screening criteria at MW10-02 and MW10-04, respectively, no longer exceed the screening criteria.

4.2.4.3 Conclusions

The supplemental RFI groundwater data from AOI W-10 do not indicate the presence of any concentrations higher than the screening criteria, however, LNAPL is present at this AOI. As discussed in the RFI Report (ENCORE, 2002b), NFA or investigation for soil or groundwater is warranted for this area. The LNAPL will be addressed in the CMP.

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Table 1-1 presents a summary of the data, conclusions, and proposed activity for the AOI.

4.2.5 Area of Industrial Redevelopment

GM has prepared an industrial redevelopment proposal for a large portion of the DA. This potential redevelopment area includes portions of AOIs W-1, W-8 and W-9. Table 4-13 provides a list of AOI W-1, W-8, and W-9 sampling locations within the planned extent of the proposed industrial redevelopment area. To evaluate potential exposures to workers by constituents in soil under this redevelopment scenario, the soil results from locations listed in Table 4-13 were grouped and evaluated as a single area identified as the Area of Industrial Redevelopment.

The analytical results for all of these locations have been discussed in the associated AOI Sections in this Report and the RFI Report (ENCORE, 2002b), therefore they will not be presented in this Section. Table 4-14 provides a summary of the soil analytical data from the locations listed in Table 4-13 compared against screening criteria. Groundwater results are evaluated in each AOI. As shown on Table 4-14, certain locations in the Area of Industrial Redevelopment have potentially significant releases to soil.

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4.2.5.3 Conclusions

The RFI soil and groundwater data from the potential redevelopment area indicated constituents exist at concentrations exceeding screening criteria. LNAPL is also present in this area. Based on these results, the Area of Industrial Redevelopment is further discussed in the Risk Evaluation presented in Section 5.

Table 1-1 presents a summary of the data, conclusions, and proposed activity for the redevelopment area.

4.3 Metal Fabrication Division (MFD)

This Section summarizes the investigations and results completed at eight MFD AOIs during the supplemental RFI activities.

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4.3.1 Wastewater Treatment Plant (WWTP) (AOI M-1)

AOI M-1 consists of the WWTP located west of Plants 5, 14, 23, and 56 (Figure 1-5). Historically, the WWTP has utilized up to 55 ASTs, which were related to the industrial wastewater treatment process (including system influent, system effluent, and materials used during treatment). The WWTP and two waste piles located within the WWTP area were identified as SWMUs by GM in the Certification of Potential Releases from Solid Waste Management Units (GM, 1986). This area is considered an AOI because of the type of materials stored and treated (industrial wastes), a history of documented releases, and its previous identification as a SWMU.

During the original RFI investigation activities, 11 soil borings were completed, three monitoring wells were installed and twelve surface soil samples were collected. Soil and groundwater samples were submitted for laboratory analysis of select analytes, which included VOCs, SVOCs, PCBs, inorganics, cyanide, and/or hexavalent chromium.

4.3.1.1 Scope and Results

The scope of the supplemental field investigations at AOI M-1 involved the collection of groundwater samples to support CA750 determinations (RFI Work Plan Addendum No. 8 (ENCORE, 2003e)).

The following is a summary of the supplemental RFI groundwater sampling activities completed at AOI M-1. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

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Groundwater Samples

Groundwater samples were collected from five monitoring wells (MWM1-02 through MWM1-06) as proposed in the RFI Work Plan Addendum No. 8 (ENCORE, 2003e). Monitoring wells MWM1-04 and MWM1-06 were installed in locations side-gradient from existing monitoring well MWM1-03. Monitoring well MWM1-05 was installed as a downgradient well to MWM1-03. Well locations are shown on Figure 4-13. The samples were submitted for laboratory analysis for cyanide. Monitoring well MWM1-01 was dry during the sampling event; therefore, a groundwater sample could not be collected. Soil boring logs and monitoring wells construction diagrams are provided in Appendix B.

The number of locations from which supplemental RFI groundwater samples were collected and the number of samples analyzed for each analyte group is as follows:

Medium	Locations	Cyanide
Groundwater	5	5

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Summaries of the analytical data for all AOI M-1 groundwater samples collected during the RFI are shown in Table 4-15. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.3.1.2 Discussion of Results

The concentrations of constituents detected in groundwater were compared with the screening criteria as discussed in Section 4.0.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI M-1 exceed the screening criteria for cyanide. Cyanide was detected in MWM1-03 and MWM1-06 (1.3 and 0.489 mg/L, respectively), which exceeds the IDWC and RDWC of 0.2 mg/L. Three new monitoring wells (MWM1-04 through MWM1-06) were installed at AOI M-1 to provide downgradient and side-gradient wells to bound the contaminant plume at AOI M-1 to support the CA750 determination. Based on these results, side-gradient to the south-west and downgradient have been bound since cyanide concentrations in the new wells did not exceed screening criteria. Although newly installed monitoring well MWM1-06 does not bound the contaminant plume in the north-east direction (side-gradient), MWM2-02 is located side-gradient from MWW1-06 and does not exhibit any exceedances of the screening criteria for cyanide. Therefore, MWM2-02 provides the remaining appropriate well to bound the contaminant plume to support the CA750 determination. Figure 4-13 provides a summary of sample locations and analytical results for groundwater.

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4.3.1.3 Conclusions

The supplemental RFI groundwater data from AOI M-1 indicate that a release of cyanide has occurred to groundwater at AOI M-1. Concentrations of cyanide in supplemental RFI groundwater samples exceed screening criteria for IDWC and RDWC. Based on these results, AOI M-1 is further discussed in the Risk Evaluation presented in Section 5.

Groundwater analytical results for MWM1-04, MWM1-05 (supplemental RFI activities) and MWM2-02 (initial RFI activities, RFI Report, ENCORE, 2002b) provide appropriate downgradient and side-gradient boundaries for cyanide concentrations in groundwater at AOI M-1

Table 1-1 presents a summary of the data, conclusions, and proposed activity for this AOI.

4.3.2 Former Plating Operations Area (AOI M-2)

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AOI M-2 consists of a Former Plating Operations Area located in the western portion of Plant 56 (old Plant 2), near Dock 34 (Figure 1-5). This area is considered an AOI because of the type of materials historically used in plating operations (metals, solvents, and acids). In addition, the plating pits showed evidence of corrosion (ENCORE, 2002b). This area also has six metal-lined mix tanks located below the concrete floor east of the plating pits.

During the original RFI investigation activities, 18 soil borings were completed and ten monitoring wells were installed at AOI M-2. Soil samples were submitted for laboratory analysis for select analytes, which included VOCs, SVOCs, PCBs, inorganics, cyanide and/or hexavalent chromium.

On August 28 and 29, 2002, groundwater levels and LNAPL measurements were recorded from all on-Site monitoring wells that were installed as part of the RFI. LNAPL was observed in two of the monitoring wells located within AOI M-2 (MWM2-04 and MWM2-06). The area of AOI M-2 where the LNAPL is located is directly beneath an active production area. The source of the LNAPL is currently not known, however, the migration of the LNAPL (and groundwater) appears to be at least partially influenced by the presence of a storm sewer located near the eastern edge of AOI M-2. A groundwater flow map is presented as Figure 3-5.

The investigation (RFI Work Plan Addendum No. 4 (ENCORE, 2003a)) was completed to delineate the LNAPL. The investigation focused on the storm sewer line to determine if the storm sewer is influencing the groundwater flow. Due to elevated levels of dissolved chlorinated organic compounds observed in monitoring wells MWM2-04, MWM2-06 and MWM2-07, additional monitoring wells were

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installed in the shallow water bearing unit as part of the RFI Work Plan Addendum No. 4 (ENCORE, 2003a).

4.3.2.1 Scope and Results

The scope of the supplemental field investigations at AOI M-2 involved collection of soil and groundwater samples to assess potential LNAPL source areas (RFI Work Plan Addendum No. 4 (ENCORE, 2003a)), investigate elevated chlorinated organic compounds in groundwater (RFI Work Plan Addendum No. 4 (ENCORE, 2003a)), and fulfill the second round groundwater sampling requirements, as discussed in Section 2.1.1.

The following is a summary of the supplemental RFI sampling activities conducted for each medium at AOI M-2. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

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LNAPL Samples

A LNAPL sample was collected from MWM2-06 and submitted for fingerprint and chemical (VOCs, SVOCs, PCBs, and inorganics) analysis.

Soil Samples

RFI Work Plan Addendum No. 4 (ENCORE, 2003a) proposed the installation of 18 additional monitoring wells to delineate LNAPL observed at AOI M-2 and investigate the potential for dense non-aqueous phase liquid (DNAPL) due to elevated chlorinated organics in groundwater samples previously collected from AOI M-2. Only nine of the proposed 18 monitoring wells were installed in a phased approach (Figure 4-14). The monitoring wells were completed initially in areas where LNAPL was detected and then proceeded upgradient, side-gradient, and downgradient (with respect to groundwater flow or sewer flow direction) until LNAPL was no longer observed.

Of the nine monitoring wells installed, three were set to straddle the water table (water table well) and six were set at the base of the first water-bearing unit (shallow well). Three nested pairs (water table and shallow wells) were installed and three individual wells were installed at locations where the saturated zone was less than 8 feet thick (MWM2-15, MWM2-16, MWM2-19).

Soil samples were only collected from one of each nested monitoring well pair. Samples were collected from MWM2-15 through MWM2-17, MWM2-19, and MWM2-22. Sampling locations are shown on Figure 4-14. Samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics. Soil boring logs and well construction diagrams are provided in Appendix B.

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Groundwater Samples

Groundwater samples were collected from fifteen monitoring wells (MWM2-01 through MWM2-05, MWM2-07, MWM2-15 through MWM2-20, and MWM2-22 through MWM2-24) to evaluate the groundwater quality, to verify whether DNAPL was present, and to delineate the extent of LNAPL. Nine of the fifteen monitoring wells sampled were installed per the RFI Work Plan Addendum No. 4 (ENCORE, 2003a), the remaining were installed during the initial RFI activities. Monitoring well locations are shown on Figure 4-13. Samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The second round of groundwater samples were collected from seven AOI M-2 monitoring wells (MWM2-01 through MWM2-05, MWM2-07 and MWM2-08) during the supplemental field investigation activities, per the RFI Work Plan (ENCORE, 2001b). The samples were submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The number of locations from which supplemental RFI samples were collected from each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	5	15	15	15	15
Groundwater	15	22	22	22	22
LNAPL	1	1	1	1	1

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Summaries of the analytical data for all AOI M-2 soil, groundwater, and LNAPL samples collected during the RFI are shown in Tables 4-16, 4-17, and 4-18, respectively. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.3.2.2 Discussion of Results

The concentrations of constituents detected in soil and groundwater were compared with the screening criteria as discussed in Section 4.0.

LNAPL Samples

Screening criteria (i.e., Part 201) are not available for LNAPL, therefore, constituents concentrations detected in LNAPL are discussed below without a comparison against screening criteria.

Thirteen VOCs were detected in the AOI M-2 LNAPL sample (1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, 4-methyl-2-pentanone, chloroform, ethylbenzene, isopropylbenzene, methyl cyclohexane, methylene chloride, tetrachloroethene, toluene,

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trichloroethene, and xylenes). Six SVOCs were detected in the AOI M-2 LNAPL sample (2-methylnaphthalene, anthracene, fluoranthene, fluorene, phenanthrene, and pyrene). Ten inorganics were detected in the AOI M-2 LNAPL sample (antimony, arsenic, chromium, cobalt, copper, cyanide, lead, nickel, silver, and zinc). PCBS were also detected in the LNAPL sample.

Further LNAPL discussion including fingerprint analysis and delineation is presented in Section 4.6.3.

Soil Samples

The concentrations of constituents detected in the soil boring samples collected from AOI M-2 during the supplemental RFI activities do not exceed the screening criteria. Figure 4-14 provides a summary of sample locations and analytical results for soil. Concentrations of 1,1-dichloroethene and manganese in samples collected during the original RFI activities that were higher than the screening criteria.

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Groundwater Samples

Seven VOCs were detected at concentrations that exceed screening criteria. 1,1,1-Trichloroethane detected at MWM2-04 and MWM2-20 (0.6 and 0.24 mg/L, respectively) exceeds the IDWC, and RDWC of 0.2 mg/L. 1,1,2-Trichloroethane detected at MWM2-04 (0.02 mg/L) exceeds the IDWC and RDWC of 0.005 mg/L. 1,1-Dichloroethane detected at MWM2-04 (1.5 mg/L) exceeds the RDWC of 0.88 mg/L. 1,1-Dichloroethene detected at MWM2-04 and MWM2-20 (0.087 and 0.029 mg/L, respectively) exceeds the IDWC and RDWC of 0.007 mg/L. Tetrachloroethene detected at MWM2-20 (0.0075 mg/L) exceeds the IDWC and RDWC of 0.005 mg/L. Trichloroethene detected at MWM2-18, MWM2-22, and MWM2-24 (0.0055, 0.056, and 0.011 mg/L, respectively) exceeds the IDWC and RDWC of 0.005 mg/L. Vinyl chloride detected at MWM2-07, MWM2-18, and MWM2-23 (0.0035, 0.0034, and 0.0023 mg/L, respectively) exceeds the IDWC and RDWC of 0.002 mg/L.

The concentration of nickel in six of the monitoring wells (MWM2-07, MWM2-18, MWM2-19, and MWM2-22 to MWM2-24), ranges from 1.06 to 5.04 mg/L, which exceeds the IDWC and RDWC of 0.1 mg/L. Vanadium detected at MWM2-03 (0.0053 mg/L) exceeds the RDWC of 0.0045 mg/L.

The concentrations of constituents detected as part of the second round of groundwater sampling in AOI M-2 exceed the screening criteria for IDWC and RDWC. Bis(2-ethylhexyl)phthalate detected at MWM2-03 (0.024 mg/L) exceeds the IDWC and RDWC of 0.006 mg/L. 1,1,1-Trichloroethane detected at MWM2-04 (0.550 mg/L) exceeds the IDWC and RDWC of 0.2 mg/L. 1,1-Dichloroethane detected at MWM2-04 (1.9 mg/L) exceeds the RDWC of 0.88 mg/L. 1,1-Dichloroethene detected at MWM2-04 and MWM2-08 (0.091 and 0.0081 mg/L) exceeds the IDWC and RDWC of 0.007 mg/L. cis-1,2-Dichloroethene detected at MWM2-07 (0.09 mg/L) exceeds the IDWC and RDWC of 0.07 mg/L. Methylene chloride detected at MWM2-04 (0.024 mg/L) and MWM2-08 (0.0076 mg/L) exceeds the IDWC and RDWC of 0.005 mg/L. Vinyl chloride detected at MWM2-07 (0.027 mg/L)

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exceeds the IDWC and RDWC of 0.002 mg/L. Vanadium detected at MWM2-03 (0.0054 mg/L) exceeds the RDWC of 0.0045 mg/L. Nickel detected at MWM2-04 and MWM2-07 (0.180 and 10.4 mg/L, respectively) exceeds the IDWC and RDWC of 0.1 mg/L. Cyanide detected at MWM2-05 (0.55 mg/L) exceeds the IDWC and RDWC of 0.2 mg/L.

Figure 4-13 provides a summary of sample locations and analytical results for groundwater.

4.3.2.3 Conclusions

The supplemental RFI soil data for AOI M-2 confirms that the soil samples collected during the original RFI activities adequately characterized the soil conditions at this AOI, and that no further soil investigation is necessary. The supplemental RFI groundwater data from AOI M-2 confirm that a release has occurred to groundwater at AOI M-2. Concentrations of VOCs and inorganics in groundwater samples exceed screening criteria for IDWC and RDWC. Based on the soil and groundwater results and the presence of LNAPL, AOI M-2 is further discussed in the Risk Evaluation presented in Section 5.

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Table 1-1 presents a summary of the data, conclusions, and proposed activity for the AOI.

4.3.3 Plant 25 Former Gasoline UST and Current Gasoline Above Ground Storage Tank (AST) Location (AOI M-4)

AOI M-4 consists of two tanks (one former UST and one existing AST) adjacent to Plant 25 (formerly Plant 51) located in the northwest corner of the MFD portion of the Site (Figure 1-5). This area is considered an AOI because of a prior documented release from the former UST. There have been no documented releases from the existing AST, which is located within a secondary containment system. Remediation of the gasoline spill from the former UST was terminated in August 1987. Analytical data for groundwater indicate that concentrations of benzene and ethylbenzene are higher than screening criteria.

During the original RFI investigation activities one soil boring was completed and five monitoring wells were installed at AOI M-4. Soil and groundwater samples were submitted for laboratory analysis for VOCs and lead.

4.3.3.1 Scope and Results

The scope of the supplemental field investigations at AOI M-4 involved the collection of groundwater samples and to fulfill the second round groundwater sampling requirements as discussed in

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Section 2.1.1, collect groundwater data for remedial design purposes, and to support the CA750 determination for benzene and ethylbenzene (RFI Work Plan Addenda Nos. 8 and 8A (ENCORE, 2003e,f).

The following is a summary of the supplemental RFI sampling activities completed for each medium at AOI M-4. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Soil Samples

A soil boring was completed during the installation of MWM4-06 in the basement of Plant 25 as proposed in RFI Work Plan Addendum No. 8 (ENCORE, 2003e). Soil samples were not collected due to a shallow water table and the lack of staining, odors or elevated PID readings. Following installation, LNAPL was observed in this well, therefore this well could not be used as an appropriate downgradient monitoring point for the AOI M-4 contaminant plume to support the CA750 determination.

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To provide an appropriate downgradient monitoring point for AOI M-4, RFI Work Plan Addendum No. 8A (ENCORE, 2003g) proposed the installation of MWM4-07, upgradient to MWM4-06 and downgradient MWM4-04. During the installation of monitoring well MWM4-07 a soil sample was submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics due the presence of faint petroleum like odors. The well location is within AOI M-16 therefore any soil impacts observed will be addressed and used to delineate AOI M-16, which is still under investigation (Figure 4-15). The soil boring logs and monitoring well construction diagrams are provided in Appendix B.

Groundwater Samples

A round of groundwater samples was collected during the supplemental field investigation activities for remedial design purposes, and to fulfill groundwater sampling requirements as discussed in Section 2.1.1. Samples were collected from five monitoring wells (MWM4-01 through MWM4-05). The samples were submitted for laboratory analysis for VOCs.

RFI Work Plan Addenda No. 8 (ENCORE, 2003e) proposed the installation of a downgradient monitoring well at AOI M-4 to support the CA750 determination. Following the installation of monitoring well MWM4-06, LNAPL was observed in the well, therefore no groundwater sample was collected. Monitoring well MWM4-06 is within the limits of AOI M-16. Due to the additional evidence of LNAPL observed during AOI M-16 investigations, monitoring well MWM4-06 will be further discussed in association with AOI M-16.

RFI Work Plan Addenda No. 8A (ENCORE, 2003g) proposed the installation of monitoring well MWM4-07 as a downgradient well for AOI M-4. Groundwater samples were collected from

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six monitoring wells (MWM4-01 through MWM4-05, and MWM4-07) to evaluate groundwater quality downgradient from AOI M-4 to support the CA750 determination. The samples were submitted for laboratory analysis for benzene, toluene, ethylbenzene, and xylene (BTEX). Well locations are shown on Figure 4-16.

The number of locations from which supplemental RFI samples were collected from each medium during the supplemental RFI activities and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	1	1	1	1	1
Groundwater	6	11*	0	0	0

*Six samples were for BTEX only.

Summaries of the validated analytical data for all AOI M-4 groundwater samples are shown in Table 4-19. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

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4.3.3.2 Discussion of Results

The concentrations of constituents detected in soil and groundwater were compared with the screening criteria as discussed in Section 4.0.

Soil Samples

The results from the soil sample collected during the installation of MWM4-07 were not validated in time for inclusion in this Report. Due to the location of MWM4-07, the soil samples will be associated with soil samples collected during the AOI M-16 delineation. AOI M-16 remains under investigation.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI M-4 exceed the screening criteria for two VOCs at MWM4-04. The groundwater sample collected from MWM4-04 during the second round sampling event exceeds the IDWC and RDWC for benzene (of 0.005 mg/L) at a concentration of 0.62 mg/L. Benzene and ethylbenzene concentrations (0.98 and 1.5 mg/L, respectively) detected at MWM4-04 during the most recent sampling event (September 2003) exceed the IDWC and RDWC of 0.005 and 0.7 mg/L, respectively.

Monitoring well MWM4-07 was installed to provide an appropriate upgradient well to bound the contaminant plume at AOI M-4 to support the CA750 determination. This well did not exhibit

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groundwater concentrations exceeding screening criteria, therefore it serves as an upgradient well for this AOI supporting the CA750 determination.

Figure 4-16 provides a summary of sample locations and analytical results for groundwater.

4.3.3.3 Conclusions

The supplemental RFI groundwater data from AOI M-4 indicate that a release has occurred to groundwater at AOI M-4. Concentrations of benzene and ethylbenzene in groundwater exceed screening criteria for IDWC and RDWC. The groundwater impacts have been bound and the CA750 determination requirements have been fulfilled. Based on these groundwater results, AOI M-4 is further discussed in the Risk Evaluation presented in Section 5.

Table 1-1 presents a summary of the data, conclusions, and proposed activity for the AOI.

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4.3.4 Former A-2 Fill Area (AOI M-5)

AOI M-5 consists of the former A-2 fill area, which covers approximately 10 acres under Plants 25 and 33 (previously Plants 51 and 55), the east parking lot area in the MFD area, and under the SPO building (Plant 75) (Figure 1-5). The former landfill was identified as a SWMU by GM in the Certification of Potential Releases from Solid Waste Management Units (GM, 1986). This area is considered an AOI because of previous landfilling activities.

During the original RFI investigation activities, two soil borings were completed and one replacement monitoring well was installed. Soil and groundwater samples were submitted for laboratory analysis of select analytes, which included VOCs, PCBs, inorganics, and/or dioxins.

4.3.4.1 Scope and Results

The scope of the supplemental field investigations at AOI M-5 involved collection of groundwater samples to support the CA750 determination at AOI M-5 (RFI Work Plan Addendum No. 8 (ENCORE, 2003e)).

The following is a summary of the supplemental RFI groundwater sampling activities completed at AOI M-5. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed in presented in Table 1-1.

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Groundwater Samples

Three additional monitoring wells were installed at AOI M-5 consistent with the RFI Work Plan Addendum No. 8 (ENCORE, 2003e). Groundwater samples were collected from five monitoring wells (MW-2-99, MWM5-01 through MWM5-04). The three new wells (MWM5-02 through MWM5-04) were installed side-gradient and downgradient from existing monitoring wells MW2-99 and MWM5-01. Monitoring well locations are shown on Figure 4-16. The samples were submitted for laboratory analysis for PCBs, barium and manganese. Soil boring logs and well construction diagrams are provided in Appendix B.

The number of locations from which supplemental RFI groundwater samples were collected and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	PCBs	Barium	Manganese
Groundwater	5	5	5	5

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Summaries of the analytical data for all AOI M-5 groundwater samples collected during the RFI are shown in Table 4-20. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.3.4.2 Discussion of Results

The concentrations of constituents detected in groundwater were compared with the screening criteria as discussed in Section 4.0.

Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI M-5 exceed the screening criteria for barium, manganese, and PCBs. Barium was detected at MWM5-01 with a concentration of 2.2 mg/L, which exceeds the IDWC and RDWC of 2.0 mg/L. Manganese was detected at MW-2-99 with a concentration of 1.16 mg/L, which exceeds RDWC of 0.86 mg/L. Total PCBs detected at MWM5-03 (0.00059 mg/L) exceeds the IDWC and RDWC of 0.0005 mg/L.

Monitoring wells MWM5-02 through MWM5-04 were installed to provide appropriate boundaries for the impacted groundwater to support the CA750 determination at this AOI. Monitoring wells MWM2-02 and MWM2-04 serve this purpose, since no groundwater screening criteria were exceeded at these wells. The PCB screening criteria at MWM5-03 was marginally exceeded. A second round of groundwater samples will be collected from AOI M-5 per RFI Work Plan Addendum No. 8 (ENCORE, 2003e). The groundwater concentrations will be monitored and will be reevaluated

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following the next sampling round. Figure 4-16 provides a summary of sample locations and analytical results for groundwater.

4.3.4.3 Conclusions

The supplemental RFI groundwater data from AOI M-5 indicates the same constituents exceeding screening criteria as were reported in the RFI Report (ENCORE, 2002b). Inorganic constituents (barium and manganese) and PCBs have been found to exceed the IDWC and RDWC. Based on these results, AOI M-5 is further discussed evaluated in the Risk Evaluation presented in Section 5.

Groundwater analytical results for MWM5-02 and MWM5-04 provide side-gradient and downgradient boundaries to support the CA750 determination. Exceedances of the screening criteria at MWM5-03, installed as a second downgradient boundary well, do not currently provide a boundary for impacted groundwater at AOI M-5. Additional groundwater monitoring will be continued per the RFI Work Plan Addendum No. 8 (ENCORE, 2003e).

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Table 1-1 presents a summary of the data, conclusions, and proposed activity for the AOI.

4.3.5 ELPO Building (AOI M-7)

AOI M-7 consists of the ELPO Building located east of Plants 5 and 8 and southwest of Plant 18 (Figure 1-5). The ELPO Building is considered an AOI because of poor sump integrity. In addition, numerous spills in the interior of the ELPO process area are evident and staining was observed on the outside wall of the ELPO Building.

During the original RFI investigation activities, three soil borings were completed and three monitoring wells were installed at AOI M-7. Soil and groundwater samples were collected and submitted for laboratory analysis of VOCs, SVOCs, PCBs, and inorganics.

4.3.5.1 Scope and Results

The scope of the supplemental field investigations at AOI M-7 involved collection of a soil sample to investigate soil below a four-inch diameter hole that was identified by Site personnel in the concrete floor in the ELPO Building.

An investigation was conducted on March 28, 2003, that consisted of a visual inspection of the subsurface conditions beneath the concrete floor at the hole location and collection of a soil sample beneath the hole.

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Soil Sample

A soil sample was collected at BM7-04 immediately beneath the 4-inch diameter hole using a hand auger. The soil sample was collected from 0 to 1 foot into the soil surface (20 to 32 inches below the concrete floor). The boring location is shown on Figure 4-17. The sample was submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The soil boring log is provided in Appendix B.

The following is a summary of the supplemental RFI soil sampling activities completed at AOI M-7. Samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

The number of locations from which supplemental RFI samples were collected from each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	1	1	1	1	1

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A summary of the analytical data for all AOI M-7 soil samples is shown in Table 4-21. The analytical data for the supplemental RFI sample is provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.3.5.2 Discussion of Results

The concentrations of constituents detected in the soil were compared with the MDEQ screening criteria as discussed in Section 4.0.

Soil Samples

The concentrations of constituents detected in the soil boring sample collected from AOI M-7 during the supplemental RFI activities do not exceed the screening criteria. Figure 4-17 provides a summary of sample locations and analytical results for soil. Also, no concentrations detected in the soil samples collected during the original RFI activities were higher than the screening criteria.

The visual inspection of the subsurface conditions beneath the hole indicated that a void space was present immediately beneath the concrete floor. Soil was present at approximately 20 inches beneath the concrete floor. The concrete floor is six inches thick. Using a hand held mirror to inspect the areal extent of the void space revealed that the void space extended in every direction until a concrete wall was visible. The concrete walls were observed five feet to the east of the hole, 10 feet to the west,

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25 feet to the north, and 50 feet to the south (distances are approximate based on visual observation). The soil surface remained approximately 20 to 24 inches beneath the concrete floor in every direction. Wood debris and a 4-inch diameter pipe were observed in the void space between the concrete floor and the soil surface. The 4-inch diameter pipe appeared to be in good condition. It is not known if the pipe is active.

The concrete walls enclosed the void space completely in every direction, except along the west wall near the southwest corner of the void area. Along the west wall, the soil surface fell to a depth of approximately 30 inches below the concrete floor, and the concrete wall extended from the concrete floor to a depth of approximately 24 inches below the concrete floor, resulting in approximately 6 inches of void space. Nothing could be observed on the western side of this wall.

4.3.5.3 Conclusions

The supplemental RFI soil data from AOI M-7 confirms the findings of the RFI Report (ENCORE, 2002b) that indicate a release has not occurred at AOI M-7. Concentrations detected in soil do not exceed screening criteria. NFA or investigation is warranted for this area.

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Table 1-1 presents a summary of the data and conclusions for this AOI.

4.3.6 Plant 11 Heat Treat Oil Storage Area (AOI M-9)

AOI M-9 consists of a four former ASTs located near the eastern wall of Plant 11, which are contained inside a floor pit with a sump that discharges to the WWTP (Figure 1-5). The area is considered an AOI because of the type and quantity of oils and coolant materials historically stored in the ASTs.

GM removed the ASTs from this AOI in August, 2002 as part of abandonment activities. The sump is scheduled to be abandoned and the area converted to a non-hazardous storage area. Seven pits were discovered beneath the ASTs after they were removed. These pits were inspected on September 6, 2002. The inspection revealed that all the pits were lined with a rubber coating and showed no signs of being compromised. During the RFI investigation activities, one soil boring was completed and two monitoring wells were installed at AOI M-9. Soil and groundwater samples were collected and submitted for laboratory analysis of VOCs, SVOCs, PCBs, and inorganics.

4.3.6.1 Scope and Results

The scope of the supplemental field investigations at AOI M-9 involved collection of soil samples from beneath the sump to support decommissioning activities as discussed in Section 2.1.2 and

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groundwater samples to fulfill the second round groundwater sampling requirements as presented in Section 2.1.1.

The following is a summary of the soil sampling activities completed at AOI M-9. The sample was collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Soil Samples

One surficial soil sample (0 to 2 foot interval) was collected from the south end of the sump (SM9-01). The location of the sample is shown on Figure 4-17. The sample was submitted for laboratory analysis for VOCs, SVOCs PCBs, and inorganics.

Groundwater Samples

One groundwater sample was collected from MWM9-02 to fulfill the groundwater sampling requirement as discussed in Section 2.1.1. The well location is shown on Figure 4-18. The sample was submitted for laboratory analysis for VOCs, SVOC, PCBs, and inorganics.

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The number of locations from which supplemental RFI soil and groundwater samples were collected for each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Soil	1	1	1	1	1
Groundwater	1	1	1	1	1

A summary of the analytical data for all AOI M-9 soil and groundwater samples collected during the RFI is shown in Tables 4-22 and 4-23, respectively. The analytical data for the supplemental RFI samples is provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.3.6.2 Discussion of Results

The concentrations of constituents detected in the soil and groundwater were compared with the screening criteria as discussed in Section 4.0.

Soil Samples

The concentrations of constituents detected in the soil sample collected from AOI M-9 do not exceed the screening criteria. Figure 4-17 provides a summary of sample locations and analytical results for soil. Also, concentrations from soil samples collected during the initial RFI activities do not exceed the screening criteria.

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Groundwater Samples

The concentration of constituents detected the groundwater sample collected from AOI M-9 do not exceed the screening criteria. Figure 4-18 provides a summary of sample locations and analytical results for groundwater. Also, concentrations from the groundwater sample collected during the initial RFI activities do not exceed the screening criteria.

4.3.6.3 Conclusions

The supplemental RFI soil and groundwater data from AOI M-9 confirm the findings of the RFI Report (ENCORE, 2002b) that indicate a release has not occurred at AOI M-9. Concentrations detected in soil and groundwater do not exceed screening criteria. NFA or investigation is warranted for this area.

Table 1-1 presents a summary of the data, and conclusions for this AOI.

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4.3.7 Plant 25 Basement Sump Area (AOI M-16)

AOI M-16 consists of the basement area of Plant 25, which contains a sludge tank, pumping system, and several floor sumps (Figure 1-5). This area is considered an AOI because oily liquid was observed in several of the floor sumps. Most of the basement sumps have been filled with grout. The two remaining floor sumps were cleaned and inspected as part of the RFI activities (ENCORE, 2002b). Both sumps contained black oily sludge, topped with alkali-oily liquids. The concrete was intact in both sump pits, although one pit exhibited minor pitting while heavy black staining was observed on the other. Two monitoring wells were completed during the original RFI investigation activities at AOI M-16. Soil and groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, and inorganics.

Large metal cutting machinery used to be located in this area of Plant 25. Metal cuttings and oils would be collected beneath the equipment by sluiceways and transported to the Plant 25 basement. The area is currently used for storage or is vacant.

4.3.7.1 Scope and Results

The scope of the supplemental field investigations at AOI M-16 involved the collection of groundwater samples to support the CA750 determination (RFI Work Plan Addendum No. 8 (ENCORE, 2003e)) and fulfill second round groundwater sampling requirements as discussed in Section 2.1.1. Following the discovery of LNAPL, additional activities were initiated to delineate the presence of LNAPL (RFI Work Plan Addendum No. 8A (ENCORE, 2003g)).

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The following is a summary of the supplemental RFI sampling activities completed at AOI M-16. The samples were collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

LNAPL Sample

Following the installation of MWM4-06 and MWM16-03, installed to support the CA750 determination (RFI Work Plan Addendum No. 8 (ENCORE, 2003e)), LNAPL was observed in both wells. Monitoring well MWM4-06 is within the limits of AOI M-16. Due to the additional evidence of LNAPL observed during AOI M-16 investigations, monitoring well MWM4-06 will be associated with AOI M-16.

A sample of the LNAPL was collected from MWM4-06 and submitted for chemical (VOCs, SVOCs, PCBs, and inorganics) and fingerprint analysis. This LNAPL area is identified as LNAPL Area No. 5.

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Soil Samples

Soil borings associated with the installation of two additional downgradient AOI M-16 wells (MWM16-04 and MWM16-05) were completed as proposed in RFI Work Plan Addendum No. 8 (ENCORE, 2003e). Soil samples were not collected from these wells since odors, staining or elevated PID readings were not encountered.

Following the discovery of LNAPL in the Plant 25 basement monitoring wells, three additional side-gradient and downgradient wells were installed (MWM16-07 through MWM16-09) west of Plant 25 (RFI Work Plan Addendum No. 8A (ENCORE, 2003g)). A soil sample was collected at MWM16-07 from the 0 to 2-foot interval due to odors. The sample was submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics. During the installation of MWM16-06 (RFI Work Plan Addendum No. 8A (ENCORE, 2002g)) LNAPL was observed, therefore, a monitoring well was not installed and a LNAPL delineation program was initiated.

During the LNAPL delineation program, 18 soil borings were completed. Soil samples were collected from four borings due to staining, odor, and elevated PID readings. The results from these soil samples were not validated in time for inclusion in this Report; therefore they will not be discussed in this Report.

The locations of the soil borings are presented on Figure 4-15. Soil boring logs and well construction diagrams are provided in Appendix B.

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Groundwater Samples

One groundwater sample was collected from monitoring well MWM16-02 as part of the scheduled second round sampling activities, as discussed in Section 2.1.1. The sample was submitted for laboratory analysis of VOCs, SVOCs, PCBs, and inorganics.

Groundwater samples were collected from three monitoring wells (MWM16-01, MWM16-02, MWM16-04) following the installation of wells to support the CA750 determination. Well locations are shown on Figure 4-16. The samples were submitted for laboratory analysis for vinyl chloride. Five monitoring wells were not sampled; LNAPL is present in MWM16-03, natural recharge did not occur at MWM16-05, and MWM16-07 through MWM16-09 will be sampled following installation of additional LNAPL delineation wells.

The number of locations from which supplemental RFI samples were collected from each medium and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
LNAPL	1	1	1	1	1
Soil	5	10	10	10	10
Groundwater	4	4*	1	1	1

*Three for vinyl chloride only.

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Summaries of the validated analytical data for all AOI M-16 soil, groundwater, and LNAPL samples are shown in Tables 4-24, 4-25, and 4-26, respectively. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

4.3.7.2 Discussion of Results

The concentrations of constituents detected in soil and groundwater were compared with the screening criteria as discussed in Section 4.0.

LNAPL Samples

Screening criteria (i.e. Part 201) are not available for LNAPL, so the constituents detected in the LNAPL are discussed below without a comparison against screening criteria.

Eleven VOCs were detected in the AOI M-16 LNAPL sample (benzene, cis-1,2-dichloroethene, cyclohexane, ethylbenzene, isopropylbenzene, methyl acetate, methyl cyclohexane, tetrachloroethene, toluene, trichloroethene, and xylenes). Four SVOCs were detected in the AOI M-16 LNAPL sample (bis(2-ethylhexyl)phthalate, butyl benzylphthalate, fluorene, and

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phenanthrene). Ten inorganics were detected in the AOI M-16 LNAPL sample (antimony, arsenic, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc). PCBs were also detected in the LNAPL sample.

Further LNAPL discussion including fingerprint analysis and delineation is presented in Section 4.6.4.

Soil Boring Samples

The concentration of constituents detected in the soil boring sample collected from MWM16-07 (0 to 2 foot interval) do not exceed the screening criteria. Figure 4-15 provides a summary of the sample location and analytical results for soil.

The results from the soil samples collected during the LNAPL delineation program for AOI M-16 were not validated in time to be included in this Report. The results will be presented and discussed under separate cover following the delineation of LNAPL Area No. 5. This AOI remains under investigation.

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Groundwater Samples

The concentrations of constituents detected in the groundwater samples collected from AOI M-16 exceed the screening criteria for vinyl chloride. Vinyl chloride was detected in the groundwater at MWM16-01 with a concentration of 0.014 mg/L, which exceeds the IDWC and RDWC of 0.002 mg/L. Monitoring wells MWM16-03 through MWM16-05 were installed to provide appropriate upgradient, downgradient, and side-gradient wells to bound the contaminant plume to support the CA750 determination. Groundwater samples were not collected from monitoring wells MWM16-03 due to the presence of LNAPL and MWM16-05 because natural recharge did not occur. The analytical results for vinyl chloride from MWM16-02, MWM16-04, and MWM25-02 (installed just east of MWM16-01) were rejected during data validation. Based on the August 2003 results for these wells, no new boundaries have been established. Only an existing downgradient boundary has been established (MWM16-02) based on past sampling data (January and November 2002). Figure 4-16 provides a summary of sample locations and analytical results for groundwater. Monitoring well MWM16-02 has been sampled three times. The vinyl chloride results from the first two analyses were not detected above the reporting limit of 0.001 mg/L, therefore providing a down gradient boundary.

Therefore, the vinyl chloride impacted groundwater observed at MW M16-01, has been bound to the southwest (downgradient, MWM16-02) only. The investigation at AOI M-16 is ongoing. Additional LNAPL and groundwater investigative activities will be conducted to provide appropriate data to delineate the extent of LNAPL and support the CA750 determination.

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4.3.7.3 Conclusions

The RFI groundwater data from AOI M-16 indicate that a release has occurred to groundwater at AOI M-16. Vinyl chloride was found to exceed IDWC and RDWC at MWM16-01. Based on these results and the presence of LNAPL, AOI M-16 is further discussed evaluated in the Risk Evaluation presented in Section 5.

Groundwater analytical results for MWM16-02, MWM16-04 and MWM25-02 were rejected during data validation. It should be noted that LNAPL delineation activities are ongoing at this AOI, and additional groundwater monitoring events will be conducted to support the CA750 determination.

Table 1-1 presents a summary of the data, conclusions, and proposed activity for the AOI.

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4.3.8 Plant 33 Basement Sump Area (AOI M-25)

AOI M-25 consists of the basement area of Plant 33, which contains several floor sumps and process pits (Figure 1-5). This area is considered an AOI because the condition of the floor pits could not be evaluated due to the pits having recently been filled with flowable fill (grout). One sump was inspected in the Plant 33 basement. Black oily sludge with a strong petroleum odor was present at the bottom of the sump. As part of original RFI activities, the sump was cleaned and inspected. The concrete walls and floor of the sump appeared to be smooth and no substantial pitting observed. One monitoring well, where natural recharge did not occur, was installed during the original RFI activities. Soil samples were submitted for laboratory analysis of VOCs, SVOCs, inorganics and PCBs.

4.3.8.1 Scope and Results

The scope of the supplemental field investigations at AOI M-25 involved collection of a groundwater sample to support the CA750 determination for AOI M-25 (RFI Work Plan Addendum No. 8 (ENCORE, 2003e)).

The following is a summary of the supplemental RFI sampling activities conducted for groundwater at AOI M-25. The sample was collected in accordance with the procedures discussed in Section 2.4, except as otherwise noted. A summary of field investigations performed is presented in Table 1-1.

Groundwater Samples

A second well (MWM25-02) was installed at AOI M-25 as proposed in RFI Work Plan Addendum No. 8 (ENCORE, 2003e). Natural recharge never occurred at the existing AOI M-25 monitoring well MWM25-01. The soil boring log and well construction diagram is provided in Appendix B.

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A groundwater sample was collected from one monitoring well (MWM25-02) to obtain additional information regarding the groundwater quality downgradient from AOI M-25 and side-gradient from AOI M-16. The well location is shown on Figure 4-16. The sample was submitted for laboratory analysis for VOCs, SVOCs, PCBs, and inorganics.

The number of locations from which supplemental RFI groundwater samples were collected and the number of samples analyzed for each analyte group are as follows:

Medium	Locations	VOCs	SVOCs	PCBs	Inorganics
Groundwater	1	1	1	1	1

Summaries of the analytical data for all AOI M-25 groundwater samples are shown in Table 4-27. The analytical data for the supplemental RFI samples are provided in Appendix C. Complete documentation of the data review and validation of the supplemental RFI samples are provided in Appendix D.

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4.3.8.2 Discussion of Results

The concentrations of constituents detected in groundwater were compared with the screening criteria as discussed in Section 4.0.

Groundwater Samples

Monitoring well MWM25-02 was installed to provide a monitoring point to determine if groundwater is impacted at AOI M-25 to support the CA750 determination for AOI M-25. The concentration of constituents detected in the groundwater sample collected from AOI M-25 does not exceed the screening criteria. Figure 4-16 provides a summary of sample locations and analytical results for groundwater.

4.3.8.3 Conclusions

The RFI groundwater data from AOI M-25 does not indicate that a release has occurred at AOI M-25. Concentrations detected in groundwater do not exceed screening criteria, supporting the CA750 determination at AOI M-25. NFA or investigation is warranted for this area.

Table 1-1 presents a summary of the data and conclusions for this AOI.

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5. Human Health Risk Evaluation

Section 4 discussed the results of the RFI field investigations for the AOIs where supplemental RFI field work was completed after preparation of the RFI Report (ENCORE, 2002b). It also compared all RFI soil and groundwater data collected at these AOIs with screening criteria, as defined in Section 4.0 to identify whether a potentially significant release of hazardous constituents has occurred. The environmental media that have been identified to have been affected by potentially significant releases and the primary constituents affecting each medium are summarized in Section 5.1. The potential for exposure to these media are discussed in Section 5.2 and the significance of these potential exposures is evaluated in Section 5.3. The results of the evaluation are summarized in Section 5.4.

5.1 Potentially Significant Releases

As discussed in Section 4.0, a potentially significant release at the AOIs where supplemental RFI field work was completed is identified based on comparison of the RFI characterization data for soil and groundwater with screening criteria. The results of the comparisons discussed in Section 4 are summarized for soil and groundwater in Sections 5.1.1 and 5.1.2, respectively.

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5.1.1 Soil

The tables for Section 4 summarized the soil characterization data for each AOI, as well as the ratios of the highest measured concentrations for each constituent at each AOI to the screening criteria. As discussed in Section 4.0, the screening criteria for soil are the MDEQ Part 201 generic cleanup criteria for industrial sites that are based on direct contact, inhalation of soil vapor and particulates in ambient air, and inhalation of soil vapor in indoor air (MDEQ, 2002). The industrial Part 201 criteria were derived by the MDEQ based on a cancer risk of 10^{-5} and a HQ of 1.

A potentially significant release to soil at an AOI is identified in the Section 4 tables by comparing the highest Site-related concentration of each chemical in surface and subsurface soil at the AOI to the screening criteria. As a conservative assumption, all concentrations of organic chemicals are assumed to be Site-related. For inorganic chemicals, Site-related concentrations are considered those that are higher than the Site-specific background levels shown in the Section 4 soil tables, which were summarized and discussed in Table 3-4 and in Section 3.9 of the RFI Report (ENCORE, 2002b), respectively. Ratios of the highest Site-related concentrations in surface or subsurface soil to the screening criteria that exceed 1 are considered indications of a potentially significant release to soil. As shown in the Section 4 tables, the ratios for certain constituents exceed 1 at the following AOIs where supplemental RFI field work was completed:

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- AOI F-7 (Wastewater Collection Sumps at Fiero Powerhouse)
- AOI F-15 (Oil/Solvent Catch Basin)
- AOI M-2 (Former Plating Operations Area)
- AOI P-9 (Pipeline Release Investigation)
- AOI P-11 (Trestle Pipeline Release Investigation)
- AOI W-1 (West Yard)
- AOI W-8 (Former Plant 9 Basement AST Area)
- AOI W-9 (Former Central Foundry Resin Spill and UST)

This list of AOIs does not include AOIs where supplemental RFI field work was not necessary.

As noted in Section 4.2.5 of this Report, proposed industrial redevelopment is expected to be initiated at the Site where AOIs W-1, W-8, and W-9 are located. To evaluate potential exposures of workers to constituents in soil under this Site redevelopment scenario, the soil samples within the planned extent of the proposed industrial redevelopment were grouped and evaluated as a single area called "Area of Industrial Redevelopment". As shown on Table 4-14, certain locations in the Area of Industrial Redevelopment have potentially significant releases to soil.

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Among the AOIs listed above, only AOIs F-15 and M-2 have constituents with concentrations that are higher than the screening criteria based on inhalation of soil vapor in indoor air (i.e., 1,1-dichloroethene and tetrachloroethene at AOI F-15, and 1,1-dichloroethene at AOI M-2). These constituents and concentrations are the same as those evaluated in the RFI Report (ENCORE, 2002b) and found to present no unacceptable exposure. Since these data were previously discussed in Section 5 of the RFI Report (ENCORE, 2002b), the discussion is not repeated in this Report. No constituents in soil at the Area of Industrial Redevelopment have concentrations that exceed the criteria based on vapor intrusion.

In addition to the soil characterization data summarized in the Section 4 tables, chemical characterization data for LNAPL was collected during the supplemental RFI field work at AOIs M-2 and M-16, as discussed in Sections 4.3.2 and 4.3.7, respectively. The chemical characterization data for the LNAPL at each of these AOIs are summarized in Tables 4-18 and 4-26, respectively. Although soil sampling completed during the RFI did not specifically target the depth interval in which the LNAPL layer fluctuates with the water table (the smear zone), a theoretical upper bound on the concentration of a LNAPL constituent in the smear zone soil (C_{soil}) can be estimated as follows:

$$C_{soil} = C_{NAPL} \cdot r_{NAPL} \cdot \frac{n}{r_{soil}}$$

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where C_{NAPL} is the concentration of a chemical in the LNAPL, $?_{NAPL}$ is the density of the LNAPL (approximately 0.9 kg/L), *n* is the total porosity of the soil (assumed to be 0.43), and $?_{soil}$ is the dry bulk density of the soil (assumed to be 1.5 kg/L). The assumed soil porosity and bulk density are the default values U.S. EPA recommended in the Soil Screening Guidance (U.S. EPA, 1996). This calculation assumes 100% non-aqueous phase liquid (NAPL) saturation of the soil voids and is highly conservative since typical NAPL residual saturation does not exceed 20% to 50%, depending on the type of NAPL and soil.

The upper-bound smear zone soil concentrations estimated using the highest concentrations detected in the LNAPL at each AOI are shown in Table 5-1, and are compared with the soil screening criteria discussed above. As shown in Table 5-1, two constituents have upper-bound smear zone soil concentrations that exceed the screening criteria (1,1-dichloroethene and PCBs at AOI M-2, and PCBs at AOI M-16).

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The potential for human exposure to the constituents in soil and LNAPL-containing soil with concentrations higher than the screening criteria is discussed in Section 5.2 and the significance of any potential exposure is discussed in Section 5.4. Section 5.4 also includes discussion of potential exposures of workers to the LNAPLs at AOIs M-2 and M-16 during subsurface construction activities that the soil screening criteria do not address (e.g., dermal contact with LNAPL) and hypothetical exposure of routine workers to vapors that are assumed to migrate from the LNAPL into indoor air.

5.1.2 Groundwater

Groundwater quality data were collected from four saturated zones during the RFI and the supplemental RFI field investigations, as discussed in the RFI Report (ENCORE, 2002b). Data from monitoring wells screened in the shallow unconfined water table zone are summarized in Table 5-2a, and data from monitoring wells screened in the intermediate zone (glaciolacustrine deposits) and in the deep zones (upper and lower sand and gravel outwash deposits) are summarized in Table 5-2b. Where appropriate based on the locations of the monitoring wells, the groundwater data on these Tables are grouped and summarized by AOI or area. Data from monitoring wells not specifically associated with a particular AOI (or area) are summarized as a group under "Site-wide hydrogeologic investigation" (SWHI). The locations of the monitoring wells are shown on Figures 4-1 through 4-5.

Tables 5-2a and 5-2b show the detected constituents, their detection frequencies and range of detected concentrations, and the ratios of the highest measured concentrations to the screening criteria. The screening criteria for groundwater are the MDEQ Part 201 generic cleanup criteria. The specific Part 201 criteria used here for identifying a potentially significant release for all four saturated

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zones are those based on residential drinking water use (MDEQ, 2002), although these saturated zones are not a current or reasonably expected future drinking water source for the Site or the immediate vicinity. It should be noted that a deed restriction to prevent installation of water supply wells in the shallow unconfined water table zone at the Site may be established as part of the corrective measures proposed for the Site. In addition, the Part 201 criteria based on inhalation of groundwater vapor in indoor air and the criteria based on direct contact by workers conducting excavations (MDEQ, 2002) are also used to identify potentially significant releases in the unconfined saturated zone, which is as shallow as 10 ft bgs at some locations.

A potentially significant release to groundwater is identified in Tables 5-2a and 5-2b by comparing the highest concentration of each chemical in groundwater at an area to the screening criteria. The ratios of the highest concentrations to each set of screening criteria are shown in Tables 5-2a and 5-2b. Ratios higher than 1 are considered indications of a potentially significant release to groundwater.

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As shown in Table 5-2a, organic chemicals with concentrations higher than the screening criteria in the shallow groundwater consist primarily of the VOCs: benzene, 1,1-dichloroethene, and vinyl chloride. Each of these VOCs is found at concentrations higher than the screening criteria at only one to three AOIs. No VOC has a concentration higher than the criteria based on inhalation of vapors in indoor air or the criteria based on direct contact by excavation workers.

Table 5-2a also shows that the following organic constituents were detected at concentrations that are higher than the screening criteria: bis(2-ethylhexyl)phthalate, 2,4-dimethylphenol, methylphenol (total), pentachlorophenol, PCBs, and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) toxicity equivalent (TEQ). These organic constituents have a very small number of concentrations that are higher than the screening criteria. Only two concentrations of bis(2-ethylhexyl)phthalate (at AOIs M-2 and W-10), two concentrations 2,4-dimethylphenol (at AOIs P-9 and W-8), three concentrations of methylphenol (total) (at AOIs P-9 and W-8), and one concentration of pentachlorophenol (at AOI P-9) among 204 to 205 samples of shallow groundwater across the Site are higher than the screening criteria.

The presence of PCBs and 2,3,7,8-TCDD TEQ in groundwater at concentrations higher than the screening criteria is likely related to the presence of these chemicals in LNAPLs on the water table at AOIs W-1 and W-8. These constituents and concentrations are the same as those evaluated in Section 5.3.1 of the RFI Report (ENCORE, 2002b) and found to present no unacceptable exposure. Because these data were previously discussed in the RFI Report (ENCORE, 2002b), the discussion is not repeated in this Report.

Several metals are also present in the shallow groundwater at concentrations higher than the screening criteria, as shown in Table 5-2a. The most prevalent of these are manganese,

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thallium, and vanadium. As discussed in Section 3 of the RFI Report (ENCORE, 2002b), the only thallium concentrations higher than the screening criteria were those that were obtained by Method 6010B, which was the method originally specified in the RFI Work Plan (ENCORE, 2001b). Based on a review of the thallium results from the initial phase of field work, U.S. EPA and GM determined that Method 6010B has a high potential for false detection of thallium at low concentrations in aqueous matrices (groundwater and surface water), and identified Method 6020 as a more appropriate method. All thallium analyses in subsequent phases of field work were done using Method 6020. The thallium concentrations obtained by Method 6020 do not exceed the screening criteria.

The groundwater data from the intermediate saturated zones have only four chemicals with concentrations higher than the screening criteria discussed above (acetone, bis(2-ethylhexyl)phthalate, lead, and thallium), as shown in Table 5-2a. Except for acetone, these chemicals have concentrations higher than the screening criteria in only one monitoring well in the intermediate saturated zone, and are unlikely to be associated with a release. Specifically, bis(2-ethylhexyl)phthalate and lead were detected at concentrations of 0.0088 mg/L and 0.0135 mg/L, respectively, at monitoring well IDW7 in January of 2002. Subsequent sampling and analysis during the semi-annual groundwater sampling events (November 2002 and May 2003) showed bis(2-ethylhexyl)phthalate and lead to be non-detect or below the screening criteria at IWD7. Based on recent groundwater results from this well and the frequency of detection, the concentrations of bis(2-ethylhexyl)phthalate and lead in well IDW7 are unlikely to be the result of a release.

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In the deep saturated zones, the only chemicals with concentrations higher than a screening criterion are acetone and methylene chloride. The presence of acetone in the groundwater samples appears to be unrelated to a release at any AOI. As discussed in Section 4 of the RFI Report (ENCORE, 2002b), the presence of acetone in the groundwater samples is likely associated with well construction materials (coated bentonite pellets). Subsequent sampling and analysis during the most recent semi-annual groundwater sampling event (May 2003) showed acetone to be non-detect at GWP6 and GWD8, the two locations where acetone had previously exceeded the screening criteria. Therefore, the presence of acetone at these locations during previous sampling is not associated with a release from an AOI. The presence of methylene chloride in the groundwater sample at DWD12 does not appear to be due to a release at any AOI, as it is generally considered a common laboratory contaminant (U.S. EPA, 1989). During the two previous rounds of groundwater sampling at this location the methylene chloride results were non-detect. On October 31, 2003, a groundwater sample and field duplicate were collected from this location to confirm the methylene chloride concentration from May 2003. The analytical results from these samples showed that methylene chloride was not detectable. Therefore, the presence of methylene chloride at this location during previous sampling is not associated with a release from an AOI.

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The potential for human exposure to constituents in groundwater with concentrations higher than the screening criteria is discussed in Section 5.2, and the significance of any potential exposure is discussed in Section 5.3.

5.2 Exposure Pathways

The potential for exposure to media affected by the potentially significant releases identified in Section 5.1 under current conditions and reasonably expected future land use is discussed below.

Soil

Contaminated soil identified at AOIs F-7, F-15, M-2, and M-19 is covered by building floors or pavement, which prevents current exposure of workers engaged in routine activities or exposure of trespassers. However, potential exposure of workers engaged in subsurface construction activities at these AOIs is possible, and potential exposure of workers engaged in routine activities is possible if building floors or pavement in these areas were removed in the future. Contaminated soil at AOIs P-9, P-11, W-1, W-8, W-9, and the Area of Industrial Redevelopment is not covered or not entirely covered, so potential exposure of workers engaged in routine activities and subsurface construction activities, and exposure of trespassers is possible. At AOIs M-2 and M-16, potential exposure of workers via direct contact with LNAPLs during subsurface construction activities and potential exposure of routine workers via assumed vapor migration from LNAPLs into indoor air of existing manufacturing buildings is also possible.

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Groundwater

As discussed in Section 3.7 of the RFI Report (ENCORE, 2002b), the Site and the immediate vicinity obtain potable water from the City of Detroit, and do not rely on local groundwater in any of the saturated zones as a drinking water supply. Therefore, drinking water exposure of workers and residents at and around the Site is not expected. However, potential exposure of workers to groundwater in the shallow saturated zone during subsurface construction activities is possible because the water table at the Site at many locations is shallower than the expected maximum excavation depths of 10 to 12 ft bgs. No current exposure to groundwater in the intermediate and deep saturated zones is expected because these zones are deeper than the expected maximum excavation depths, and groundwater from these zones is not currently used for any purpose at the Site or in the immediate vicinity.

The potential significance of exposures via the complete pathways identified above is discussed in Section 5.3.

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5.3 Significance of Potential Exposures

The significance of potential exposures, from complete exposure pathways, identified in Section 5.2 is discussed below.

5.3.1 Soil

The significance of potential exposures to soil contamination can be evaluated by estimating the cumulative cancer and noncancer risks associated with the potential exposures and comparing them with the U.S. EPA-established levels for determining whether corrective measures are warranted under RCRA Corrective Action. Under U.S. EPA policy, corrective measures are not warranted when the site-related cumulative cancer risk does not exceed 10^{-4} and the noncancer hazard index (HI) does not exceed 1 (61 FR 19432, May 1, 1996; U.S. EPA, 1991b).

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Upper-bound estimates of high-end cumulative cancer and noncancer risks for potential exposure of workers to soil at the AOIs identified in Section 5.1.1 are shown in Table 5-3. These upper-bound estimates are calculated using the highest concentration of each constituent detected in soil at each area, and the conservative exposure factors that were used to derive the U.S. EPA Region 9 risk-based preliminary remediation goals (PRGs) for soil in generic commercial/industrial settings (U.S. EPA, 2002a). High-end cumulative cancer and noncancer risk estimates for an area would be lower if concentrations representative of the area were used instead of the highest concentrations, and if site-specific exposure factors were used to account for the magnitude, frequency, and duration of exposures appropriate for the particular area, as would be done in risk assessments following U.S. EPA guidance (1989). These upper-bound estimates of high-end cumulative cancer and noncancer risks for routine workers also represent conservative estimates of risks for potential exposure of workers during occasional maintenance/construction activities and for potential exposure of trespassers (ENVIRON, 2003).

As summarized in Table 5-3, these upper-bound estimates of cumulative cancer risk and HI do not exceed 10^{-4} or 1, respectively, for the following AOIs where supplemental RFI activities were completed:

- AOI F-7 (Wastewater Collection Sumps at Fiero Powerhouse)
- AOI F-15 (Oil/Solvent Catch Basin)
- AOI M-2 (Former Plating Operations Area)
- AOI P-9 (Pipeline Release Investigation)
- AOI P-11 (Trestle Pipeline Release Investigation)

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This means that there are no unacceptable exposures at these AOIs, except these calculations do not address the potential for indoor air exposure at AOI F-15 which was evaluated in Section 5.3.1 of the RFI Report and found to present no unacceptable exposure.

Potential exposures at AOIs W-1, W-8, W-9, and the proposed Area of Industrial Redevelopment are further evaluated below by developing conservative estimates of the average concentrations for certain chemicals at each AOI to provide more representative concentrations to which receptors might be exposed under current and reasonably expected future conditions. Potential exposures of construction workers during activities in the proposed Area of Industrial Redevelopment are also evaluated using a larger-scale, short-term construction scenario that might be associated with redevelopment of this part of the Site.

Conservative estimates of the average concentrations are calculated as 95% upper confidence limits (UCLs) on the means of surface (0 to 2 ft) and depth-averaged (0 to 10 ft) concentrations at each sampling location for evaluating potential exposure of routine workers/trespassers and construction workers, respectively. Data that consist of non-detects are conservatively replaced with one-half sample quantitation limits (SQLs), and unusually high SQLs are handled as recommended in U.S. EPA guidance (U.S. EPA, 1989).

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The 95% UCL for each chemical is calculated using the nonparametric bootstrap method known as the bias-corrected and accelerated (BCa) method with 4,000 bootstrap replications (Efron and Tibshirani, 1998). A nonparametric bootstrap confidence interval does not rely on assumptions about the data's underlying probability distribution which are often difficult to confirm, but instead are based on statistical re-sampling of the empirical distribution of the observed concentrations. For an empirical distribution that is approximately normal, the bootstrap confidence interval will be essentially the same as the normal confidence interval. For an empirical distribution that is not normal, however, the bootstrap confidence interval will be more accurate than a confidence interval calculated assuming a normal (or even lognormal) distribution (U.S. EPA, 1997b).

Table 5-4a shows the high-end estimates of cumulative cancer risk and HI for AOIs W-1, W-8, W-9, and the proposed Area of Industrial Redevelopment that are based on 95% UCLs for certain chemicals at each AOI. The chemicals chosen for 95% UCL calculations at each AOI are those with maximum concentrations that contribute most significantly to the cumulative cancer and noncancer risks. Using 95% UCLs for these chemicals and maximum concentrations for other chemicals still overestimates cumulative risks, but is an efficient approach that is consistent with U.S. EPA guidance (1989; page 6-25). As shown on this table, these high-end estimates of cumulative cancer risk and HI do not exceed 10^{-4} or 1, respectively, except for the construction worker scenario at AOI W-1. The calculation of these cumulative cancer and noncancer risk estimates is provided in Appendix F.1 and is discussed below.

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The construction worker scenario for AOI W-1 is further evaluated using exposure factors for a construction scenario at the Site. Table 5-4b summarizes the estimates of cumulative cancer risk and HI for construction workers at AOI W-1, which do not exceed 10^{-4} or 1, respectively, as shown in the calculations provided in Appendix F.2. This means that there is no unacceptable current exposure to soil at these AOIs.

AOI W-1 (West Yard)

Potential exposure of routine workers to surface soil in unpaved areas and potential exposure of construction workers to surface and subsurface soil at AOI W-1 are possible. The estimates of cancer risk and HQ shown in Appendix F.1 are calculated using the maximum concentrations of each chemical detected in surface soil at AOI W-1, except bootstrap 95% UCLs are used for benzene (0.1 mg/kg), xylenes (0.25 mg/kg), benzo(a)pyrene (2.4 mg/kg), 2-methylnaphthalene (6.6 mg/kg), naphthalene (23 mg/kg), PCBs (0.8 mg/kg), antimony (6.7 mg/kg), arsenic (16 mg/kg), chromium (437 mg/kg), copper (418 mg/kg), iron (127,000 mg/kg), manganese (2,460 mg/kg), mercury (0.1 mg/kg), thallium (2.2 mg/kg), and 2,3,7,8-TCDD TEQ (3.8×10^{-5} mg/kg). As shown in Table 5-4a, the estimated high-end cumulative cancer risk and HI at AOI W-1 based on these exposure concentrations are approximately 4×10^{-5} and 1, respectively.

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The calculations in Appendix F.1 assume that workers contact contaminated soil during the entire workday for 250 days per year and 25 years (U.S. EPA, 2002a). However, the frequency of potential exposure of workers to soil at AOI W-1 is expected to be much lower. Currently, many of the areas where concentrations are higher than the screening criteria are covered with gravel or concrete. No routine activity is being conducted in these areas, so workers currently have little opportunity for direct contact with soil in this area. Potential future exposures of routine workers at the Area of Industrial Redevelopment are evaluated separately below. The frequency of current exposure to contaminated soil at AOI W-1 is expected to be on the order of only a few days a year at most. This means the calculations in Appendix F.1 are conservative high-end estimates of cumulative cancer and noncancer risks for routine workers at AOI W-1.

The estimates of cancer risk and HQ for workers who perform occasional construction that involves excavating into subsurface soil are calculated in Appendix F.2. These estimates are calculated using the maximum concentrations of each chemical detected at AOI W-1, except depth-averaged bootstrap 95% UCLs are used for 2-methylnaphthalene (12 mg/kg), naphthalene (18 mg/kg), PCBs (14 mg/kg), and manganese (1,860 mg/kg) for the construction worker scenario. As shown in Table 5-4b, the estimated high-end cumulative cancer risk and HI for this scenario at AOI W-1 based on these exposure concentrations are approximately 1×10^{-5} and 0.6, respectively.

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The calculations in Appendix F.2 assume that workers contact surface and subsurface soil during the entire workday for 5 days per year and 10 years (ENVIRON, 2003), which are conservative estimates on how long a typical construction worker may be involved in construction at GM Sites. Potential future exposures of construction workers at the Area of Industrial Redevelopment are evaluated separately below. The frequency of current exposure to soil at AOIW-1 is expected to be on the order of only a few days per year at most. This means the calculations in Appendix F.2 are conservative high-end estimates of cumulative cancer and noncancer risks for occasional excavations at AOIW-1.

Since the risk estimates for potential exposure of both routine and construction workers do not exceed U.S. EPA's acceptable cancer risk range of 10^{-6} to 10^{-4} and HI limit of 1 (U.S. EPA, 1991b), the concentrations of chemicals in soil at AOIW-1 do not pose an unacceptable risk.

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AOIW-8 (Former Plant 9 Basement AST Area)

Potential exposure of routine workers to surface soil in unpaved areas and potential exposure of construction workers to surface and subsurface soil at AOIW-8 are possible. The estimates of cancer risk and HQ shown in Appendix F.1 are calculated using the maximum concentrations of each chemical detected at AOIW-8, except a 95% UCL is used for antimony (12 mg/kg), chromium (325 mg/kg), copper (2610 mg/kg), and mercury (0.59 mg/kg). As shown in Table 5-4a, the estimated high-end cumulative cancer risk and HI at AOIW-8 based on these exposure concentrations are approximately 7 x 10^{-5} and 0.9, respectively.

The calculations in Appendix F.1 assume that workers contact surface or subsurface soil during the entire workday for 250 days per year and 25 years (U.S. EPA, 2002a). However, the frequency of potential exposure of workers to soil at AOIW-8 is expected to be much lower. Currently, many of the areas where concentrations are higher than the screening criteria are covered with gravel or concrete. No routine activity is being conducted in these areas, so workers currently have little opportunity for direct contact with soil in this area. Construction activity is being planned for the portions of AOIW-8 that will be used for the Area of Industrial Redevelopment. The areas that will be used for the Area of Industrial Redevelopment are evaluated separately below. The frequency of current exposure to contaminated soil at AOIW-8 is expected to be on the order of only a few days a year at most. This means the calculations in Appendix F.1 are conservative high-end estimates of cumulative cancer and noncancer risks at AOIW-8. Since these estimates do not exceed U.S. EPA's acceptable cancer risk range of 10^{-6} to 10^{-4} and HI limit of 1 (U.S. EPA, 1991b), the concentrations of chemicals in soil at AOIW-8 do not pose an unacceptable risk.

AOIW-9 (Former Central Foundry Resin Spill and UST)

Potential exposure of routine workers to surface soil in unpaved areas and potential exposure of construction workers to surface and subsurface soil at AOIW-9 are possible. The estimates of cancer

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risk and HQ shown in Appendix F.1 are calculated using the maximum concentrations of each chemical detected at AOI W-9, except bootstrap 95% UCLs are used for benzo(a)pyrene and PCBs. The bootstrap 95% UCLs on the mean concentrations are approximately 1.5 and 3.6 mg/kg, for benzo(a)pyrene and PCBs, respectively. As shown in Table 5-4a, the estimated high-end cumulative cancer risk and HI at AOIW-9 based on these exposure concentrations are approximately 4×10^{-5} and 0.9, respectively. These calculations do not include the data at and around soil boring BW9-02, because that area is currently fenced to prevent unauthorized worker access until corrective measures to address the presence of PCBs in the soil is completed, which is discussed in the CMP Report (ENCORE, 2003j). The restricted-access area around boring BW9-02 is shown on Figure 4-12.

The calculations in Appendix F.1 assume that workers contact contaminated soil during the entire workday for 250 days per year and 25 years (U.S. EPA, 2002a). However, the frequency of potential exposure of workers to soil at AOI W-9 is expected to be much lower. Currently, many of the areas where concentrations are higher than the screening criteria are covered with gravel or concrete. No routine activity is being conducted or planned in these areas, so workers currently have little opportunity for direct contact with soil in this area. Construction activity is being planned for the portion of AOI W-9 that will be used for the Area of Industrial Redevelopment, which is evaluated separately below. The frequency of current exposure to contaminated soil at AOIW-9 is expected to be on the order of only a few days a year at most. This means the calculations in Appendix F.1 are conservative high-end estimates of cumulative cancer and noncancer risks at AOI W-9. Since these estimates do not exceed U.S. EPA's acceptable cancer risk range of 10^{-6} to 10^{-4} and HI limit of 1 (U.S. EPA, 1991b), the concentrations of benzo(a)pyrene, PCBs, and other chemicals in soil at AOI W-9 outside the restricted-access area shown on Figure 4-12 do not pose an unacceptable risk.

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Proposed Area of Industrial Redevelopment

Potential exposure of routine workers to surface soil in unpaved areas and potential exposure of construction workers to surface and subsurface soil at the proposed Area of Industrial Redevelopment are possible. The estimates of cancer risk and HQ shown in Appendix F.1 are calculated using the maximum concentrations of each chemical detected in the surface soil at the proposed Area of Industrial Redevelopment, except bootstrap 95% UCLs are used for xylenes (0.1 mg/kg), benzo(a)pyrene (1.3 mg/kg), 2-methylnaphthalene (2.9 mg/kg), naphthalene (9.7 mg/kg), PCBs (1.6 mg/kg), antimony (3.7 mg/kg), arsenic (12 mg/kg), chromium (279 mg/kg), copper (333 mg/kg), iron (157,000 mg/kg), manganese (1,620 mg/kg), mercury (0.14 mg/kg), thallium (1.2 mg/kg), and 2,3,7,8-TCDD TEQ (4.4×10^{-5} mg/kg). As shown in Table 5-4a, the estimated high-end cumulative cancer risk and HI at the proposed Area of Industrial Redevelopment based on these exposure concentrations are approximately 4×10^{-5} and 1, respectively. Like the calculations for AOIW-9 discussed above, these calculations also do not include the data at and around soil boring BW9-02, because that area is currently fenced to prevent unauthorized worker access until corrective

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measures to address the presence of PCBs in the soil is completed. The restricted-access area around boring BW9-02 is shown on Figure 4-12.

The calculations in Appendix F.1 assume that workers contact contaminated soil during the entire workday for 250 days per year and 25 years (U.S. EPA, 2002a). However, the frequency of potential exposure of workers to soil at the proposed Area of Industrial Redevelopment is expected to be much lower. Currently, many of the areas where concentrations are higher than the screening criteria are covered with gravel or concrete. If the proposed Area of Industrial Redevelopment is initiated, some or all of these areas may be under the building, pavement, or other ground cover that would prevent or limit contact by workers during routine activities, depending on the final construction plans for the distribution center. Under the current construction plans, the Area of Industrial Redevelopment would occupy approximately 970,000 sq ft and paved areas would cover 1,700,000 sq ft, which constitutes a total of approximately 89% of the Area of Industrial Redevelopment. This means the calculations in Appendix F.1 are conservative high-end estimates of cumulative cancer and noncancer risks at the Area of Industrial Redevelopment. These estimates of risk are also conservative estimates for potential exposure of workers conducting excavations during occasional maintenance activities and potential exposure of trespassers (ENVIRON, 2003).

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For the larger-scale, short-term construction scenario, an exposure frequency of up to approximately 125 days over a period of 1 year is expected to give estimates of cancer and noncancer risks that are within the acceptable limits, as discussed further in Appendix F.2. These estimates of risks are calculated using the maximum concentrations of each chemical detected at the Area of Industrial Redevelopment, except depth-averaged bootstrap 95% UCLs are used for xylenes (0.55 mg/kg), benzo(a)pyrene (5 mg/kg), 2-methylnaphthalene (2.6 mg/kg), naphthalene (1.4 mg/kg), PCBs (2.9 mg/kg), antimony (4.5 mg/kg), arsenic (8.8 mg/kg), total chromium (119 mg/kg), cobalt (9 mg/kg), copper (983 mg/kg), iron (37,600 mg/kg), manganese (799 mg/kg), mercury (0.25 mg/kg), and thallium (1.2 mg/kg). The maximum concentrations and 95% UCL concentrations do not include the following samples: BW1-02-S(0-2), BW1-03-S(0-2), BW1-07-S(0-2), BW1-09-S(0-2), BW9-03-S(0-2)072803, BMWW8-02-S(0-2), SBSB5-04.0, SSTT4 (0-6), SSTT5 (0-6), SW8-03-S(0-2), SW8-04-S(0-2), SW8-05-S(0-2), SW8-09-S(0-2), SSTT2 (0-6), and SBTT3-5.0. Concentrations in these samples would present an unacceptable risk for a larger scale, short-term construction scenario. Larger-scale, short-term construction in these areas will be restricted in the updated Due Care Plan (to be revised in January 2004) until final industrial redevelopment plans have been finalized. Once the final redevelopment plans have been determined, this area will be reevaluated to determine the appropriate soil removal actions required, if any. As shown in Table 5-4c, the estimated high-end cumulative cancer risk and HI for this scenario at the Area of Industrial Redevelopment based on the exposure concentrations discussed above are approximately 9×10^{-6} and 1, respectively.

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Since the risk estimates for potential exposure of both routine and construction workers do not exceed U.S. EPA's acceptable cancer risk range of 10^{-6} to 10^{-4} and HI limit of 1 (U.S. EPA, 1991b), the concentrations of chemicals in soil, excluding the samples listed above, at the Area of Industrial Redevelopment do not pose an unacceptable risk.

As noted in Section 5.1.1 and in Sections 4.3.2 and 4.3.7 of this Report, subsurface soil at AOIs M-2 and M-16 contains LNAPL at the water table. The LNAPLs at these AOIs have constituents with concentrations that correspond to theoretical upper-bound smear zone soil concentrations that exceed the soil screening criteria used in Section 5.1.1. The significance of potential exposure of workers to these constituents during excavation associated with occasional maintenance or construction activities is evaluated in Appendix F.2. Potential exposure of workers via direct contact with the LNAPLs and inhalation of vapors from exposed LNAPL is also evaluated in Appendix F.2, which discusses the exposure concentrations, exposure factors, toxicity values, and risk calculations used to evaluate these pathways. As noted above, no construction is actually being conducted or is planned at these areas.

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The cumulative cancer risk and HI for each exposure pathway for each LNAPL area are summarized on Table 5-5.

These estimates are calculated using the highest concentration of each constituent detected in each LNAPL at AOIs M-2 and M-16. This summary shows that potential exposure of workers conducting excavations during occasional maintenance or construction activities is not expected to result in significant cancer or noncancer risks. The same evaluation for the LNAPLs at AOIs W-1, W-8, and W-10 was discussed in Section 5 of the RFI Report (ENCORE, 2002b).

The LNAPLs at AOI M-2 and AOI M-16 are under existing manufacturing buildings, and the LNAPL at AOI W-8 (which was identified during the original RFI activities and discussed in the RFI Report (ENCORE, 2002b)) could become located under a proposed building in the Area of Industrial Redevelopment. To evaluate the potential for significant exposure if constituents of the LNAPLs at AOIs M-2, M-16, and W-8 were to migrate through the foundation of a building, a simplified and conservative approach is used in which vapor concentrations in equilibrium with each LNAPL (source vapor concentrations) are estimated and directly compared with inhalation limits. As shown in Appendix F.3, these ratios are all less than 1.

The approach presented in Appendix F.3 is highly conservative since these estimated vapor concentrations would undergo attenuation if they migrate through the soil and any foundation cracks into indoor air. Conservative attenuation coefficients for VOCs are typically on the order of 10,000-fold or more. This means that the indoor air concentrations of VOCs due to vapor intrusion, if

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vapor intrusion were to occur, would be at least 10,000 times lower than the source vapor concentrations, and the ratios shown in Appendix F.3 also would be at least 10,000 times lower.

To illustrate this point, attenuation coefficients are calculated in Appendix F.3 using the generic commercial/industrial building characteristics recommended by MDEQ (2002), a conservative separation of 1.5 m between the subsurface vapor source and the building (based on site-specific depth to the water table), and assuming that soil between the LNAPL and the building consists of only sand. Even with these assumptions, which are highly conservative for the existing buildings overlying the LNAPL at AOI M-2, AOI M-16, and the proposed Area of Industrial Redevelopment, the attenuation coefficients are at least approximately 10,000-fold. These calculations show that the LNAPL constituents, if assumed to migrate into indoor air, would not exceed any occupational inhalation limit and would contribute insignificantly to indoor air concentrations that include chemicals from occupational sources.

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5.3.2 Groundwater

As discussed in Section 5.2, potential current exposure to groundwater at and around the Site is limited to worker contact with groundwater in the shallow unconfined water table zone during excavation activities that extend into the water table. Screening criteria for evaluating the significance of these potential current exposures do not need to include the screening criteria that are based on residential drinking water use, which are used in the evaluation discussed in Section 5.1.2. Instead, the evaluation of significance is more appropriately conducted using only the screening criteria that are based on worker contact with groundwater while performing excavations. Comparison of the data from monitoring wells screened in the shallow unconfined water table zone with these criteria is included in the right-most column in Table 5-2a. The ratios in this column show that the only instances where concentrations exceed these screening criteria are for 2,3,7,8-TCDD TEQ at AOIs W-1 and W-8, and for PCBs at AOI W-1. As discussed in Section 5.1.2, these samples were evaluated in Section 5.3.1 of the RFI Report (ENCORE, 2002b). Section 5.3.2 of the RFI Report (ENCORE, 2002b) concluded that the aqueous-phase concentrations in the groundwater do not pose a significant risk to workers who might contact groundwater while performing occasional excavations.

The significance of potential exposure of workers to constituents in LNAPL during occasional excavations is evaluated in Appendix F.2, and the results of the calculations are summarized above in Section 5.3.1. The results show that the estimates of cumulative cancer and noncancer risks associated with such exposures at AOIs M-2 and M-16 do not exceed 10^{-4} or HI of 1, respectively. These risk estimates show that such exposures would not pose a significant risk.

The significance of potential exposure of workers to vapors that are assumed to migrate from LNAPL into buildings is evaluated in Appendix F.3, and the results of the evaluation are summarized

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above in Section 5.3.1. The results show that the assumed contribution of LNAPL vapor concentrations to indoor air mixtures that include chemicals from occupational sources would be insignificant.

5.4 Conclusions

Soil and groundwater at a number of AOIs at the Site are considered to have been affected by potentially significant releases when the highest constituent concentrations in these media are compared with generic risk-based screening criteria. However, when the likelihood of complete exposure pathways, current Site-specific conditions, and 95% UCLs rather than the highest concentrations are considered, the concentrations of constituents in these media do not present a significant exposure, except one area at AOIW-9 where GM has developed a corrective measure (ENCORE, 2003j) and a few areas at the proposed Area of Industrial Redevelopment where results will be reevaluated, following finalization of redevelopment plans, to address the presence of contaminants in surface and subsurface soil. GM has restricted worker access to the area at AOIW-9 until the corrective measures are completed. Similarly, GM has restricted any large-scale construction activities in the proposed Area of Industrial Redevelopment until the corrective measures in that area are completed.

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6. Summary/Conclusions

The supplemental RFI included field investigations at the following AOIs and other areas:

Fiero
AOI F-7: Wastewater Collection Sumps
AOI F-8: Paint Sludge Storage Area Form
AOI F-15: Oil/Solvent Catch Basin

Demolition Area
AOI W-1: West Yard
AOI W-8: Former Plant 9 Basement AST Area
AOI W-9: Former Central Foundry (Plant 6) Resin Spill and UST
AOI W-10: Railroad Marshalling Area Drainage System

Metal Fabrication Division
AOI M-1: WWTP
AOI M-2: Former Plating Operations Area
AOI M-4: Plant 25 Former Gasoline UST and Current Gasoline UST Location
AOI M-5: Former A-2 Fill Area
AOI M-7: ELPO Building
AOI M-9: Heat Treat Oil Storage Area
AOI M-16: Plant 25 Basement Sump Area
AOI M-25: Plant 33 Basement Sump Area

Powertrain
AOI P-6: Former UST Farm and Stoddard Solvent AST
AOI P-9: Pipeline Release;
AOI P-10: Former Plant 18
AOI P-11: Trestle Pipeline Release

Other
Storm Water Detention Facility

The objectives of supplemental RFI activities were to complete investigations necessary to:

- Determine hydrogeologic conditions, as necessary, to properly investigate releases from the new AOIs;

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- Characterize the nature and extent of releases of hazardous waste and/or hazardous constituents in environmental media at the new AOIs;
- Assess potential risk to human health and the environment associated with releases of hazardous waste and/or hazardous constituents at the new AOIs;
- Provide sufficient data to support the RCRA corrective action EI determination for the new AOIs;
- Determine whether interim corrective measures are necessary to control current unacceptable risks, if any, to human health at the new AOIs;
- Determine whether corrective measures are necessary to mitigate current and future unacceptable risks, if any, to human health and the environment for the new AOIs;
- Determine the impact, if any, from discharges from the new AOIs to off-Site areas;
- Determine the impact, if any, below several sumps and pits;
- Fulfill provisions for a second round of groundwater sampling, as described in the RFI Work Plan (ENCORE, 2001b);
- Provide further characterization of groundwater quality at existing AOIs based on U.S. EPA comments on the CA750/CA725 determination;
- Monitor Site-wide groundwater conditions by completing two semi-annual sampling events (November 2002 and May 2003); and
- Delineate free product plumes.

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Based on the results of the supplemental RFI field investigations it was determine that a potentially significant release has occurred at 14 AOIs and the SWDF. The findings of the field investigation are discussed in Section 4 of this Report. The potential health significance of the constituents found in soil, groundwater, and LNAPL are discussed in a risk evaluation presented in Section 5 of this Report.

6.1 No Significant Release Found

Among the AOIs and off-Site areas investigated during the supplemental RFI, the following have no significant release of hazardous constituents to the environment. The determination is based on a conservative approach in which the highest concentration of a constituent at an area is compared with screening criteria:

<u>Fiero</u>
AOI F-8: Paint Sludge Storage Area Form

<u>Metal Fabrication Division</u>
AOI M-7: ELPO Building
AOI M-9: Heat Treat Oil Storage Area
AOI M-25: Plant 33 Basement Sump Area

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Powertrain
AOI P-10: Former Plant 18

The results of the RFI indicate that no further investigation of these areas is warranted.

6.2 AOIs Discussed In Risk Evaluation

A release of hazardous constituents was identified at 14 AOIs and the SWDF, based on a conservative approach in which the highest concentrations of a constituent at an AOI or area were compared against screening criteria. Using the RFI characterization data on the nature and extent of constituents at these areas, the health significance of these releases under current and reasonably expected future land use were evaluated. The finding of the RFI field investigation and conclusion of the risk evaluation are summarized below:

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Fiero
AOI F-7: Wastewater Collection Sumps
A release was identified based on the presence of 1,1-dichloroethene and tetrachloroethene within groundwater. However, the results of the risk evaluation indicate that this area does not pose an unacceptable health risk. NFA is proposed for soils. Groundwater at this AOI will be addressed in the CMP.

AOI F-15: Oil/Solvent Catch Basin
A release was identified based on the presence of tetrachloroethene in the soil at concentrations greater than the screening criteria. However, the results of the risk evaluations presented in the RFI Report (ENCORE, 2002b) and in this Report indicate that this area does not pose an unacceptable health risk, therefore, NFA is required.

Demolition Area
AOI W-1: West Yard
A release was identified based on the presence of lead, manganese, chromium and PCBs in the soil and select VOCs, inorganics, PCBs, and dioxins in the groundwater at concentrations higher than the screening criteria. The results of the risk evaluations presented in the RFI Report (ENCORE, 2002b) and in this Report indicate that this area does not pose an unacceptable health risk. NFA is required for soils. An LNAPL plume (LNAPL Area No. 1) is present in this AOI. This AOI will be evaluated further in the CMP.

AOI W-8: Former Plant 9 Basement AST Area
A release was identified based on the presence of arsenic, manganese, chromium, and lead in the soil and select inorganics, PCBs, and dioxins in the groundwater at concentrations higher than the

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screening criteria. The results of the risk evaluations presented in the RFI Report (ENCORE, 2002b) and in this Report indicate that this area does not pose an unacceptable health risk. NFA is required for soils. An LNAPL plume (LNAPL Area No. 3) is present in this AOI. This AOI will be evaluated further in the CMP.

AOI W-9: Former Central Foundry (Plant 6) Resin Spill and UST

A release was identified based on the presence of manganese, chromium, and PCBs in the soil, and lead in the groundwater at concentrations higher than the screening criteria. An LNAPL plume (LNAPL Area No. 6) is present in this AOI. This AOI will be evaluated further in the CMP.

Area of Industrial Redevelopment

A release was identified based on the presence of inorganics, SVOCs, PCBs, and dioxins in soil at concentrations exceeding the screening criteria. LNAPL Areas Nos. 1, 3, and 6 are within this area. The risk evaluation presented in Section 5, indicated that constituents do pose an unacceptable risk to human health under a large scale, short term construction scenario. This area will be further addressed in the CMP.

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AOI W-10: Railroad Marshalling Area Drainage System

A release was identified based on the presence of manganese and chromium in the surface soil, lead in the deeper soil borings, and select arsenic, thallium, PCBs, and bis-(2-ethylhexyl)-phthalate in the groundwater at concentrations higher than the screening criteria during the initial RFI investigations. The risk evaluation presented in the RFI Report (ENCORE, 2002b) indicate that these constituents in soil do not pose an unacceptable health risk, therefore NFA is proposed for soils. An LNAPL plume (LNAPL Area No. 2) is present in this AOI. This AOI will be evaluated further in the CMP.

Metal Fabrication Division

AOI M-1: WWTP

A release was identified based on the presence of PCBs in the soil and cyanide in the groundwater at concentrations higher than the screening criteria. The risk evaluation indicates that these constituents do not pose an unacceptable health risk. NFA is proposed for soils. Groundwater at this AOI will be addressed in the CMP.

AOI M-2: Former Plating Operations Area

A release was identified based on the presence of manganese and 1,1-dichloroethene in soil, and bis(2-ethylhexyl)phthalate and select VOCs and inorganics in groundwater at concentrations higher than the screening criteria. The risk evaluations presented in the RFI Report (ENCORE, 2002b) and in this Report, indicate that these constituents in soil do not pose an unacceptable health risk, therefore NFA is proposed for soils. An LNAPL plume (LNAPL Area No. 4) is present in this AOI. This AOI will be addressed in the CMP.

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AOI M-4: Plant 25 Former Gasoline UST and Current Gasoline UST Location

A release was identified based on the presence of benzene, ethylbenzene, and xylenes in the groundwater at concentrations higher than the screening criteria. NFA is required for soils. Groundwater at this AOI will be addressed in the CMP.

AOI M-5: Former A-2 Fill Area

A release was identified based on the presence of lead in the soil and barium, manganese, and PCBs in the groundwater at concentrations higher than the screening criteria. The risk evaluation indicates that these constituents do not pose an unacceptable threat to workers. NFA is required for soils. Groundwater at this AOI will be addressed in the CMP.

AOI M-16: Plant 25 Basement Sump Area

A release was identified based on the presence of vinyl chloride in the groundwater at concentrations higher than the screening criteria. NFA is required for soils. An LNAPL plume (LNAPL Area No. 5) is present in this AOI. This AOI will be evaluated further in the CMP.

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Powertrain

AOI P-6: Emissions Control Building, Former UST Farm and Former Stoddard Solvent AST

A release was identified based on the presence of benzene, toluene, ethyl benzene, and xylenes in the groundwater at concentrations higher than the screening criteria. NFA is required for soils. Groundwater at this AOI will be addressed in the CMP.

AOI P-9: Pipeline Release

A release based on the presence of benzo(a)pyrene in soil, and phenols, antimony, nickel, selenium, and vanadium in groundwater at concentrations higher than the screening criteria. The risk evaluation indicates that these constituents do not pose an unacceptable health risk, therefore NFA is required for soil. Groundwater at this AOI will be evaluated in the CMP.

AOI P-11: Trestle Pipeline Release

A release based on the presence of manganese in soil, and cobalt in groundwater at concentrations higher than the screening criteria. The risk evaluation indicates that these constituents do not pose an unacceptable health risk, therefore NFA is required for soil. Groundwater at this AOI will be evaluated in the CMP.

Other Area

Stormwater Detention Facility

A release based on the presence of PCBs and select inorganics in groundwater at concentrations higher than the screening criteria. The risk evaluation indicates that these constituents do not pose

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an unacceptable health risk, therefore NFA is required for soil. Groundwater at this AOI will be evaluated in the CMP.

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Tables

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TABLE 1-1
GENERAL MOTORS CORPORATION
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RCRA FACILITY INVESTIGATION

SUMMARY OF SUPPLEMENTAL RFI ACTIVITIES, RESULTS, AND PROPOSED FURTHER ACTIVITY

AOI #	AOI Description	Summary of Primary Materials Managed	Reason for Investigation						Supplemental RFI No. 1 Activities	Soil Laboratory Analysis Performed	Groundwater Laboratory Analysis Performed	Analytical Results That Exceed Part 201 Industrial Criteria		RFI Report Proposed Activity	Supplemental RFI Report No. I Proposed Activity
			Semi- Annual Sampling*	Second Round Sampling	Pits/ Sumps	Remediation Design	Other	RFI Work Plan Addendum				Soil	Groundwater		
Study Area 1 - Fiero															
F-7	Wastewater Collection Sumps - Located in the basement of the Powerhouse	- Industrial wastewater			X			8	- Cleaned and repaired sumps - Installed 1 groundwater monitoring well - Collected 1 soil sample - Collected 3 groundwater samples	- VOCs - SVOCs - PCBs - Inorganics	- 1,1-DCE - TCE	No exceedances	1,1-DCE (0.013 mg/L) TCE (0.0062 mg/L)	Sump pits to be repaired	Soil: NFA Groundwater: Perform CMP
F-8	Paint Sludge Storage Area - Located north of Building 17 - The concrete pad is 12 by 24 ft and is unbermed - It is covered with a corrugated roof	- Storage of nonhazardous paint sludge and sludge from filtering waste bonderite			X				- 1 subsurface soil sample collected	- VOCs - SVOCs - PCBs - Inorganics		No exceedances		Trench and sump to be properly abandoned	NFA
F-15	Fuel AST Area: Oil/Solvent Catch Basin - Located in the Fiero Loading dock - Contents of catch basin was an oil sludge - Catch basin cleaned and inspected	- Unknown			X			8	- Completed 3 soil borings	- VOCs		No exceedances		Catch basin to be properly abandoned	NFA
Study Area 2 - Demolition Area															
W-1	West Yard - Approximately 20 acres in size - Entire yard was historically used for materials management activities, including: - Disposal of foundry sand, refuse, sludge and trash; - The storage of hazardous waste (former hazardous waste storage pad); - Former railroad marshalling area; and - a backfilled settling basin	- Impacted soils, groundwater, and LNAPL containing VOCs, SVOCs, metals, PCB and Dioxins	X	X				9	- Completed 1 soil boring - 3 groundwater samples collected - Groundwater samples were collected at selected, previously installed, downgradient wells (DWD-13, MWW1-04, MWW1-05)	- VOCs - SVOCs - PCBs - Inorganics	- MWW1-04 & -05 PCBs only - DWD13 VOCs, SVOCs, PCBs, Inorganics - Semi-annual wells - VOCs, SVOCs, PCBs, Inorganics, Dioxins, and Furans	Arsenic (9 mg/kg) Manganese (7,260 mg/kg) Chromium (total) (340 mg/kg)	Total PCBs (0.0013 mg/L) Vanadium (0.0484 mg/L)* Manganese (1.2 mg/L)* Methylene chloride (0.3 mg/L)* Acetone (12 mg/L)*	Perform CMP	Soil: NFA Groundwater: Perform CMP LNAPL: Perform CMP
W-8	Plant 9-Basement - 12 ASTs ranging in size from 2,000 gal to 14,000 gal - The tanks were located along the north side of Plant 9 basement - Kerosene-like odors noticed in storm sewer in this area	- Kerosene - Coolant (141-KC)		X				9	- Completed 5 soil borings - Collected 5 groundwater samples - Installed 2 recovery wells - Installed 3 groundwater monitoring wells - Evaluated 11 soil borings for the presence of LNAPL (no samples collected)	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics - Methylene chloride (Nov. 2003 sample only)	Arsenic (54 mg/kg) Manganese (1,990 mg/kg) Chromium (total) (363 mg/kg) Lead (8,440 mg/kg)	Manganese (5.41 mg/L) Nickel (0.307 mg/L) Lead (0.122 mg/L) Vanadium (0.239 mg/L) Arsenic (0.0849 mg/L) Beryllium (0.0054 mg/L) Chromium (total) (0.295 mg/L) Cobalt (0.0879 mg/L) Thallium (0.003 mg/L) 2,4-Dimethylphenol (2.5 mg/L) Total methylphenols (4.6 mg/L)	Perform CMP	Soil: NFA Groundwater: Perform CMP LNAPL: Perform CMP
W-9	Former Central Foundry (Plant 6) - Formerly located east of the West Yard - Produced gray iron from metallic ore to be casted into automotive parts - Operations ceased in 1987 and the plant was demolished in 1995 - 20,000 gal. UST	- Gasoline - Metals - PCBs - Arsenic - Resin	X					9	- Completed 9 soil borings - Collected 4 groundwater samples - Installed 2 groundwater monitoring wells - Evaluated 9 soil borings for the presence of LNAPL - Collected 1 LNAPL sample	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics - Semi-annual wells - VOCs, SVOCs, PCBs, Inorganics, Dioxins, and Furans	Manganese (3,680 mg/kg)	Lead (0.0391 mg/L)	Perform CMP	Perform CMP
W-10	Railroad Marshalling Area Drainage System - Extends the entire length of the west boundary of the West Yard - Used for the temporary storage of railcars loaded with scrap metal and grinding waste to be shipped off-site - A drainage system was installed in 1972 to collect the waste draining out of the railcars - The marshalling area is no longer used for the storage of railcars, although the drainage system remains in place	- Waste from metal chips - Oils - PCBs	X	X					- Collected 4 groundwater samples		- VOCs - SVOCs - PCBs - Inorganics - Semi-annual wells - VOCs, SVOCs, PCBs, Inorganics, Dioxins, and Furans		No exceedances	Perform CMP	Soil: NFA Groundwater: Perform CMP LNAPL: Perform CMP
Study Area 3 - Metal Fabrication Division															
M-1	Wastewater Treatment Plant (WWTP) - Located west of Plants 5/23 and Plant 14 - Included up to 55 ASTs historically utilized for the WWTP - Ground cover includes pavement, gravel, and grass - Known releases included alkali/oily water, cyanide plating solution, acidic alkali water, lime slurry, reclaimed oil, storing metallic water, chrome solution, and cyanide solution. - History of exceedances of lead, phenol, and Chromium VI at sanitary sewer outfall 003	- Treated metals (including chromium VI) - Treated alkali/oily wastes - Oil - Sludge - Sulfuric Acid - Lime, Alum, Polymer, Caustic - Pickle Liquid						8	- Installed 3 monitoring wells - Collected 5 groundwater samples		- Cyanide		Cyanide (1.3 mg/L)	NFA	Soil: NFA Groundwater: Perform CMP

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TABLE 1-1
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS, PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SUMMARY OF SUPPLEMENTAL RFI ACTIVITIES, RESULTS, AND PROPOSED FURTHER ACTIVITY

AOI #	AOI Description	Summary of Primary Materials Managed	Reason for Investigation						Supplemental RFI No. 1 Activities	Soil Laboratory Analysis Performed	Groundwater Laboratory Analysis Performed	Analytical Results That Exceed Part 201 Industrial Criteria		RFI Report Proposed Activity	Supplemental RFI Report No. I Proposed Activity
			Semi- Annual Sampling*	Second Round Sampling	Pits/ Sumps	Remediation Design	Other	RFI Work Plan Addendum				Soil	Groundwater		
M-2	Former Plating Operations Area - Western portion of Plant 2 - Types of plating included meatier (copper coating) and utility (nickel and chrome plating) - Plating pits showed evidence of corrosion during Site visit	- Metals (including copper, nickel, and chromium VI) - Chlorinated solvents		X				4	- LNAPL delineation - Collected 1 LNAPL sample for chemical analysis and fingerprinting - Completed 5 soil borings - Installed 9 monitoring wells - Collected 22 groundwater samples	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics	No exceedances	1,1,1-TCA (0.555 mg/L) 1,1,2-TCA (0.02 mg/L) 1,1-DCE (0.091 mg/L) 1,1-DCA (1.9 mg/L) PCE (0.0075 mg/L) TCE (0.056 mg/L) cis-1,2-DCE (0.09 mg/L) bis(2-ethylphthalate) (0.024 mg/L) Methylene chloride (0.024 mg/L) Vinyl Chloride (0.027 mg/L) Nickel (10.4 mg/L) Vanadium (0.0054 mg/L) Cyanide (0.55 mg/L)	Soils: NFA Groundwater: Perform CMP	Soil: NFA Groundwater: Perform CMP LNAPL: Perform CMP
M-4	Plant 25 Former Gasoline UST & Current Gasoline AST - Prior documented release (gasoline) from former UST (1,000 gal)	- Gasoline (leaded and unleaded)		X		X		8, 8A	- LNAPL delineation - Collected 1 LNAPL sample for chemical analysis and fingerprinting - Installed 2 groundwater monitoring wells - Collected 1 soil sample - Collected 11 groundwater samples	- VOCs - SVOCs - PCBs - Inorganics	- BTEX - VOCs	Waiting for validated analytical data	Benzene (0.98 mg/L) Ethylbenzene (1.5 mg/L)	Soils: NFA Groundwater: Perform CMP	Soil: NFA Groundwater: Perform CMP LNAPL: Perform CMP
M-5	Former Fill Area A-2 - Used for disposal of plant refuse and industrial waste including partially burned materials	- Wastewater sludge - PCBs - Partially burned waste						8	- Installed 3 monitoring wells - Collected 5 groundwater samples		- PCBs - Barium - Manganese		Barium (2.2 mg/L) Manganese (1.16 mg/L) PCBs (0.00059 mg/L)	NFA	Soil: NFA Groundwater: Perform CMP (Collect second round groundwater samples from new wells)
M-7	ELPO Building/Flammable Liquids Storage Building - Includes ELPO Operations Building and Flammable Liquids Storage Building - Series of concrete trenches and sumps which convey wastewater containing metals	- Solvents - Alkali Cleaners - Phosphoric Acid - Chromic Acid - PCBs - Metals					X		- Completed 1 soil boring - Visual inspection of subsurface conditions	- VOCs - SVOCs - PCBs - Inorganics		No exceedances		NFA	NFA
M-9	Former Plant 1 Heat Treat Oil Storage Area - 4 ASTs near the eastern wall of Plant 11 - ASTs contained inside a floor pit with sump that discharges to WWTP	- Dirty heat treat quench oil - LC-7 coolant - Acidic material		X	X				- 1 surficial soil sample collected - 1 groundwater sample collected	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics	No exceedances	No exceedances	Sump will be properly abandoned NFA	NFA
M-16	Plant 25 Basement Sump Area - Sludge tank, pumping system, and several floor sumps - Area currently flooded - Several of the sumps and pits filled with grout, unable to ascertain condition - Evidence of water on foundation walls	- Sludges - Oils		X				8, 8A	- 1 LNAPL sample collected (MWM4-06) - 1 soil sample collected from monitoring well installation - 6 groundwater monitoring wells installed - 4 groundwater samples collected - Completed 18 soil borings, sampled 4 (waiting for validated analytical results)	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics - MWW16-02 second round sample for cyanide only	No exceedances Validated Analytical Data not available for 4 sampled soil borings.	Vinyl Chloride (0.014 mg/L)	NFA	Soil: NFA Groundwater: Perform CMP LNAPL: Delineation Activities and Perform CMP
M-25	Plant 25 East Basement Sump Area - Plants 25 and 33 housed engine machining and assembly operations, material storage and shipping - Basement sump area is located along the east wall of Plant 33 , the floor sump discharges to Plant 25 which discharges to the WWTP - Plant 25 and 33 under extensive renovation	- Framing system wax						8	- Installed one groundwater monitoring well - 1 groundwater sample collected		- VOCs - SVOCs - PCBs - Inorganics		No exceedances	NFA	NFA
Study Area 4 - Powertrain															
P-6	Former UST Farm & Stoddard Solvent AST - West of the northwest corner of the Emissions Control building - Release from UST(s) was discovered in 1984 - Remediation performed in 1984 and tanks removed in 1987 - Documentation of previous investigations and remediation does not exist - Recent (Jan 2001) construction activities indicate subsurface contamination exceeds Part 201 Criteria for BTEX compounds	- Gasoline - Indolene I clear gas - GM calibration solvent - Stoddard solvent		X		X			- Collected 10 groundwater samples		- VOCs - BTEX		Benzene (0.34 mg/L) Ethylbenzene (1.6 mg/L)	Perform CMP	Soil: NFA Groundwater: Perform CMP
P-9	Pipeline Release Investigation - Alkali-oily wastewater reported leaking (Aug./02) from trestle pipeline at NE side of former Plant 18 - Jan. /03 a second leak reported - Plant 18 demolished in 1998	- Alkali-oily wastewater						5	- Installed 3 groundwater monitoring wells - Completed 31 soil borings (14 for areal coverage, 3 borings to investigate for benzo (a)pyrene, 14 safety overage) - Collected 3 groundwater samples - Completed and sampled one test pit	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics - Benzo(a)pyrene (BP9-11 to BP9-13)	Benzo(a)pyrene (12 mg/kg)	2,4-dimethylphenol (0.6 mg/L) Total methylphenols (1.28 mg/L) Antimony (0.0131 mg/L) Nickel (0.128 mg/l) Selenium (0.0607 mg/L) Vanadium (0.578 mg/L)	Not evaluated in RFI Report	Soil: NFA Groundwater: Perform CMP

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RCRA FACILITY INVESTIGATION

SUMMARY OF SUPPLEMENTAL RFI ACTIVITIES, RESULTS, AND PROPOSED FURTHER ACTIVITY

AOI #	AOI Description	Summary of Primary Materials Managed	Reason for Investigation						Supplemental RFI No. 1 Activities	Soil Laboratory Analysis Performed	Groundwater Laboratory Analysis Performed	Analytical Results That Exceed Part 201 Industrial Criteria		RFI Report Proposed Activity	Supplemental RFI Report No. I Proposed Activity
			Semi- Annual Sampling*	Second Round Sampling	Pits/ Sumps	Remediation Design	Other	RFI Work Plan Addendum				Soil	Groundwater		
P-10	Former Plant 18 - July 1978 oil reported to be leaking form transformer on roof of Plant 18 - 2002 Storm sewer investigation - PCBs present in sewer water & sediment samples	- PCBs - Oil and Grease						6	- Completed 6 soil borings - Installed 3 monitoring wells	-SVOCs -PCBs	Groundwater not encountered	No exceedances		Not evaluated in RFI Report	NFA
P-11	Trestle Pipeline Release Investigation - Overhead trestle pipeline release in Mar./03 in vicinity of Former Plant 18 - Alkali-oily wastewater reported flowing from broken pipeline along north side of Former Plant 18 - stained soils in area of release collected for disposal - Pooled liquid observed near storm sewer MH	- Alkali-oily wastewater						7	- Completed 10 soil borings - Installed 3 monitoring wells - Collected 2 groundwater samples	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics	Manganese (3,260 mg/kg)	Cobalt (0.0535 mg/L)	Not evaluated in RFI Report	Soil: NFA Groundwater: Perform CMP
Other Areas															
	Storm Water Detention Facility (SWDF) - Located on the south side of Montcalm Avenue - Operational in May 1982, intercepting and treating the Site storm water discharged to Outfall 001 - During routine cleaning/inspection (Sept./02) cracks in the concrete floor and degraded sections of rubber seals observed - Subsurface investigation to determine if impacted storm water from pond was infiltrating into the subsurface	- Storm water	X				X		- Repair to concrete and rubber seals - 5 soil samples collected, temporary well installed at each boring location - 3 temporary piezometers installed in 3 boring locations - 5 soil samples collected - 6 groundwater samples collected	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics (total and dissolved) - MW-02 and MW-03 only total	Arsenic (9.3 mg/kg)	PCBs (0.0017 mg/L) Antimony (total)(0.0129 mg/L) Cadmium (total)(0.0067 mg/L) Lead (total)(0.164 mg/L) Manganese(total) (1.64 mg/L) Vanadium(total) (0.087 mg/L) Antimony(dissolved) (0.0223 mg/L) Manganese(dissolved) (1.02 mg/L) Vanadium(dissolved) (0.0116 mg/L)	Not evaluated in RFI Report	Soil: NFA Groundwater: Perform CMP
	Site-Wide Groundwater Monitoring - **Sampling locations included in the November 2003 and May 2003 semi-annual groundwater monitoring events		X						- Semi-annual hydrogeologic investigations - Included 2 AOI F-12 (MWF12-01 and -02) wells and 3 Site-wide wells (IWP5, GWP3, and GWP6)		- VOCs - SVOCs - PCBs - Inorganics - Dioxins - Furans		Manganese (1.05 mg/L) Acetone (1.4 mg/L)		Perform CMP
Other	Proposed Industrial Redevelopment Area - During follow up activities to a geotechnical borehole investigation in AOIs W1, W8, and W9, stained soils and potential LNAPL was observed in the soil - Geotechnical investigation consisted of completing 36 soil borings - 16 of the 36 boreholes exhibited stained/discolored soils, and/or elevated PID readings	- Impacted soils, groundwater, and LNAPL containing VOCs, SVOCs, metals, PCB and Dioxins						9	- 33 Soil borings completed - Collected soil samples from 15 soil borings - Installed 8 groundwater monitoring wells - Collected 5 groundwater samples - Evaluated 13 soil borings for the presence of LNAPL - Collected 1 LNAPL sample	- VOCs - SVOCs - PCBs - Inorganics	- VOCs - SVOCs - PCBs - Inorganics	Arsenic (54 mg/kg) Chromium (total) (360 mg/kg) Manganese (7,260 mg/kg) Lead (8,440 mg/kg)	Lead (0.0391 mg/L) 2,4-Dimethylphenol (2.5 mg/L) Total methylphenols (4.6 mg/L)	Not evaluated in RFI Report	Soil: NFA Groundwater: Perform CMP

* = Constituent concentration from Semi-Annual Groundwater sampling results

* *= Refer to Table 2-1 Semi-Annual Groundwater Monitoring Events Sampling Locations

NFA = No Further Action

FA = Further Action

CMP = Corrective Measures Proposal

IDWC = Part 201 Generic Industrial Drinking Water Criteria (Groundwater)

IPSIC = Part 201 Generic Industrial Particulate Soil Inhalation Criteria (Soil)

IDC = Part 201 Generic Industrial Direct Contact Criteria (Soil)

RDC = Part 201 Generic Residential Direct Contact Criteria (Soil)

RDWC = Part 201 Generic Residential Drinking Water Criteria (Groundwater)

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TABLE 2-1
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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SEMI-ANNUAL GROUNDWATER SAMPLING LOCATIONS

November 2002	May 2003
MWD6	MWD6
MWW1-02	MWW1-02
MWW1-03	MWW1-03
MWW1-06	MWW1-06
MWW10-03	MWW10-03
MWF12-01	MWF12-01
MWF12-02	MWF12-02
MWF1	MWF1
MW40-99	MW40-99
IWD7	IWD7
IWP5	IWP5
GWD11	GWD11
DWD10	DWD10
DWD12	DWD12
GWP3	GWP3
GWD9	GWD9
	MWW1-04
	GWP6
	GWD8

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TABLE 2-2

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION

GROUNDWATER SAMPLING PARAMETER SUMMARY

Date (mm/dd/yyyy)	Well ID	pH	Specific Conductivity mS/cm	Temperature degree C	Turbidity NTU	DO mg/L	ORP mV	DTW ft	Flow Rate mL/min	Volume Purged gallons
FIERO										
	F-7									
8/11/2003	MWF7-01	8.72	1.59	22.96	1.88	0.24	97	22.1	100.00	0.396
8/11/2003	MWF7-02	7.61	1.30	22.15	4.76	0.36	100	22.1	100.00	2.378
8/11/2003	MWF7-03	7.19	0.48	19.89	4.61	0.28	64	23.89	100.00	1.189
DEMOLITION AREA										
	W-1									
7/17/2002	MWW1-04	11.82	1.83	20.1	1.60	0.85	17	5.87	100.00	
11/10/2003	MWW1-04	9.68	1.45	14.20	4.2	0.37	-7	4.1	100.00	0.793
8/19/2002	MWW1-05	6.36	4.23	18.43	4.61	0.23	-206.1	7.19	50.00	1.321
	W-8									
11/14/2002	MWW8-08	Monitoring Well Was Pumped Dry Twice And Sampled								
11/12/2002	MWW8-10	7.94	1.88	12.73	18.1	0.16	35	9.13	100.00	2.113
11/12/2002	MWW8-11	7.19	1.43	12.70	4.7	0.11	50	9.38	100.00	3.302
11/12/2002	MWW8-12	12.10	1.45	10.94	3.42	0.3	51	10.5	100.00	0.660
8/25/2003	MWW8-13	10.46	1.32	19.25	5.54	0.03	124	20.19	100.00	1.189
	W-9									
8/25/2003	MWW9-01	Monitoring Well Was Pumped Dry Twice And Sampled								
9/30/2003	MWW9-03	7.16	1.28	13.05	1.7	0.58	-88	24.75	100.00	1.321
9/30/2003	MWW9-05	Monitoring Well Was Dry - No Samples Collected								
9/30/2003	MWW9-06	7.99	1.32	12.57	0.75	4.85	44	24.44	150.00	3.566
9/30/2003	MWW9-07	Monitoring Well Was Dry - No Samples Collected								
9/30/2003	TWW9-01	9.09	14.37	13.09	2.11	0.43	106	21.78	150.00	1.981
METAL FABRICATION DIVISION										
	M-1									
8/12/2003	MWM1-02	6.85	2.71	17.44	4.39	0.93	27	14.28	100.00	1.215
8/12/2003	MWM1-03	6.95	4.43	16.94	1.88	0.23	5	15.01	100.00	0.925
8/12/2003	MWM1-04	6.89	2.52	17.00	1.34	2.63	-3	20.65	100.00	0.528
8/12/2003	MWM1-05	7.13	2.53	16.65	2.01	0.27	-74	17.57	100.00	0.925
8/12/2003	MWM1-06	6.98	4.47	16.70	3.37	0.22	-115	13.97	100.00	0.528
	M-2									
11/12/2002	MWM2-01	7.05	3.75	15.46	4.95	0.88	199	12.89	100.00	1.321
6/23/2003	MWM2-01	7.24	6.33	13.76	3.22	1.6	-	12.88	100.00	1.321
11/12/2002	MWM2-02	7.43	1.14	16.85	0.13	0.26	-50	16.86	250.00	7.000
6/23/2003	MWM2-02	7.45	0.57	15.48	3.12	0.17	-	16.82	100.00	1.189
11/12/2002	MWM2-03	7.39	1.73	17.69	0.05	0.49	149	16.98	250.00	8.000
6/23/2003	MWM2-03	7.02	1.47	17.77	3.51	0.42	39	16.45	150.00	5.548
11/12/2002	MWM2-04	6.87	1.57	19.09	0.04	0.1	-43	16.74	300.00	14.000
6/24/2003	MWM2-04	6.69	0.97	18.98	22	0.37	-42	16.64	150.00	4.161
11/12/2002	MWM2-05	7.55	0.94	18.52	0.15	0.09	-120	16.16	500.00	12.000
6/23/2003	MWM2-05	7.41	0.53	18.06	3.1	0.15	-35	16.02	200.00	2.113
11/12/2002	MWM2-07	6.65	1.36	20.76	4.83	0.13	-41	16.95	250.00	4.000
6/23/2003	MWM2-07	6.43	1.01	20.14	2.28	0.09	-101	16.83	150.00	2.576
11/12/2002	MWM2-08	7.00	6.61	17.62	0.03	0.21	78	16.9	250.00	8.000
6/24/2003	MWM2-15	7.36	0.64	20.62	2.87	0.33	272	16.36	120.00	1.902
6/24/2003	MWM2-16	7.04	0.72	20.49	2.88	0.46	-99	16.58	150.00	0.991
6/23/2003	MWM2-17	7.41	0.92	19.46	0.9	0.14	-	16.36	100.00	0.793
6/24/2003	MWM2-18	6.84	0.88	22.38	4.38	0.39	-130	16.63	150.00	5.151
6/23/2003	MWM2-19	6.52	1.52	22.00	0.9	0.28	-72	16.7	120.00	0.951
6/23/2003	MWM2-20	6.99	0.91	18.94	4.97	0.17	-84	16.26	150.00	1.783
6/23/2003	MWM2-22	6.35	1.40	20.55	1.29	0.12	-115	16.7	125.00	1.486
6/23/2003	MWM2-23	6.35	0.96	20.24	1.42	0.17	0.93	16.73	140.00	0.925
6/23/2003	MWM2-24	6.34	1.75	20.80	3.03	0.17	-85	16.5	125.00	1.321
	M-4									
11/14/2002	MWM4-01	7.04	1.71	11.83	0.23	2.66	76	26.74	100.00	1.000
9/30/2003	MWM4-01	8.11	3.35	2.22	3.16	2.71	-29	27.64	100.00	0.528
11/14/2002	MWM4-02	7.68	5.50	14.79	1	0.2	68	5.5	100.00	0.925
10/1/2003	MWM4-02	8.34	1.05	14.81	2.88	0.31	-105	6.82	150.00	1.981
11/14/2002	MWM4-03	7.50	4.82	11.99	0.19	0.14	71	25.42	100.00	2.000
9/30/2003	MWM4-03	6.82	5.27	12.02	3.82	0.14	57	26.21	150.00	2.774
11/14/2002	MWM4-04	7.23	5.58	13.07	0.25	1.19	-	10.03	75.00	0.500
9/30/2003	MWM4-04	8.45	6.16	14.00	0.71	2.57	-131	9.31	100.00	0.660
11/14/2002	MWM4-05	7.10	0.73	13.16	0.04	0.26	76	9.65	100.00	1.000
10/1/2003	MWM4-05	8.02	0.76	13.09	0.6	0.68	-108	9.09	100.00	3.302
10/1/2003	MWM4-07	6.51	4.51	15.51	1.58	0.17	-88	29.65	200.00	5.019

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TABLE 2-2

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION

GROUNDWATER SAMPLING PARAMETER SUMMARY

Date (mm/dd/yyyy)	Well ID	pH	Specific Conductivity mS/cm	Temperature degree C	Turbidity NTU	DO mg/L	ORP mV	DTW ft	Flow Rate mL/min	Volume Purged gallons
	M-5									
8/12/2003	MW2-99	6.77	22.20	18.54	1.77	0.35	-120		100.00	2.008
8/12/2003	MWM5-01	10.10	20.30	18.51	4.65	0.26	-85	5.91	100.00	1.981
8/12/2003	MWM5-02	6.47	2.61	15.83	4.1	0.27	-252	21.5	100.00	0.528
8/12/2003	MWM5-03	6.60	4.30	15.82	1.63	0.58	-179	23.21	100.00	0.528
8/12/2003	MWM5-04	6.43	6.08	17.01	1.43	0.48	80	24.12	100.00	0.660
	M-9									
11/14/2002	MWM9-02	9.80	27.80	13.79	2.75	4.53	-68	15.47	50.00	2.000
	M-16									
8/11/2003	MWM16-01	6.98	4.65	18.10	4.95	0.08	--	24.65	80.00	3.381
11/13/2002	MWM16-02	7.20	1.46	10.80	4.3	4.58	67	24.2	100.00	2.510
8/11/2003	MWM16-02	7.33	1.67	19.20	4.2	3.56	--	24.97	80.00	1.479
8/11/2003	MWM16-04	7.08	3.90	16.35	1.83	1.8	--	24.55	80.00	0.766
8/11/2003	MWM16-05	Monitoring Well Was Dry - No Samples Collected								
	M-25									
8/11/2003	MWM25-01	Monitoring Well Was Dry - No Samples Collected								
8/11/2003	MWM25-02	6.98	3.51	16.22	0.18	0.52	62	24.75	100.00	0.660
POWERTRAIN										
	P-9									
6/15/2003	MWP9-01	11.54	1.50	16.87	4.02	0.29	172	3.9	150.00	1.000
6/8/2003	MWP9-01	11.16	1.46	14.39	2.26	0.45	160	4.66	120.00	1.800
6/8/2003	MWP9-03	11.41	2.27	13.73	3.79	0.06	46	5.54	200.00	4.227
6/15/2003	MWP9-03	11.09	2.13	15.74	-	0.08	-7	4.88	150.00	1.000
6/15/2003	MWP9-04	7.53	1.34	15.43	2.64	0.15	18	15.72	100.00	0.793
6/8/2003	MWP9-04	7.51	1.33	13.81	1.53	0.21	102	15.43	100.00	0.793
	P-10									
6/15/2003	MWP10-01	Monitoring Well Was Dry - No Samples Collected								
6/15/2003	MWP10-03	Monitoring Well Was Dry - No Samples Collected								
6/15/2003	MWP10-05	Monitoring Well Was Dry - No Samples Collected								
	P-11									
6/15/2003	MWP11-01	7.06	1.35	12.93	4.26	0.56	89	11.94	150.00	1.500
6/15/2003	MWP11-02	Monitoring Well Was Dry - No Samples Collected								
6/15/2003	MWP11-04	6.86	1.86	17.25	4.68	0.05	-101	3.84	120.00	3.329

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TABLE 3-1

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATON

SUBSURFACE STRATIGRAPHIC DATA SUMMARY

Well ID	TOC	Elevation P/Casing	Ground	Installation Date/Status	Total Depth	Screen Intake (ft bgs)		Screen Intake Elevation		Flow Zone
						Top	Bottom	Top	Bottom	
FIERO										
F-7										
MWF7-03	973.31	973.60	973.63	7/24/2003	35	22	32	951.63	941.63	Clay/Sand
DEMOLITION AREA										
W-1										
MWW1-06	943.63	--	943.75	7/30/2002	16	4	16	939.75	927.75	Marl
W-8										
MWW8-13	970.22	970.50	967.75	5/29/2003	67	17	27	950.75	940.75	Sand/Silty Clay
MWW8-14	970.23	970.63	967.71	10/11/2003	31.5	11.5	31.5	956.21	936.21	Silty Clay/Silt/Sand
MWW8-15	970.24	970.40	967.71	10/11/2003	31.5	11.5	31.5	956.21	936.21	Silty Clay/Silt/Silty Clay
MWW8-16	970.46	970.83	968.00	10/11/2003	31.5	11.5	31.5	956.50	936.50	Sitly Clay/Silt/Sand/Silty Clay
RWW8-01	970.33	970.65	967.86	7/30/2003	37	10	30	957.86	937.86	Silty Clay
RWW8-02	970.75	971.38	967.94	7/30/2002	32	9.3	29.3	958.64	938.64	Silty Clay
W-9										
MWW9-01	969.60	969.94	969.94	7/28/2003	37	24	34	945.94	935.94	Sand/Silt/Peat/Silt/Sand
MWW9-02	973.26	973.56	970.64	7/28/2003	37	23	33	947.64	937.64	Sand/Silt/Silty Clay
MWW9-03	971.98	972.37	969.11	9/8/2003	37	18	28	951.11	941.11	Silt/Sand/Clay
MWW9-05	973.79	974.06	970.71	7/28/2003	37	23	33	947.71	937.71	Silty Clay
MWW9-06	973.82	974.15	970.82	9/10/2003	37	23	33	947.82	937.82	Sand/Silt
MWW9-07	970.59	970.76	967.59	9/10/2003	27	13	23	954.59	944.59	Silt
TWW9-01	971.14	--	970.79	8/18/2003	37	21	31	949.79	939.79	Sand
MFD										
M-1										
MWM1-04	970.25	970.6	967.65	7/23/2003	27	15	25	952.65	942.65	Silty Clay/Sand
MWM1-05	967.48	967.67	967.66	7/23/2003	27	15	25	952.66	942.66	Sand
MWM1-06	964.07	964.34	964.32	7/23/2003	27	15	25	949.32	939.32	Sand
M-2										
MWM2-15	967.58	967.88	967.94	5/31/2003	25	15	25	952.94	942.94	Sand/Silty Clay
MWM2-16	967.70	968.00	968.00	6/1/2003	25	14	24	954.00	944.00	Sand/Silty Clay
MWM2-17	967.43	967.88	967.88	4/24/2003	28.6	18	28	949.88	939.88	Sand/Silty Clay
MWM2-18	967.59	967.94	967.94	5/18/2003	35	18	28	949.94	939.94	Sand/Silt
MWM2-19	967.74	968.00	968.00	5/18/2003	25	15	25	953.00	943.00	Sandy Clay/Silty Sand/Silty Clay
MWM2-20	967.30	967.81	967.81	4/24/2003	33	19	29	948.81	938.81	Silty Sand/Sand/Silty Clay
MWM2-22	967.56	967.94	967.94	6/1/2003	25	15	25	952.94	942.94	Sand
MWM2-23	967.61	967.94	967.94	5/18/2003	30	15	25	952.94	942.94	Sand
MWM2-24	967.36	967.94	967.94	5/18/2003	30	20	30	947.94	937.94	Sand/Clay
M-4										
MWM4-06	911.10	961.31	961.29	7/21/2003	11	1	10	960.29	951.29	Sand
MWM4-07	985.22	985.44	985.44	9/15/2003	35	28	38	957.44	947.44	Sand
M-5										
MWM5-02	977.07	977.36	977.33	7/28/2003	27	17	27	960.33	950.33	Silty Clay/Sand/Silt/Sand
MWM5-03	979.11	979.11	979.10	7/22/2003	36.5	23.5	33.5	955.60	945.60	Sand
MWM5-04	979.55	979.91	979.91	7/22/2003	37	16	26	963.91	953.91	Sand/Silty Clay
M-16										
MWM16-03	960.92	961.26	961.26	7/21/2003	15	2	12	959.26	949.26	Sand
MWM16-04	980.20	980.52	980.73	7/21/2003	27	17	27	963.73	953.73	Sand/Silt
MWM16-05	980.96	981.05	981.12	7/21/2003	27	17	26	964.12	955.12	Sand/Silt/Silty Clay/Silt/Sand
MWM16-07	981.20	981.50	981.52	8/18/2003	37	22	32	959.52	949.52	Clay/Sand
MWM16-08	982.05	982.35	982.35	8/18/2003	32	18	28	964.35	954.35	Sand/Silt/Clay/Sand
MWM16-09	981.80	982.05	982.06	8/18/2003	37	2	30	980.06	952.06	Clay/Sand
M-25										
MWM25-02	980.06	980.28	980.28	7/21/2003	27	16	26	964.28	954.28	Silt/Sand
POWERTRAIN										
P-9										
MWP9-01	987.24	987.54	985.04	4/28/2003	8	3	8	982.04	977.04	Silty Sand/Silty Clay
MWP9-03	987.92	988.32	985.64	4/29/2003	27	15	25	970.64	960.64	Silt/Silty Sand/Silty Clay
MWP9-04	988.81	988.91	985.89	5/8/2003	27	13	23	972.89	962.89	Clay/Sand/Clay
P-10										
MWP10-01	987.51	987.97	984.93	5/1/2003	47	26	36	958.93	948.93	Silty Clay/Sand
MWP10-03	987.63	987.95	985.22	5/7/2003	37	27	37			Silty Sand/Sand
MWP10-05	988.74	989.09	986.31	5/7/2003	37	26	36	960.31	950.31	Silty Clay/Silty Sand
P-11										
MWP11-01	985.49	985.77	982.84	5/6/2003	27	9	19	973.84	963.84	Sand
MWP11-02	984.26	984.64	981.68	5/6/2003	27	9	19	972.68	962.68	Silt
MWP11-04	964.36	964.73	964.73	4/29/2003	27	10	20	954.73	944.73	Silty Clay/Silty Sand

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TABLE 3-1

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATON

SUBSURFACE STRATIGRAPHIC DATA SUMMARY

Well ID	TOC	Elevation P/Casing	Ground	Installation Date/Status	Total Depth	Screen Intake (ft bgs)		Screen Intake Elevation		Flow Zone
						Top	Bottom	Top	Bottom	
SWDF										
DP-01	--		939.14	10/3/2002	15					
DP-02	--		939.11	10/3/2002	15					
DP-03	--		939.42	10/3/2002	15					
DP-04	--		939.71	10/3/2002	15					
DP-05	--		939.78	10/3/2002	15					
DP-06	--		939.79	10/3/2002	15					
DP-07	--		939.81	10/3/2002	10					
DP-08	--		939.87	10/3/2002	15					
MW-01	949.95		947.93	10/4/2002	20					
MW-02	951.12		948.70	10/4/2002	20					
MW-03	948.40		948.70	10/4/2002	15					

Notes:
1. TOC - top of casing
2. P/Casing - Protective casing
3. ft bgs - feet below ground surface

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TABLE 3-2
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

AOIs W-8, W-9 AND M-2 GROUNDWATER ELEVATIONS

Well ID	Depth to Water feet bgs	Groundwater Elevation AMSL
AOI M2 (August 27, 2003)		
MWM2-01	13.13	950.65
MWM2-02	17.04	950.78
MWM2-03	16.98	950.87
MWM2-04	16.88	950.80
MWM2-05	16.35	950.62
MWM2-06	17.44	950.61*
MWM2-07	17.02	950.58
MWM2-08	--	967.56
MWM2-15	16.68	950.90
MWM2-16	16.84	950.86
MWM2-17	16.59	950.84
MWM2-18	16.88	950.71
MWM2-19	17.00	950.74
MWM2-20	16.60	950.78
MWM2-22	16.98	950.58
MWM2-23	17.02	950.59
MWM2-24	16.77	950.59
AOI W-8 (October 28, 2003)		
MWW8-03	31.76	942.77*
MWW8-04	8.90	961.60
MWW8-05	33.52	942.25*
MWW8-07	31.16	943.53*
MWW8-08	31.59	939.51*
MWW8-09	14.66	957.32*
MWW8-10	8.56	961.40
MWW8-11	7.43	962.91
MWW8-12	7.80	962.30
MWW8-13	19.87	950.35
MWW8-14	30.25	940.02*
MWW8-15	32.31	937.95*
MWW8-16	29.99	940.95*
RWW8-01	26.18	944.25*
RWW8-02	31.50	940.51*
AOI W-9 (October 27, 2003)		
MWW8-10	8.67	961.29
MWW8-05	13.52	954.69
MW43-99	15.34	953.74
MWD3	13.98	956.60
MW38-99	18.07	952.12
DW 22	24.02	946.48
MW 22	26.51	944.19
MW37-99	23.58	946.18
MW44-99	26.06	945.83
MWW1-05	30.66	942.56*
MW-19S	29.59	941.54
MWW9-01	--	969.60
MWW9-02	33.92	939.54*
MWW9-03	24.66	947.32
MWW9-05	26.72	947.07
MWW9-06	24.28	949.54
MWW9-07	17.89	952.70
TWW9-01	21.6	949.54

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Notes

1. feet bgs - feet below ground surface.
2. AMSL - Above mean sea level.
3. * - This water level was corrected to reflect the influence of the LNAPL present in this well.
4. A correction factor of 0.80 which represents the average LNAPL density/water density was used.

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TABLE 4-1

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

CONSTITUENTS OF CONCERN/SCREENING CRITERIA FOR AOIs

A: SOIL COC LIST

Chemical	RSVIC (mg/kg)	RPSIC (mg/kg)	RDC (mg/kg)	ISVIC (mg/kg)	IVSIC (mg/kg)	IPSIC (mg/kg)	IDC (mg/kg)
VOC							
Acetone	110,000	3.90E+08	23,000	110,000	160,000	1.70E+08	73,000
Benzene	1.6	380,000	180	8.4	45	470,000	400
1,1-Dichloroethane	230	3.3E+07	890	430	2,500	1.5.E+07	890
1,2-Dichloroethane	2.1	120,000	91	11	21	150,000	420
1,1-Dichloroethene	0.062	62,000	200	0.33	3.7	78,000	570
cis-1,2-Dichloroethene	22	2.30E+06	640	41	210	1.00E+06	640
Ethyl Benzene	87	1.00E+07	140	140	2,400	1.30E+07	140
Methylene Chloride	45	6.60E+06	1,300	240	700	8.30E+06	2,300
Tetrachloroethene	11	5.40E+06	88	60	600	6.80E+06	88
Toluene	250	2.70E+07	250	250	3,300	1.20E+07	250
Trichloroethene	7.1	1.80E+06	500	37	260	2.30E+06	500
1,1,1-Trichloroethane	250	6.70E+07	460	460	4,500	2.90E+07	460
1,1,2-Trichloroethane	4.6	190,000	180	24	57	250,000	840
Vinyl Chloride	0.27	350,000	3.8	2.8	29	890,000	34
SVOC							
2-4-Dimethylphenol	NA	4.70E+06	11,000	NA	NA	2.10E+06	36,000
Benzo(a)pyrene	NA	1,500	2	NA	NA	1,900	8
bis(2-Ethylhexyl)phthalate	NA	700,000	2,300	NA	NA	890,000	10,000
Butylbenzylphthalate	NA	4.70E+07	310	NA	NA	2.10E+07	310
Dibenz(a,h)anthracene	NA	NA	2	NA	NA	NA	8
Methylphenol (Cresol)	NA	6.70E+06	11,000	NA	NA	2.90E+06	36,000
Pentachlorophenol	NA	100,000	90	NA	NA	130,000	320
P/PCB							
PCBs (total)	3,000	5,200	4	13,000	810	6,500	16
INORGANIC							
Antimony	NA	13,000	180	NA	NA	5,900	670
Arsenic	NA	720	7.6	NA	NA	910	37
Barium	NA	330,000	37,000	NA	NA	150,000	130,000
Beryllium	NA	1,300	410	NA	NA	590	1,600
Cadmium	NA	1,700	550	NA	NA	2,200	2,100
Chromium Total	NA	330,000	790,000	NA	NA	150,000	1.00E+06
Cobalt	NA	13,000	2,600	NA	NA	5,900	9,000
Copper	NA	130,000	20,000	NA	NA	59,000	73,000
Cyanide (total)	NA	250	12	NA	NA	250	250
Iron	NA	NA	160,000	NA	NA	NA	580,000
Lead	NA	100,000	400	NA	NA	4,400	900
Manganese	NA	3,300	25,000	NA	NA	1,500	90,000
Nickel	NA	13,000	40,000	NA	NA	16,000	150,000
Selenium	NA	130,000	2,600	NA	NA	59,000	9,600
Thallium	NA	NA	35	NA	NA	NA	130
Vanadium	NA	NA	750	NA	NA	NA	5,500
CDD/F							
2,3,7,8-TCDD Equivalent	NA	0.071	0.00009	NA	NA	0.089	0.00099

Notes:

RSVIC - Residential Soil Volatilization to Indoor Air Inhalation Criteria

RVSIC - Residential Infinite Source Volatile Soil Inhalation Criteria

RPSIC - Residential Particulate Soil Inhalation Criteria

RDC - Residential Direct Contact

ISVIC - Industrial Soil Volatilization to Indoor Air Inhalation Criteria

IVSIC - Industrial Infinite Source Volatile Soil Inhalation Criteria

IPSIC - Industrial Particulate Soil Inhalation Criteria

IDC - Industrial Direct Contact

RDWC - Residential Drinking Water Criteria

IDWC - Industrial Drinking Water Criteria

RGVIC - Residential Groundwater Volatilization to Indoor Air Inhalation Criteria

IGVIC - Industrial Groundwater Volatilization to Indoor Air Inhalation Criteria

GCC - Groundwater Contact Criteria

NA - Not Applicable

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TABLE 4-1

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

CONSTITUENTS OF CONCERN/SCREENING CRITERIA FOR AOIs

B: GROUNDWATER COC LIST

Chemical	RDWC (mg/L)	IDWC (mg/L)	RGVIC (mg/L)	IGVIC (mg/L)	GCC (mg/L)
VOC					
Acetone	0.73	2.1	1,000,000	1,000,000	31,000
Benzene	0.005	0.005	5.6	35	11
1,1-Dichloroethane	0.88	2.5	1,000	2,300	2,400
1,2-Dichloroethane	0.005	0.005	9.6	59	19
1,1-Dichloroethene	0.007	0.007	0.2	1.3	11
cis-1,2-Dichloroethene	0.07	0.07	93	210	200
Ethyl Benzene	0.074	0.074	110	170	170
Methylene Chloride	0.005	0.005	220	1,400	220
Tetrachloroethene	0.005	0.005	25	170	12
Toluene	0.79	0.79	530	530	530
Trichloroethene	0.005	0.005	15	97	22
1,1,1-Trichloroethane	0.2	0.2	660	1,300	1,300
1,1,2-Trichloroethane	0.005	0.005	17	110	21
Vinyl Chloride	0.002	0.002	1.1	13	1
SVOC					
2-4-Dimethylphenol	0.37	1	NA	NA	520
Benzo(a)pyrene	0.005	0.005	NA	NA	0.002
bis(2-Ethylhexyl)phthalate	0.006	0.006	NA	NA	0.32
Butylbenzylphthalate	1.2	2.7	NA	NA	2.7
Dibenz(a,h)anthracene	5	5	NA	NA	5
Methylphenol (Cresol)	0.37	1	NA	NA	810
Pentachlorophenol	0.001	0.001	NA	NA	0.2
P/PCB					
PCBs (total)	0.0005	0.0005	0.045	0.045	0.0033
INORGANIC					
Antimony	0.006	0.006	NA	NA	68
Arsenic	0.05	0.05	NA	NA	4.3
Barium	2	2	NA	NA	14,000
Beryllium	0.004	0.004	NA	NA	290
Cadmium	0.005	0.005	NA	NA	190
Chromium Total	0.1	0.1	NA	NA	290,000
Cobalt	0.04	0.1	NA	NA	2,400
Copper	1.4	4.0	NA	NA	7,400
Cyanide (total)	0.2	0.2	NA	NA	57
Iron	300	300	NA	NA	58,000
Lead	0.004	0.004	NA	NA	NA
Manganese	0.05	0.05	NA	NA	9,100
Nickel	0.1	0.1	NA	NA	74,000
Selenium	0.05	0.05	NA	NA	970
Thallium	0.002	0.002	NA	NA	13
Vanadium	0.0045	0.062	NA	NA	970
CDD/F					
2,3,7,8-TCDD Equivalent	3.00E-08	3.00E-08	NA	NA	1.00E-08

Notes:

RSVIC - Residential Soil Volatilization to Indoor Air Inhalation Criteria

RVSIC - Residential Infinite Source Volatile Soil Inhalation Criteria

RPSIC - Residential Particulate Soil Inhalation Criteria

RDC - Residential Direct Contact

ISVIC - Industrial Soil Volatilization to Indoor Air Inhalation Criteria

IVSIC - Industrial Infinite Source Volatile Soil Inhalation Criteria

IPSIC - Industrial Particulate Soil Inhalation Criteria

IDC - Industrial Direct Contact

RDWC - Residential Drinking Water Criteria

IDWC - Industrial Drinking Water Criteria

RGVIC - Residential Groundwater Volatilization to Indoor Air Inhalation Criteria

IGVIC - Industrial Groundwater Volatilization to Indoor Air Inhalation Criteria

GCC - Groundwater Contact Criteria

NA - Not Applicable

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR W-1 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	92	51	2.50E-03	2.20E+00	2.00E-03	5.70E+01		1.1E+05	2.0E-05	1.6E+05	1.4E-05	1.7E+08	1.3E-08	7.3E+04	3.0E-05	1.1E+05	2.0E-05	1.3E+05	1.7E-05	3.9E+08	5.6E-09	2.3E+04	9.6E-05
VOC	Acetonitrile	75-05-8	D	10				5.30E-02	1.40E+01		8.8E+03		1.9E+03		1.8E+06		1.4E+04		4.8E+03		1.6E+03		4.0E+06		4.3E+03	
VOC	Acrolein	107-02-8	ID	10				5.30E-02	1.40E+01		7.6E-01		3.7E-01		5.9E+02		1.2E+04		4.1E-01		3.1E-01		1.3E+03		3.6E+03	
VOC	Acrylonitrile	107-13-1	B1	10				5.30E-02	1.40E+01		3.5E+01		1.7E+01		5.8E+04		7.4E+01		6.6E+00		5.0E+00		4.6E+04		1.6E+01	
VOC	Benzene	71-43-2	A	92	13	2.00E-03	7.20E-01	6.10E-04	5.70E+00		8.4E+00	8.6E-02	4.5E+01	1.6E-02	4.7E+05	1.5E-06	4.0E+02	1.8E-03	1.6E+00	4.5E-01	1.3E+01	5.5E-02	3.8E+05	1.9E-06	1.8E+02	4.0E-03
VOC	Bromodichloromethane	75-27-4	B2	92				1.10E-03	5.70E+00		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	92				1.40E-03	5.70E+00		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	92				1.60E-03	5.70E+00		1.6E+00		1.3E+01		1.5E+05		1.0E+03		8.6E-01		1.1E+01		3.3E+05		3.2E+02	
VOC	2-Butanone	78-93-3	ID	92	35	2.20E-03	2.30E+00	2.50E-03	5.70E+01		2.7E+04	8.5E-05	3.5E+04	6.6E-05	2.9E+07	7.9E-08	2.7E+04	8.5E-05	2.7E+04	8.5E-05	2.9E+04	7.9E-05	6.7E+07	3.4E-08	2.7E+04	8.5E-05
VOC	Carbon Disulfide	75-15-0		92	4	2.20E-03	9.60E-03	7.00E-04	5.70E+01		1.4E+02	6.9E-05	1.6E+03	6.0E-06	2.1E+07	4.6E-10	2.8E+02	3.4E-05	7.6E+01	1.3E-04	1.3E+03	7.4E-06	4.7E+07	2.0E-10	2.8E+02	3.4E-05
VOC	Carbon Tetrachloride	56-23-5	B2	92				9.00E-04	5.70E+00		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00		1.3E+05		9.6E+01	
VOC	2-Chloro-1,3-butadiene	126-99-8		10				5.30E-03	1.40E+00																	
VOC	3-Chloro-1-propene	107-05-1		10				1.10E-02	2.90E+00																	
VOC	Chlorobenzene	108-90-7	D	92	1	1.10E-01	1.10E-01	4.70E-04	5.70E+00		2.2E+02	5.0E-04	9.2E+02	1.2E-04	2.1E+06	5.2E-08	2.6E+02	4.2E-04	1.2E+02	9.2E-04	7.7E+02	1.4E-04	4.7E+06	2.3E-08	2.6E+02	4.2E-04
VOC	Chloroethane	75-00-3		92	3	2.20E-03	5.20E-03	2.10E-03	5.70E+00		9.5E+02	5.5E-06	3.6E+04	1.4E-07	2.9E+08	1.8E-11	9.5E+02	5.5E-06	9.5E+02	5.5E-06	3.0E+04	1.7E-07	6.7E+08	7.8E-12	9.5E+02	5.5E-06
VOC	Chloroform	67-66-3	B2	92				7.40E-04	5.70E+00		3.8E+01		1.5E+02		1.6E+06		1.5E+03		7.2E+00		4.5E+01		1.3E+06		1.2E+03	
VOC	Chloromethane	74-87-3	D	92				1.20E-03	5.70E+00		1.0E+01		1.2E+02		2.9E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	36	10	2.50E-03	1.10E+00	6.60E-04	2.40E-01		3.9E+02	2.8E-03	2.0E+03	5.5E-04	2.9E+06	4.2E-07	3.9E+02	2.8E-03	3.9E+02	2.8E-03	1.7E+03	6.5E-04	5.8E+06	1.9E-07	3.9E+02	2.8E-03
VOC	Cyclohexane	110-82-7	ID	36	10	2.20E-03	3.00E-01	9.40E-04	5.00E-01																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	46				1.40E-03	2.90E+00		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	92				9.90E-04	5.70E+00		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	46				1.10E-03	1.40E+00		3.6E+00		5.8E+00		1.8E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	Dibromomethane	74-95-3		10				5.30E-03	1.40E+00								2.0E+03								2.0E+03	
VOC	trans-1,4-Dichloro-2-butene	110-57-6		10				5.30E-03	1.40E+00																	
VOC	1,2-Dichlorobenzene	95-50-1	D	85	2	3.40E-03	4.50E-01	6.40E-04	5.70E+00		2.1E+02	2.1E-03	9.6E+02	4.7E-06	4.4E+07	1.0E-08	2.1E+02	2.1E-03	2.1E+02	2.1E-03	3.9E+04	1.2E-05	1.0E+08	4.5E-09	2.1E+02	2.1E-03
VOC	1,3-Dichlorobenzene	541-73-1	D	85	1	1.10E-01	1.10E-01	7.20E-04	5.70E+00								1.7E+02	6.5E-04							1.7E+02	6.5E-04
VOC	1,4-Dichlorobenzene	106-46-7	C	85	1	2.60E-03	2.60E-03	6.00E-04	5.70E+00		1.0E+02	2.6E-02	2.6E+02	1.0E-05	5.7E+05	4.6E-09	1.9E+03	1.4E-06	1.9E+01	1.4E-04	7.7E+01	3.4E-05	4.5E+05	5.8E-09	4.0E+02	6.5E-06
VOC	Dichlorodifluoromethane	75-71-8		46	1	1.40E-03	1.40E-03	9.90E-04	1.40E+00		1.7E+03	8.2E-07	6.3E+03	2.2E-08	1.5E+09	9.3E-13	1.0E+03	1.4E-06	9.0E+02	1.6E-06	5.3E+04	2.6E-08	3.3E+09	4.2E-13	1.0E+03	1.4E-06
VOC	1,1-Dichloroethane	75-34-3	C	92	4	1.85E-02	1.70E-01	5.20E-04	5.70E+00		4.3E+02	4.0E-04	2.1E+03	8.8E-05	1.5E+07	1.1E-08	8.9E+02	1.9E-04	2.3E+02	7.4E-04	2.1E+03	8.1E-05	3.3E+07	5.2E-09	8.9E+02	1.9E-04
VOC	1,2-Dichloroethane	107-06-2	B2	92				6.60E-04	5.70E+00		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00		1.2E+05		9.1E+01	
VOC	1,1-Dichloroethene	75-35-4	C	92				1.10E-03	5.70E+00		3.3E-01		3.7E+00		7.8E+04		5.7E+02		6.2E-02		1.1E+00		6.2E+04		2.0E+02	
VOC	cis-1,2-Dichloroethene	156-59-2	D	92	4	1.23E-02	1.40E+00	7.60E-04	5.70E+00		4.1E+01	3.4E-02	7.1E+02	8.7E-03	1.0E+06	1.4E-06	6.4E+02	2.2E-03	2.2E+01	6.4E-02	1.8E+02	7.8E-03	2.3E+06	6.1E-07	6.4E+02	2.2E-03
VOC	trans-1,2-Dichloroethene	156-60-5		92	1	1.80E-01	1.80E-01	6.60E-04	5.70E+00		4.3E+01	4.2E-03	3.3E+02	5.5E-04	2.1E+06	8.6E-08	1.4E+03	1.3E-04	2.3E+01	7.8E-03	2.8E+02	6.4E-04	4.7E+06	3.8E-08	1.4E+03	1.3E-04
VOC	1,2-Dichloropropane	78-87-5	B2	92				6.80E-04	5.70E+00		7.4E+00		3.0E+01		1.2E+05		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	92				7.80E-04	5.70E+00		5.4E+00		6.0E+01		5.9E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	1,4-Dioxane	123-91-1	B2	10				5.30E-01	1.40E+02						7.1E+05		2.4E+03						5.7E+05		5.3E+02	
VOC	Ethyl Benzene	100-41-4	D	92	23	2.10E-03	2.50E+01	5.50E-04	2.40E-01		1.4E+02	1.8E-01	2.4E+03	1.0E-02	1.3E+07	1.9E-06	1.4E+02	1.8E-01	8.7E+01	2.9E-01	7.2E+02	3.5E-02	1.0E+07	2.5E-06	1.4E+02	1.8E-01
VOC	Ethyl Methacrylate	97-63-2		4				5.65E-03	1.30E-02																	
VOC	2-Hexanone	591-78-6		92	3	2.50E-03	1.58E-02	1.50E-03	5.70E+01		1.8E+03	8.8E-06	1.3E+03	1.2E-05	1.2E+06	1.3E-08	2.5E+03	6.3E-06	9.9E+02	1.6E-05	1.1E+03	1.4E-05	2.7E+06	5.8E-09	2.5E+03	6.3E-06
VOC	Iodomethane	74-88-4		10				5.30E-03	1.40E+00																	
VOC	Isobutyl Alcohol	78-83-1		10				2.30E+00	6.30E+02		8.9E+03		9.5E+04		4.4E+07		8.9E+03		8.9E+03		7.9E+04		1.0E+08		8.9E+03	
VOC	Methacrylonitrile	126-98-7		10				2.10E-02	5.70E+00																	
VOC	Methyl Acetate	79-20-9		36	8	1.40E-01	3.40E+01	9.90E-04	5.00E-01																	
VOC	Methyl tert-butyl ether	1634-04-4		36				7.60E-04	1.30E+00		5.9E+03		3.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	92	8	3.00E-03	6.80E-01	1.70E-03	5.70E+01		2.7E+03	2.5E-04	5.3E+04	1.3E-05	6.0E+07	1.1E-08	2.7E+03	2.5E-04	2.7E+03	2.5E-04	4.5E+04	1.5E-05	1.4E+08	4.9E-09	2.7E+03	2.5E-04
VOC	Methylcyclohexane	108-87-2		36	15	6.40E-04	1.40E+00	5.50E-04	4.90E-01																	
VOC	Methylene Chloride	75-09-2	B2	92	11	2.40E-03	2.50E+01	1.20E-03	1.40E+00		2.4E+02	1.0E-01	7.0E+02	3.6E-02	8.3E+06	3.0E-06	2.3E+03	1.1E-02	4.5E+01	5.6E-01	2.1E+02	1.2E-01	6.6E+06	3.8E-06	1.3E+03	1.9E-02
VOC	Methylmethacrylate	80-62-6	E	10				5.30E-03	1.40E+00																	
VOC	Pentachloroethane	76-01-7		10	1	9.90E-02	9.90E-02	1.70E-01	3.00E+01																	
VOC	Propionitrile	107-12-0		10				2.10E-02	5.70E+00																	
VOC	Styrene	100-42-5		92				4.50E-04	5.70E+00		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,1,2-Tetrachloroethane	630-20-6		10				5.30E-03	1.40E+00		3.3E+01		1.2E+02		5.3E+05		4.4E+02		6.2E+00		3.6E+01		4.2E+05		4.4E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	92				1.60E-03	5.70E+00		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	92	12	2.30E-03	5.60E+00	1.10E-03	5.70E+00		6.0E+01	9.3E-02	6.0E+02	9.3E-03	6.8E+06	8.2E-07	8.8E+01	6.4E-02	1.1E+01	5.1E-01	1.8E+02	3.1E-02	5.4E+06	1.0E-06	8.8E+01	6.4E-02
VOC	Toluene	108-88-3	D	92	38	5.60E-04	4.20E+01	5.40E-04	2.50E-01		2.5E+02	1.7E-01	3.3E+03	1.3E-02	1.2E+07	3.5E-06	2.5E+02	1.7E-01	2.5E+02	1.7E-01	2.8E+03	1.5E-02	2.7E+07	1.6E-06	2.5E+02	1.7E-01
VOC	1,2,4-Trichlorobenzene	120-82-1	D	67				8.00E-04	1.10E+02		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	92	2	2.60E-03	3.90E-03	8.30E-04	5.70E+00		4.6E+02	8.5E-06	4.5E+03	8.7E-07	2.9E+07	1.3E-10	4.6E+02	8.5E-06	2.5E+02	1.6E-05	3.8E+03	1.0E-06	6.7E+07	5.8E-11	4.6E+02	8.5E-06
VOC	1,1,2-Trichloroethane	79-00-5	C	92				1.10E-03	5.70E+00		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01		1.9E+05		1.8E+02	
VOC	Trichloroethene	79-01-6	C-B2	92	5	4.90E-02	2.30E+00	6.90E-04	5.70E+00		3.7E+01	6.2E-02	2.6E+02	8.8E-03	2.3E+06	1.0E-06	5.0E+02	4.6E-03	7.1E+00	3.2E-01	7.8E+01	2.9E-02	1.8E+06	1.3E-06	5.0E+02	4.6E-03
VOC	Trichlorofluoromethane	75-69-4		46	2	1.40E-03	1.50E-03	9.90E-04	1.40E+00		5.6E+02	2.7E-06	1.1E+05	1.4E-08	1.7E+09	8.8E-13	5.6E+02	2.7E-06	5.6E+02	2.7E-06	9.2E+04	1.6E-08	3.8E+09	3.9E-13	5.6E+02	2.7E-06
VOC	1,2,3-Trichloropropane	96-18-4	B2	12				5.30E-03	1.40E+00								8.3E+02								8.3E+02	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		36	3	5.50E-03	8.90E-03	8.40E-04	3.20E-01		5.5E+02	1.6E-05	2.1E+05	4.2E-08	2.3E+09	3.9E-12	5.5E+02	1.6E-05	5.5E+02	1.6E-05	1.8E+05	4.9E-08	5.1E+09	1.7E-12	5.5E+02	1.6E-05
VOC	Vinyl Acetate	108-05-4		10				5.30E-02	1.40E+01		1.5E+03		2.0E+03		5.9E+06		2.4E+03		7.9E+02		1.7E+03		1.3E+07		2.4E+03	
VOC	Vinyl Chloride	75-01-4	A	92	1	9.50E-03	9.50E-03	1.30E-03	5.70E+00		2.8E+00	3.4E-03	2.9E+01	3.3E-04	8.9E+05	1.1E-08	3.4E+01	2.8E-04	2.7E-01	3.5E-02	4.2E+00	2.3E-03	3.5E+05	2.7E-08	3.8E+00	2.5E-03
VOC	Xylenes (total)	1330-20-7	ID	92	27	4.85E-03	1.50E+02	1.80E-03	1.00E-01		1.5E+02	1.0E+00	5.4E+04	2.8E-03	1.3E+08	1.2E-06	1.5E+02	1.0E+00	1.5E+02	1.0E+00	4.6E+04	3.3E-03	2.9E+08	5.2E-07	1.5E+02	1.0E+00
SVOC	Acenaphthene	83-32-9		68	16	2.40E-02	3.60E+01	1.50E-02	3.50E+01		3.5E+05	1.0E-04	9.7E+04	3.7E-04	6.2E+06	5.8E-06	1.3E+05	2.8E-04	1.9E+05	1.9E-04	8.1E+04	4.4E-04	1.4E+07	2.6E-06	4.1E+04	8.8E-04
SVOC	Acenaphthylene	208-96-8	D	68	2	5.80E-02	2.00E+00	2.30E-02	1.10E+02		3.0E+03	6.7E-04	2.7E+03	7.4E-04	1.0E+06	2.0E-06	5.2E+03	3.8E-04	1.6E+03	1.3E-03	2.2E+03	9.1E-04	2.3E+06	8.7E-07	1.6E+03	1.3E-03
SVOC	Acetophenone	98-86-2	D	46				2.10E-02	3.00E+01		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	2-Acetylaminofluorene	53-96-3		10				1.70E+00	3.00E+02																	
SVOC	4-Aminobiphenyl	92-67-1		10				9.00E-01	1.60E+02																	
SVOC	Aniline	62-53-3	B2	10				9.00E-01	6.10E+01						2.9E+04		1.5E+03						6.7E+04		3.3E+02	
SVOC	Anthracene	120-12-7	D	68	20	2.00E-02	2.10E+01	1.80E-02	3.00E+01		1.0E+06	2.1E-05	1.6E+06	1.3E-05	2.9E+07	7.2E-07	7.3E+05	2.9E-05	1.0E+06	2.1E-05	1.4E+06	1.5E-05	6.7E+07	3.1E-07	2.3E+05	9.1E-05
SVOC	Atrazine	1912-24-9		36	1	9.60E-02	9.60E-02	2.60E-02	1.90E+01								3.3E+02	2.9E-04							7.1E+01	1.4E-03
SVOC	Benzaldehyde	100-52-7		36				1.50E-02	1.90E+01																	
SVOC	Benzo(a)anthracene	56-55-3	B2	68	23	4.20E-02	1.50E+01	2.70E-02	1.10E+02								8.0E+01	1.9E-01							2.0E+01	7.5E-01
SVOC	Benzo(a)pyrene	50-32-8	B2	68	16	2.50E-02	8.60E+00	1.80E-02	1.10E+02						1.9E+03	4.5E-03	8.0E+00	**1.1E+00**					1.5E+03	5.7E-03	2.0E+00	**4.3E+00**
SVOC	Benzo(b)fluoranthene	205-99-2	B2	68	24	2.80E-02	1.10E+01	2.40E-02	1.10E+02								8.0E+01	1.4E-01							2.0E+01	5.5E-01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	68	19	2.10E-02	4.50E+00	1.90E-02	1.10E+02						3.5E+05	1.3E-05	7.0E+03	6.4E-04					8.0E+05	5.6E-06	2.5E+03	1.8E-03
SVOC	Benzo(k)fluoranthene	207-08-9	B2	68	12	3.60E-02	5.30E+00	1.90E-02	1.10E+02								8.0E+02	6.6E-03							2.0E+02	2.7E-02

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TABLE 4-6
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR W-1 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Benzyl Alcohol	100-51-6		10				6.90E-01	6.10E+01						1.5E+08		5.8E+03						3.3E+08		5.8E+03	
SVOC	Biphenyl	92-52-4	D	36	3	3.00E-01	3.40E+00	1.90E-02	1.90E+01																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	68				2.70E-02	1.10E+02																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	68				1.90E-02	1.10E+02		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	68	19	2.40E-02	7.60E+01	1.40E-02	3.50E+01						8.9E+05	8.5E-05	1.0E+04	7.6E-03					7.0E+05	1.1E-04	2.8E+03	2.7E-02
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	68				1.60E-02	1.10E+02																	
SVOC	2,sec-Butyl-4,6-dinitrophenol	88-85-7		10				1.10E-02	5.70E-02								1.4E+02								6.6E+01	
SVOC	Butylbenzylphthalate	85-68-7	C	68	24	9.40E-02	1.10E+03	2.50E-02	3.50E+01						2.1E+07	5.2E-05	3.1E+02	**3.5E+00**					4.7E+07	2.3E-05	3.1E+02	**3.5E+00**
SVOC	Caprolactam	105-60-2		36				2.90E-02	1.90E+01						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	67	8	2.10E-02	1.10E+01	2.00E-02	1.10E+02								2.4E+03	4.6E-03							5.3E+02	2.1E-02
SVOC	4-Chloro-3-methylphenol	59-50-7		68				2.00E-02	1.10E+02								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		68				2.10E-02	1.10E+02																	
SVOC	p-Chlorobenzilate	510-15-6		10				1.70E-01	3.00E+01																	
SVOC	2-Chloronaphthalene	91-58-7		68				1.80E-02	1.10E+02								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		68				1.90E-02	1.10E+02								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		68				1.80E-02	1.10E+02																	
SVOC	Chrysene	218-01-9	B2	68	28	4.70E-02	1.60E+01	2.60E-02	1.10E+02								8.0E+03	2.0E-03							2.0E+03	8.0E-03
SVOC	Diallate (total)	2303-16-4		10				3.50E-01	6.10E+01																	
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	68	7	1.80E-02	6.70E-01	2.20E-02	1.10E+02								8.0E+00	8.4E-02							2.0E+00	3.4E-01
SVOC	Dibenzofuran	132-64-9	D	68	15	2.20E-02	2.70E+01	1.80E-02	3.50E+01																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	68				1.90E-02	6.50E+02						8.5E+03		3.0E+01						6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		68				1.70E-02	1.10E+02						2.2E+06		1.8E+03						5.1E+06		6.6E+02	
SVOC	2,6-Dichlorophenol	87-65-0		13				1.70E-01	3.00E+01																	
SVOC	Diethylphthalate	84-66-2	D	68				2.00E-02	1.10E+02						1.5E+06		7.4E+02						3.3E+06		7.4E+02	
SVOC	Dimethoate	60-51-5		10				3.90E-02	2.30E+01																	
SVOC	p-(Dimethylamino)azobenzene	60-11-7		10				3.50E-01	6.10E+01																	
SVOC	7,12-Dimethylbenz(a)anthracene	57-97-6		10				3.50E-01	6.10E+01																	
SVOC	3,3'-Dimethylbenzidine	119-93-7		10				1.70E-01	3.00E+01																	
SVOC	a,a-Dimethylphenethylamine	122-09-8		10				9.00E-01	1.60E+02																	
SVOC	2,4-Dimethylphenol	105-67-9		68	8	2.40E-02	7.20E+01	1.90E-02	3.50E+01						2.1E+06	3.4E-05	3.6E+04	2.0E-03					4.7E+06	1.5E-05	1.1E+04	6.5E-03
SVOC	Dimethylphthalate	131-11-3	D	68				1.80E-02	1.10E+02						1.5E+06		7.9E+02						3.3E+06		7.9E+02	
SVOC	Di-n-butylphthalate	84-74-2	D	68	4	5.70E+00	4.80E+02	2.40E-02	1.10E+02						1.5E+06	3.2E-04	7.6E+02	6.3E-01					3.3E+06	1.5E-04	7.6E+02	6.3E-01
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		68				5.00E-02	5.60E+02								2.6E+02								7.9E+01	
SVOC	1,3-Dinitrobenzene	99-65-0		10				1.70E-01	3.00E+01																	
SVOC	2,4-Dinitrophenol	51-28-5		68				4.90E-02	5.60E+02																	
SVOC	2,4-Dinitrotoluene	121-14-2	B2	68				2.30E-02	1.10E+02						2.0E+04		2.2E+02						1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	68				1.60E-02	1.10E+02																	
SVOC	Di-n-octylphthalate	117-84-0		68	1	3.70E+01	3.70E+01	5.70E-02	3.50E+01								2.0E+04	1.9E-03							6.9E+03	5.4E-03
SVOC	Diphenylamine	122-39-4		10				1.70E-01	3.00E+01																	
SVOC	Disulfoton	298-04-4		10				3.90E-02	2.30E+01																	
SVOC	Ethylmethanesulfonate	62-50-0		10				1.70E-01	3.00E+01																	
SVOC	Famphur	52-85-7		10				3.90E-02	2.30E+01																	
SVOC	Fluoranthene	206-44-0	D	68	32	4.60E-02	8.20E+01	1.90E-02	3.00E+01		1.0E+06	8.2E-05	8.9E+05	9.2E-05	4.1E+06	2.0E-05	1.3E+05	6.3E-04	1.0E+06	8.2E-05	7.4E+05	1.1E-04	9.3E+06	8.8E-06	4.6E+04	1.8E-03
SVOC	Fluorene	86-73-7	D	68	22	4.00E-02	3.60E+01	1.60E-02	3.00E+01		1.0E+06	3.6E-05	1.5E+05	2.4E-04	4.1E+06	8.8E-06	8.7E+04	4.1E-04	5.8E+05	6.2E-05	1.3E+05	2.8E-04	9.3E+06	3.9E-06	2.7E+04	1.3E-03
SVOC	Hexachlorobenzene	118-74-1	B2	68				2.30E-02	1.10E+02		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	68				1.70E-02	1.10E+02		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	67				1.00E-02	1.10E+02		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	67				1.80E-02	1.10E+02		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Hexachlorophene	70-30-4		2				1.80E-01	1.80E-01																	
SVOC	Hexachloropropene	1888-71-7		10				1.70E+00	3.00E+02																	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	67	14	2.70E-02	3.70E+00	2.30E-02	1.10E+02								8.0E+01	4.6E-02							2.0E+01	1.9E-01
SVOC	Isodrin	465-73-6		10				3.50E-03	1.90E-01																	
SVOC	Isophorone	78-59-1	C	67				2.30E-02	1.10E+02						8.2E+06		2.4E+03						1.2E+07		2.4E+03	
SVOC	Isosafrole (total)	120-58-1		10				3.50E-01	6.10E+01																	
SVOC	Kepone	143-50-0	B2	10				3.50E-02	3.10E+00																	
SVOC	Methapyrilene	91-80-5		10				9.00E-01	1.60E+02																	
SVOC	Methyl parathion	298-00-0		10				3.90E-02	2.30E+01								1.8E+02								5.6E+01	
SVOC	3-Methylcholanthrene	56-49-5		10				3.50E-01	6.10E+01																	
SVOC	Methylmethanesulfonate	66-27-3		10				1.70E-01	3.00E+01																	
SVOC	2-Methylnaphthalene	91-57-6	ID	67	37	2.40E-02	1.50E+02	2.00E-02	2.10E+01								2.6E+04	5.8E-03							8.1E+03	1.9E-02
SVOC	Methylphenol (total)	1319-77-3		67	12	8.60E-02	1.25E+02	2.20E-02	3.50E+01						2.9E+06	4.3E-05	3.6E+04	3.5E-03					6.7E+06	1.9E-05	1.1E+04	1.1E-02
SVOC	Naphthalene	91-20-3	C	67	29	2.20E-02	9.70E+01	2.00E-02	2.10E+01		4.7E+02	2.1E-01	3.5E+02	2.8E-01	8.8E+04	1.1E-03	5.2E+04	1.9E-03	2.5E+02	3.9E-01	3.0E+02	3.2E-01	2.0E+05	4.9E-04	1.6E+04	6.1E-03
SVOC	1,4-Naphthoquinone	130-15-4		10				9.00E-01	1.60E+02																	
SVOC	1-Naphthylamine	134-32-7		10				1.70E-01	3.00E+01																	
SVOC	2-Naphthylamine	91-59-8		10				1.70E-01	3.00E+01																	
SVOC	5-Nitro-o-toluidine	99-55-8		10				3.50E-01	6.10E+01																	
SVOC	2-Nitroaniline	88-74-4		67				1.40E-02	5.60E+02																	
SVOC	3-Nitroaniline	99-09-2	C	67				2.30E-02	5.60E+02																	
SVOC	4-Nitroaniline	100-01-6	C	67				1.80E-02	5.60E+02																	
SVOC	Nitrobenzene	98-95-3	D	67				2.50E-02	1.10E+02		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		67				2.20E-02	1.10E+02								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		67				5.50E-02	5.60E+02																	
SVOC	4-Nitroquinoline-1-oxide	56-57-5		10				1.70E+00	3.00E+02																	
SVOC	N-Nitrosodi-n-butylamine	924-16-3		10				1.70E-01	3.00E+01																	

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TABLE 4-6
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR W-1 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	N-Nitrosodiethylamine	55-18-5		10				1.70E-01	3.00E+01																	
SVOC	N-Nitrosodimethylamine	62-75-9		10				1.70E-01	3.00E+01																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	67				2.00E-02	1.10E+02								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	67				1.60E-02	1.10E+02						2.0E+03		5.4E+00							1.6E+03		1.2E+00	
SVOC	N-Nitrosomethylethylamine	10595-95-6		10				1.70E-01	3.00E+01																	
SVOC	N-Nitrosopiperidine	100-75-4		10				1.70E-01	3.00E+01																	
SVOC	N-Nitrosopyrrolidine	930-55-2		10				1.70E-01	3.00E+01																	
SVOC	N-Nitrosomorpholine	59-89-2		10				1.70E-01	3.00E+01																	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	67				2.80E-02	1.10E+02																	
SVOC	Parathion	56-38-2		10				3.90E-02	2.30E+01																	
SVOC	Pentachlorobenzene	608-93-5		10				1.70E-01	3.00E+01								1.9E+02								1.9E+02	
SVOC	Pentachloronitrobenzene	82-68-8		10				9.00E-01	1.60E+02		2.2E+02		2.8E+02		1.5E+05		5.5E+03		1.2E+02		2.3E+02		3.3E+05		1.7E+03	
SVOC	Pentachlorophenol	87-86-5	B2	67				6.30E-02	1.00E+03						1.3E+05		3.2E+02						1.0E+05		9.0E+01	
SVOC	Phenacetin	62-44-2		10				3.50E-01	6.10E+01																	
SVOC	Phenanthrene	85-01-8	D	67	44	2.30E-02	1.10E+02	2.50E-02	3.70E-01		5.1E+03	2.2E-02	1.9E+02	5.8E-01	2.9E+03	3.8E-02	5.2E+03	2.1E-02	2.8E+03	3.9E-02	1.6E+02	6.9E-01	6.7E+03	1.6E-02	1.6E+03	6.9E-02
SVOC	Phenol	108-95-2	ID	67	9	5.90E-02	1.40E+02	1.90E-02	3.50E+01						1.8E+07	7.8E-06	1.2E+04	1.2E-02					4.0E+07	3.5E-06	1.2E+04	1.2E-02
SVOC	p-Phenylene diamine	106-50-3		10				1.70E+00	3.00E+02																	
SVOC	Phorate	298-02-2		10				3.90E-02	2.30E+01																	
SVOC	2-Picoline	109-06-8		10				3.50E-01	6.10E+01																	
SVOC	Pronamide	23950-58-5		10				3.50E-01	6.10E+01																	
SVOC	Pyrene	129-00-0	D	67	35	3.20E-02	5.00E+01	2.50E-02	3.00E+01		1.0E+06	5.0E-05	7.8E+05	6.4E-05	2.5E+06	1.7E-05	8.4E+04	6.0E-04	1.0E+06	5.0E-05	6.5E+05	7.7E-05	6.7E+06	7.5E-06	2.9E+04	1.7E-03
SVOC	Pyridine	110-86-1		10				3.50E-01	6.10E+01		2.0E+00		9.8E+00		1.9E+05		3.7E+01		1.1E+00		8.2E+00		2.3E+05		3.7E+01	
SVOC	Safrole (total)	94-59-7		10				3.50E-01	6.10E+01																	
SVOC	Sulfotepp	3689-24-5		10				3.90E-02	2.30E+01																	
SVOC	1,2,4,5-Tetrachlorobenzene	95-94-3		10				1.70E-01	3.00E+01								2.5E+05								7.7E+04	
SVOC	2,3,4,6-Tetrachlorophenol	58-90-2		10				9.00E-01	1.60E+02																	
SVOC	Thionazin	297-97-2		10				3.90E-02	2.30E+01																	
SVOC	o-Toluidine	95-53-4		10				3.50E-01	6.10E+01																	
SVOC	2,4,5-Trichlorophenol	95-95-4		67				1.60E-02	2.20E+02						1.6E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	67				2.00E-02	1.10E+02						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
SVOC	O,O,O-Triethyl phosphorothioate	126-68-1		10				3.90E-02	2.30E+01																	
SVOC	1,3,5-Trinitrobenzene	99-35-4		10				9.00E-01	1.60E+02																	
P/PCB	PCBs (total)	1336-36-3	B2	74	34	8.04E-02	9.28E+01	1.00E-02	3.80E+00		1.6E+04	5.8E-03	3.7E+02	1.1E-01	6.5E+03	1.4E-02	1.6E+01	**5.8E+00**	3.0E+03	3.1E-02	2.4E+02	3.9E-01	5.2E+03	1.8E-02	4.0E+00	**2.3E+01**
P/PCB	Aldrin	309-00-2	B2	30				1.10E-02	3.85E-01		7.1E+03		2.0E+02		8.0E+02		4.3E+00		1.3E+03		5.8E+01		6.4E+02		1.0E+00	
P/PCB	alpha-BHC	319-84-6	B2	30				1.10E-02	3.85E-01		1.6E+02		4.1E+01		2.1E+03		1.2E+01		3.0E+01		1.2E+01		1.7E+03		2.6E+00	
P/PCB	beta-BHC	319-85-7	C	30				1.10E-02	3.85E-01						7.4E+03		2.5E+01						5.9E+03		5.4E+00	
P/PCB	delta-BHC	319-86-8	D	30				1.10E-02	3.85E-01																	
P/PCB	gamma-BHC	58-89-9	B2-C	30				1.10E-02	3.85E-01								4.2E+01								8.3E+00	
P/PCB	Chlordane (total)	57-74-9	B2	30				5.30E-03	3.85E-01		5.9E+04		4.2E+03		2.1E+04		1.5E+02		1.1E+04		1.2E+03		3.1E+04		3.1E+01	
P/PCB	4,4'-DDD	72-54-8	B2	30				1.10E-02	7.70E-01						5.6E+04		4.0E+02						4.4E+04		9.5E+01	
P/PCB	4,4'-DDE	72-55-9	B2	30				1.10E-02	7.70E-01						4.0E+04		1.9E+02						3.2E+04		4.5E+01	
P/PCB	4,4'-DDT	50-29-3	B2	30				1.10E-02	7.70E-01						4.0E+04		2.8E+02						3.2E+04		5.7E+01	
P/PCB	Dieldrin	60-57-1	B2	30				1.10E-02	7.70E-01		7.2E+02		6.4E+01		8.5E+02		4.7E+00		1.4E+02		1.9E+01		6.8E+02		1.1E+00	
P/PCB	Endosulfan	115-29-7		30				1.10E-02	7.70E-01								4.4E+03								1.4E+03	
P/PCB	Endosulfan sulfate	1031-07-8		30				1.10E-02	7.70E-01								4.4E+03								1.4E+03	
P/PCB	Endrin	72-20-8	D	30				1.10E-02	7.70E-01								1.9E+02								6.5E+01	
P/PCB	Endrin aldehyde	7421-93-4		30				1.10E-02	7.70E-01								1.9E+02								6.5E+01	
P/PCB	Endrin ketone	53494-70-5		27				1.10E-02	7.70E-01								1.9E+02								6.5E+01	
P/PCB	Heptachlor	76-44-8	B2	30				1.10E-02	3.85E-01		1.9E+03		2.1E+02		3.0E+03		2.3E+01		3.5E+02		6.2E+01		2.4E+03		5.6E+00	
P/PCB	Heptachlor epoxide	1024-57-3	B2	30				1.10E-02	3.85E-01						1.5E+03		9.5E+00						1.2E+03		3.1E+00	
P/PCB	Methoxychlor	72-43-5	D	30				2.70E-02	3.85E+00								5.6E+03								1.9E+03	
P/PCB	Toxaphene	8001-35-2	B2	30				9.00E-02	1.95E+01						1.2E+04		8.5E+01						9.7E+03		2.0E+01	
INORG	Aluminum	7429-90-5	D	31	31	4.38E+02	1.08E+04										3.7E+05	2.9E-02							5.0E+04	2.2E-01
INORG	Antimony	7440-36-0		67	35	3.24E-01	1.74E+03	1.20E-01	2.08E+01						5.9E+03	2.9E-01	6.7E+02	**2.6E+00**					1.3E+04	1.3E-01	1.8E+02	**9.7E+00**
INORG	Arsenic	7440-38-2	A	67	67	6.03E-01	4.43E+01			1.3E+01					9.1E+02	3.4E-02	3.7E+01	8.4E-01					7.2E+02	4.3E-02	7.6E+00	**4.1E+00**
INORG	Barium	7440-39-3	D	67	67	4.66E+00	5.72E+03			1.1E+02					1.5E+05	3.7E-02	1.3E+05	4.3E-02					3.3E+05	1.7E-02	3.7E+04	1.5E-01
INORG	Beryllium	7440-41-7	B1	67	29	2.50E-02	1.05E+00	2.41E-02	1.72E+00	1.5E+00					5.9E+02		1.6E+03						1.3E+03		4.1E+02	
INORG	Cadmium	7440-43-9	B1	67	56	3.68E-02	1.56E+01	2.99E-02	5.89E-01	1.2E+00					2.2E+03	6.5E-03	2.1E+03	6.9E-03					1.7E+03	8.5E-03	5.5E+02	2.6E-02
INORG	Chromium (total)	7440-47-3		67	67	1.69E+00	1.66E+03			4.9E+01					2.4E+02	**6.7E+00**	9.2E+03	1.8E-01					2.6E+02	**6.2E+00**	2.5E+03	6.4E-01
INORG	Chromium III	16065-83-1	D	12	12	1.35E+01	3.77E+02								1.5E+05	2.5E-03	1.0E+06	3.8E-04					3.3E+05	1.1E-03	7.9E+05	4.8E-04
INORG	Chromium VI	18540-29-9	A	12				3.80E-01	4.46E-01						2.4E+02		9.2E+03						2.6E+02		2.5E+03	
INORG	Cobalt	7440-48-4	B1	66	50	9.70E-01	6.44E+01	2.65E+00	4.50E+00	1.7E+01					5.9E+03	8.0E-03	9.0E+03	5.2E-03					1.3E+04	3.6E-03	2.6E+03	1.8E-02
INORG	Copper	7440-50-8	D	67	67	2.79E+00	4.70E+03			3.2E+01					5.9E+04	7.9E-02	7.3E+04	6.4E-02					1.3E+05	3.6E-02	2.0E+04	2.3E-01
INORG	Cyanide (total)	57-12-5	D	56	29	2.32E-01	4.10E+00	1.78E-01	5.89E-01						2.5E+02	1.6E-02	2.5E+02	1.6E-02					2.5E+02	1.6E-02	1.2E+01	3.4E-01
INORG	Iron	7439-89-6	D	31	31	2.06E+03	3.76E+05										5.8E+05	6.5E-01							1.6E+05	**2.4E+00**
INORG	Lead	7439-92-1	B2	66	65	7.11E-01	3.95E+03	9.00E-01	9.00E-01	4.9E+01					4.4E+04	8.9E-02	9.0E+02	**4.3E+00**					1.0E+05	3.9E-02	4.0E+02	**9.8E+00**
INORG	Manganese	7439-96-5	D	79	79	3.24E+01	7.26E+03			5.1E+02					1.5E+03	**4.5E+00**	9.0E+04	7.5E-02					3.3E+03	**2.0E+00**	2.5E+04	2.7E-01
INORG	Mercury	7439-97-6	D	67	31	1.19E-02	4.65E+00	8.80E-03	9.00E-02	1.3E-01	8.9E+01	5.1E-02	6.2E+01	7.3E-02	8.8E+03	5.1E-04	5.8E+02	7.8E-03	4.8E+01	9.4E-02	5.2E+01	8.7E-02	2.0E+04	2.3E-04	1.6E+02	2.8E-02
INORG	Nickel	7440-02-0	A	67	67	3.06E+00	6.01E+02			3.0E+01					1.6E+04	3.6E-02	1.5E+05	3.8E-03					1.3E+04	4.4E-02	4.0E+04	1.4E-02
INORG	Selenium	7782-49-2	D	67	13	2.22E-01	7.67E+00	1.62E-01	1.14E+01	4.1E-01					5.9E+04	1.2E-04	9.6E+03	7.6E-04					1.3E+05	5.6E-05	2.6E+03	2.8E-03
INORG	Silver	7440-22-4	D	67	13	2.75E-01	6.96E+01	5.23E-02	5.20E+00						2.9E+03	2.4E-02	9.0E+03	7.7E-03					6.7E+03	1.0E-02	2.5E+03	2.8E-02
INORG	Thallium	7440-28-0		67	20	2.72E-01	7.72E+00	2.61E-01	2.28E+01								1.3E+02	5.9E-02							3.5E+01	2.2E-01
INORG	Tin	7440-31-5		8	3	2.70E+01	8.40E+01	1.14E+01	1.20E+01																	
INORG	Vanadium	7440-62-2		67	66	4.23E+00	6.14E+01	1.80E+00	1.80E+00	3.3E+01							5.5E+03	5.2E-03							7.5E+02	3.8E-02

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TABLE 4-6
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR W-1 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
INORG	Zinc	7440-66-6	D	67	67	3.96E+00	7.40E+03			1.9E+02							6.3E+05	1.1E-02								1.7E+05	4.2E-02
HERB	2,4-D	94-75-7		10				1.10E-01	1.70E-01						2.9E+06		8.6E+03						6.7E+06		2.5E+03	
HERB	2,4,5-T	93-76-5		10				2.70E-02	2.70E-01																	
HERB	2,4,5-TP	93-72-1		10				2.70E-02	3.00E-02								5.5E+03								1.7E+03	
CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	B2	27	26	2.57E-07	1.89E-03	8.32E-07	8.32E-07						8.9E-02	2.1E-02	9.9E-04	**1.9E+00**					7.1E-02	2.7E-02	9.0E-05	**2.1E+01**

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the Chlordane isomers (alpha and beta) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-7a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	38	10	6.80E-04	3.30E-02	5.10E-04	1.00E-02	1.0E+06	3.3E-08	3.1E+04	1.1E-06	7.3E-01	4.5E-02
Shallow	VOC	Benzene	71-43-2	T	A	38	17	1.60E-04	9.10E-02	1.60E-04	1.00E-03	3.5E+01	2.6E-03	1.1E+01	8.3E-03	5.0E-03	**1.8E+01**
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	38				1.70E-04	1.00E-03	3.7E+01		1.4E+01		1.0E-01	
Shallow	VOC	Bromoform	75-25-2	T	B2	38				1.80E-04	1.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	37				2.00E-04	1.00E-03	9.0E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	38	16	4.30E-04	7.30E-03	4.10E-04	1.00E-02	2.4E+05	3.0E-08	2.4E+05	3.0E-08	1.3E+01	5.6E-04
Shallow	VOC	Carbon Disulfide	75-15-0	T		38	1	1.30E-03	1.30E-03	2.00E-04	1.00E-03	5.5E+02	2.4E-06	1.2E+03	1.1E-06	8.0E-01	1.6E-03
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	38				1.20E-04	1.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	38				1.40E-04	1.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		38	11	5.30E-04	4.50E-02	2.60E-04	1.00E-03	5.7E+03	7.9E-06	4.4E+02	1.0E-04	4.3E-01	1.0E-01
Shallow	VOC	Chloroform	67-66-3	T	B2	38	1	8.10E-04	8.10E-04	1.40E-04	1.00E-03	1.8E+02	4.5E-06	1.5E+02	5.4E-06	1.0E-01	8.1E-03
Shallow	VOC	Chloromethane	74-87-3	T	D	38	4	1.30E-04	1.70E-04	4.30E-04	1.00E-03	4.5E+01	3.8E-06	4.9E+02	3.5E-07	2.6E-01	6.5E-04
Shallow	VOC	Cumene	98-82-8	T	D	38	12	1.70E-04	8.60E-03	1.20E-04	1.00E-03	5.6E+01	1.5E-04	5.6E+01	1.5E-04	8.0E-01	1.1E-02
Shallow	VOC	Cyclohexane	110-82-7	T	ID	38	11	1.70E-04	2.90E-02	1.60E-04	1.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	38				6.20E-04	2.10E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	38				2.60E-04	1.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	38				2.20E-04	1.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	38	1	4.80E-04	2.00E-03	1.10E-04	1.00E-03	1.6E+02	1.3E-05	1.6E+02	1.3E-05	6.0E-01	3.3E-03
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	38				1.50E-04	1.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	38				1.70E-04	1.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		38				2.60E-04	2.00E-03	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	38	11	1.60E-04	2.30E-02	1.60E-04	1.00E-03	2.3E+03	1.0E-05	2.4E+03	9.6E-06	8.8E-01	2.6E-02
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	38	1	4.50E-04	4.50E-04	2.10E-04	1.00E-03	5.9E+01	7.6E-06	1.9E+01	2.4E-05	5.0E-03	9.0E-02
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	38				2.40E-04	1.00E-03	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	38	7	4.50E-04	3.90E-03	2.20E-04	5.00E-04	2.1E+02	1.9E-05	2.0E+02	2.0E-05	7.0E-02	5.6E-02
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		38	3	1.80E-04	2.10E-03	1.50E-04	5.00E-04	2.0E+02	1.1E-05	2.2E+02	9.5E-06	1.0E-01	2.1E-02
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	38				1.70E-04	1.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	38				2.70E-04	1.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	38	8	2.40E-04	1.90E-02	1.20E-04	1.00E-03	1.7E+02	1.1E-04	1.7E+02	1.1E-04	7.0E-01	2.7E-02
Shallow	VOC	2-Hexanone	591-78-6	T		38				4.60E-04	1.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		38				4.10E-04	1.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		38	3	8.40E-04	7.10E-03	1.30E-04	5.00E-03	4.7E+04	1.5E-07	6.1E+02	1.2E-05	2.4E-01	3.0E-02
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	37	4	2.88E-04	1.60E-03	2.30E-04	1.00E-02	2.0E+04	8.0E-08	1.3E+04	1.2E-07	1.8E+00	8.9E-04
Shallow	VOC	Methylcyclohexane	108-87-2	T		38	11	3.30E-04	7.60E-03	1.50E-04	1.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	38	5	5.00E-04	7.00E-03	2.90E-04	1.00E-03	1.4E+03	5.0E-06	2.2E+02	3.2E-05	5.0E-03	**1.4E+00**
Shallow	VOC	Styrene	100-42-5	T		38				1.50E-04	1.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	38				2.50E-04	1.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	37	3	4.30E-04	2.60E-03	2.30E-04	1.00E-03	1.7E+02	1.5E-05	1.2E+01	2.2E-04	5.0E-03	5.2E-01
Shallow	VOC	Toluene	108-88-3	T	D	38	14	2.50E-04	1.50E-02	1.80E-04	1.00E-03	5.3E+02	2.8E-05	5.3E+02	2.8E-05	1.0E+00	1.5E-02
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	38	1	9.20E-04	9.20E-04	1.70E-04	1.00E-03	3.0E+02	3.1E-06	1.9E+01	4.8E-05	7.0E-02	1.3E-02
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	38				1.50E-04	1.00E-03	1.3E+03		1.3E+03		2.0E-01	
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	38				3.00E-04	1.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	38	6	2.40E-04	1.40E-03	1.40E-04	1.00E-03	9.7E+01	1.4E-05	2.2E+01	6.4E-05	5.0E-03	2.8E-01
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		38	1	6.60E-04	6.60E-04	2.80E-04	1.00E-03	1.1E+03	6.0E-07	1.1E+03	6.0E-07	2.6E+00	2.5E-04
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		38				3.20E-04	1.10E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	38	9	1.80E-04	1.80E-02	1.50E-04	1.00E-03	1.3E+01	1.4E-03	1.0E+00	1.8E-02	2.0E-03	**9.0E+00**
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	38	10	6.90E-04	2.00E-01	3.30E-04	1.00E-03	1.9E+02	1.1E-03	1.9E+02	1.1E-03	1.0E+01	2.0E-02
Shallow	SVOC	Acenaphthene	83-32-9	T		38	1	2.40E-03	2.40E-03	8.00E-04	2.50E-02	4.2E+00	5.7E-04	4.2E+00	5.7E-04	1.3E+00	1.8E-03
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	38				7.10E-04	2.50E-02	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	38	1	2.70E-03	2.70E-03	2.60E-03	5.00E-02	6.1E+03	4.4E-07	6.1E+03	4.4E-07	1.5E+00	1.8E-03
Shallow	SVOC	Anthracene	120-12-7	T	D	38				6.80E-04	2.50E-02	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		38				2.50E-03	2.50E-02			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		38				2.80E-03	5.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	38				1.80E-04	2.50E-02			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	38				7.30E-04	2.50E-02			2.0E-03		5.0E-03	
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	38				9.40E-04	2.50E-02			2.0E-03		2.0E-03	

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TABLE 4-7a
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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	38				8.50E-04	2.50E-02			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	38				8.40E-04	2.50E-02			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	38				2.60E-03	5.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	38				8.70E-04	2.50E-02						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	36				9.70E-04	2.50E-02	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	38	2	2.70E-03	4.10E-03	2.70E-03	2.50E-02			3.2E-01	1.3E-02	6.0E-03	6.8E-01
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	38				8.80E-04	2.50E-02						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	38				8.80E-04	5.00E-02			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		38				2.50E-03	5.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	38	2	1.50E-03	2.80E-03	8.20E-04	5.00E-02			7.4E+00	3.8E-04	8.5E-02	3.3E-02
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		37				9.90E-04	2.50E-02			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		37				6.10E-04	5.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		38				8.50E-04	2.50E-02			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		38				1.90E-03	2.50E-02			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		38				7.90E-04	2.50E-02						
Shallow	SVOC	Chrysene	218-01-9	T	B2	38				7.50E-04	2.50E-02			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	38				7.90E-04	2.50E-02			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	38	1	1.80E-03	1.80E-03	1.10E-03	2.50E-02						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	36				9.30E-04	1.00E-01			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		38				8.50E-04	5.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	38				6.50E-04	2.50E-02			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		37	3	1.90E-03	1.10E-02	8.50E-04	2.50E-02			5.2E+02	2.1E-05	3.7E-01	3.0E-02
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	38				7.60E-04	2.50E-02			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	38	3	1.35E-03	4.50E-03	6.70E-04	2.50E-02			1.1E+01	2.1E-04	8.8E-01	2.6E-03
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		38				1.30E-03	1.00E-01			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		38				3.00E-03	1.00E-01						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	38				7.90E-04	2.50E-02			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	38				5.70E-04	2.50E-02						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		38				1.10E-03	2.50E-02			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	38	1	9.90E-04	9.90E-04	8.10E-04	2.50E-02	2.1E-01	4.7E-03	2.1E-01	4.7E-03	2.1E-01	4.7E-03
Shallow	SVOC	Fluorene	86-73-7	T	D	38	1	2.20E-03	2.20E-03	1.00E-03	2.50E-02	2.0E+00	1.1E-03	2.0E+00	1.1E-03	8.8E-01	2.5E-03
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	38				7.40E-04	2.50E-02	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	36				7.30E-04	2.50E-02	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	35				1.10E-03	2.50E-02	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	38				7.40E-04	2.50E-02	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	38				6.30E-04	2.50E-02			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	38				6.30E-04	2.50E-02			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	38	6	8.50E-04	6.10E-03	6.40E-04	2.50E-02			2.5E+01	2.4E-04	2.6E-01	2.3E-02
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		38	1	2.16E-02	2.16E-02	1.30E-03	2.50E-02			8.1E+02	2.7E-05	3.7E-01	5.8E-02
Shallow	SVOC	Naphthalene	91-20-3	T	C	37	4	6.20E-03	1.30E-02	7.50E-04	2.50E-02	3.1E+01	4.2E-04	3.1E+01	4.2E-04	5.2E-01	2.5E-02
Shallow	SVOC	2-Nitroaniline	88-74-4	T		38				7.00E-04	1.00E-01						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	37				7.10E-04	1.00E-01						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	37				1.30E-03	1.00E-01						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	38				8.10E-04	2.50E-02	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		38				2.10E-03	2.50E-02			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		38				1.90E-03	1.00E-01						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	38				1.40E-03	2.50E-02			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	38				6.70E-04	2.50E-02			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	38				7.80E-04	2.50E-02						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	38				2.40E-03	2.50E-02			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	38				8.20E-04	2.50E-02	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	38	1	1.90E-02	1.90E-02	2.60E-03	2.50E-02			2.9E+04	6.6E-07	4.4E+00	4.3E-03
Shallow	SVOC	Pyrene	129-00-0	T	D	38				1.10E-03	2.50E-02	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		38				1.90E-03	2.50E-02			1.7E+02		7.3E-01	
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	37				1.70E-03	2.50E-02			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	12	1	5.22E-04	5.22E-04	8.20E-05	4.00E-04	4.5E-02	1.2E-02	3.3E-03	1.6E-01	5.0E-04	1.0E+00

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TABLE 4-7a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	41	8	3.67E-04	4.59E-03	8.20E-05	4.00E-04	4.5E-02	1.0E-01	3.3E-03	**1.4E+00**	5.0E-04	**9.2E+00**
Shallow	INORG	Antimony	7440-36-0	D		28	4	5.80E-03	7.90E-03	2.20E-03	2.50E-02			6.8E+01	1.2E-04	6.0E-03	**1.3E+00**
Shallow	INORG	Antimony	7440-36-0	T		38	5	2.60E-03	8.60E-03	2.20E-03	2.50E-02			6.8E+01	1.3E-04	6.0E-03	**1.4E+00**
Shallow	INORG	Arsenic	7440-38-2	D	A	28	19	4.00E-03	2.69E-02	3.90E-03	1.00E-02			4.3E+00	6.3E-03	5.0E-02	5.4E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	38	26	2.10E-03	2.64E-02	2.10E-03	1.00E-02			4.3E+00	6.1E-03	5.0E-02	5.3E-01
Shallow	INORG	Barium	7440-39-3	D	D	28	28	5.63E-02	4.07E+00					1.4E+04	2.9E-04	2.0E+00	**2.0E+00**
Shallow	INORG	Barium	7440-39-3	T	D	38	38	3.50E-02	4.57E+00					1.4E+04	3.3E-04	2.0E+00	**2.3E+00**
Shallow	INORG	Beryllium	7440-41-7	D	B1	28	1	7.50E-04	7.50E-04	5.40E-04	1.00E-03			2.9E+02	2.6E-06	4.0E-03	1.9E-01
Shallow	INORG	Beryllium	7440-41-7	T	B1	38				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	28	4	3.00E-04	6.90E-04	2.80E-04	5.00E-03			1.9E+02	3.6E-06	5.0E-03	1.4E-01
Shallow	INORG	Cadmium	7440-43-9	T	B1	38	7	2.20E-04	1.10E-03	2.80E-04	5.00E-03			1.9E+02	5.8E-06	5.0E-03	2.2E-01
Shallow	INORG	Chromium (total)	7440-47-3	D		28	3	1.80E-03	8.50E-03	1.40E-03	1.00E-02			4.6E+02	1.8E-05	1.0E-01	8.5E-02
Shallow	INORG	Chromium (total)	7440-47-3	T		38	5	1.40E-03	3.05E-02	1.40E-03	1.00E-02			4.6E+02	6.6E-05	1.0E-01	3.1E-01
Shallow	INORG	Cobalt	7440-48-4	D	B1	28	9	1.30E-03	2.50E-03	5.60E-03	2.00E-02			2.4E+03	1.5E-06	4.0E-02	8.8E-02
Shallow	INORG	Cobalt	7440-48-4	T	B1	38	13	7.60E-04	6.60E-03	5.60E-04	2.00E-02			2.4E+03	2.8E-06	4.0E-02	1.7E-01
Shallow	INORG	Copper	7440-50-8	D	D	28	2	5.50E-03	5.60E-03	4.20E-03	5.00E-03			7.4E+03	7.6E-07	1.4E+00	4.0E-03
Shallow	INORG	Copper	7440-50-8	T	D	38	3	2.30E-03	2.22E-02	1.70E-03	5.00E-03			7.4E+03	3.0E-06	1.4E+00	1.6E-02
Shallow	INORG	Cyanide (total)	57-12-5	T	D	33	2	2.00E-02	1.75E-02	1.70E-03	2.00E-02			5.7E+01	3.1E-04	2.0E-01	8.8E-02
Shallow	INORG	Lead	7439-92-1	D	B2	28				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	38	7	1.30E-03	2.71E-02	1.60E-03	3.00E-03					4.0E-03	**6.8E+00**
Shallow	INORG	Manganese	7439-96-5	D	D	28	27	4.72E-02	9.52E-01	9.00E-04	9.00E-04			9.1E+03	1.0E-04	8.6E-01	**1.1E+00**
Shallow	INORG	Manganese	7439-96-5	T	D	38	38	3.30E-02	1.22E+00					9.1E+03	1.3E-04	8.6E-01	**1.4E+00**
Shallow	INORG	Mercury	7439-97-6	D	D	28	6	6.00E-05	1.30E-04	6.90E-05	2.00E-04	5.6E-02	2.3E-03	5.6E-02	2.3E-03	2.0E-03	6.5E-02
Shallow	INORG	Mercury	7439-97-6	T	D	38	6	6.73E-05	1.30E-04	6.90E-05	2.00E-04	5.6E-02	2.1E-03	5.6E-02	2.1E-03	2.0E-03	6.0E-02
Shallow	INORG	Nickel	7440-02-0	D	A	28	19	2.40E-03	1.59E-02	2.20E-03	2.00E-02			7.4E+04	2.1E-07	1.0E-01	1.6E-01
Shallow	INORG	Nickel	7440-02-0	T	A	38	21	2.60E-03	1.94E-02	2.20E-03	2.00E-02			7.4E+04	2.6E-07	1.0E-01	1.9E-01
Shallow	INORG	Selenium	7782-49-2	D	D	28				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	38	1	4.90E-03	4.90E-03	4.50E-03	5.00E-03			9.7E+02	5.1E-06	5.0E-02	9.8E-02
Shallow	INORG	Silver	7440-22-4	D	D	28				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	38	1	1.50E-03	1.50E-03	9.80E-04	5.00E-03			1.5E+03	1.0E-06	3.4E-02	4.4E-02
Shallow	INORG	Thallium	7440-28-0	D		28	6	4.30E-05	9.10E-03	1.80E-05	1.00E-02			1.3E+01	7.0E-04	2.0E-03	**4.6E+00**
Shallow	INORG	Thallium	7440-28-0	T		38	4	1.80E-05	1.02E-02	1.80E-05	1.00E-02			1.3E+01	7.8E-04	2.0E-03	**5.1E+00**
Shallow	INORG	Vanadium	7440-62-2	D		28	4	1.00E-03	2.45E-02	8.20E-04	1.00E-02			9.7E+02	2.5E-05	4.5E-03	**5.4E+00**
Shallow	INORG	Vanadium	7440-62-2	T		38	8	8.40E-04	4.84E-02	6.70E-04	1.00E-02			9.7E+02	5.0E-05	4.5E-03	**1.1E+01**
Shallow	INORG	Zinc	7440-66-6	D	D	28	2	1.56E-02	2.09E-02	1.20E-02	2.00E-02			1.1E+05	1.9E-07	2.4E+00	8.7E-03
Shallow	INORG	Zinc	7440-66-6	T	D	38	6	1.85E-02	3.82E-02	1.20E-02	2.00E-02			1.1E+05	3.5E-07	2.4E+00	1.6E-02
Shallow	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	D	B2	4	3	1.99E-09	3.03E-09	4.57E-09	4.57E-09			1.0E-08	3.0E-01	3.0E-08	1.0E-01
Shallow	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	31	15	1.63E-09	2.16E-08	2.34E-09	3.99E-08			1.0E-08	**2.2E+00**	3.0E-08	7.2E-01

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The concentrations for the Target Dioxin congeners were used to calculate a 2,3,7,8-TCDD Equivalent, using EPA 1998 TEFs, before comparing to the Screening Levels for 2,3,7,8-TCDD.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 3-4.7
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	VOC	Acetone	67-64-1	T	ID	11	5	4.50E-02	3.10E+00	5.10E-04	3.70E-01	2.1E+00	**1.5E+00**	7.3E-01	**4.2E+00**
Deep	VOC	Benzene	71-43-2	T	A	11	2	5.60E-04	4.50E-03	1.60E-04	1.20E-01	5.0E-03	9.0E-01	5.0E-03	9.0E-01
Deep	VOC	Bromodichloromethane	75-27-4	T	B2	10				1.70E-04	4.00E-02	1.0E-01		1.0E-01	
Deep	VOC	Bromoform	75-25-2	T	B2	11				1.80E-04	1.20E-01	1.0E-01		1.0E-01	
Deep	VOC	Bromomethane	74-83-9	T	D	10				2.00E-04	1.00E-01	2.9E-02		1.0E-02	
Deep	VOC	2-Butanone	78-93-3	T	ID	11	1	9.60E-04	9.60E-04	4.10E-04	4.00E-01	3.8E+01	2.5E-05	1.3E+01	7.4E-05
Deep	VOC	Carbon Disulfide	75-15-0	T		11	1	9.40E-03	9.40E-03	2.00E-04	8.00E-02	2.3E+00	4.1E-03	8.0E-01	1.2E-02
Deep	VOC	Carbon Tetrachloride	56-23-5	T	B2	11				1.20E-04	1.20E-01	5.0E-03		5.0E-03	
Deep	VOC	Chlorobenzene	108-90-7	T	D	11				1.10E-04	1.30E-01	1.0E-01		1.0E-01	
Deep	VOC	Chloroethane	75-00-3	T		11				2.60E-04	9.70E-02	1.7E+00		4.3E-01	
Deep	VOC	Chloroform	67-66-3	T	B2	11	1	1.60E-04	1.60E-04	3.50E-04	1.20E-01	1.0E-01	1.6E-03	1.0E-01	1.6E-03
Deep	VOC	Chloromethane	74-87-3	T	D	11				1.30E-04	1.60E-01	1.1E+00		2.6E-01	
Deep	VOC	Cumene	98-82-8	T	D	11				1.20E-04	1.30E-01	2.3E+00		8.0E-01	
Deep	VOC	Cyclohexane	110-82-7	T	ID	11				1.30E-04	1.10E-01				
Deep	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	11				6.20E-04	2.70E-01	2.0E-04		2.0E-04	
Deep	VOC	Dibromochloromethane	124-48-1	T	C	11				1.60E-04	1.20E-01	1.0E-01		1.0E-01	
Deep	VOC	1,2-Dibromoethane	106-93-4	T	B2	11				2.20E-04	1.10E-01	1.0E-03		1.0E-03	
Deep	VOC	1,2-Dichlorobenzene	95-50-1	T	D	11				1.10E-04	1.30E-01	6.0E-01		6.0E-01	
Deep	VOC	1,3-Dichlorobenzene	541-73-1	T	D	11				1.50E-04	1.30E-01	1.9E-02		6.6E-03	
Deep	VOC	1,4-Dichlorobenzene	106-46-7	T	C	11				1.70E-04	1.30E-01	7.5E-02		7.5E-02	
Deep	VOC	Dichlorodifluoromethane	75-71-8	T		11				2.60E-04	1.60E-01	4.8E+00		1.7E+00	
Deep	VOC	1,1-Dichloroethane	75-34-3	T	C	11				1.60E-04	1.00E-01	2.5E+00		8.8E-01	
Deep	VOC	1,2-Dichloroethane	107-06-2	T	B2	11				2.10E-04	9.30E-02	5.0E-03		5.0E-03	
Deep	VOC	1,1-Dichloroethene	75-35-4	T	C	11				2.40E-04	4.00E-02	7.0E-03		7.0E-03	
Deep	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	10				2.20E-04	2.00E-02	7.0E-02		7.0E-02	
Deep	VOC	trans-1,2-Dichloroethene	156-60-5	T		11				1.50E-04	1.10E-01	1.0E-01		1.0E-01	
Deep	VOC	1,2-Dichloropropane	78-87-5	T	B2	11				1.70E-04	1.40E-01	5.0E-03		5.0E-03	
Deep	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	10				3.50E-04	1.20E-01	3.5E-02		8.5E-03	
Deep	VOC	Ethyl Benzene	100-41-4	T	D	10				1.20E-04	1.40E-01	7.0E-01		7.0E-01	
Deep	VOC	2-Hexanone	591-78-6	T		11				4.60E-04	4.00E-01	2.9E+00		1.0E+00	
Deep	VOC	Methyl Acetate	79-20-9	T		11				4.10E-04	4.00E-01				
Deep	VOC	Methyl tert-butyl ether	1634-04-4	T		11				1.30E-04	2.00E-01	6.9E-01		2.4E-01	
Deep	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8	1	3.20E-04	3.20E-04	2.60E-04	4.00E-01	5.2E+00	6.2E-05	1.8E+00	1.8E-04
Deep	VOC	Methylcyclohexane	108-87-2	T		11				1.50E-04	1.40E-01				
Deep	VOC	Methylene Chloride	75-09-2	T	B2	11	1	1.60E-03	1.60E-03	2.90E-04	9.70E-02	5.0E-03	3.2E-01	5.0E-03	3.2E-01
Deep	VOC	Styrene	100-42-5	T		11				1.50E-04	1.20E-01	1.0E-01		1.0E-01	
Deep	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	11				2.50E-04	1.20E-01	3.5E-02		8.5E-03	
Deep	VOC	Tetrachloroethene	127-18-4	T	C-B2	10				4.20E-04	1.40E-01	5.0E-03		5.0E-03	
Deep	VOC	Toluene	108-88-3	T	D	11				1.80E-04	1.30E-01	1.0E+00		1.0E+00	
Deep	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	11				1.70E-04	1.30E-01	7.0E-02		7.0E-02	
Deep	VOC	1,1,1-Trichloroethane	71-55-6	T	D	11				1.50E-04	1.30E-01	2.0E-01		2.0E-01	
Deep	VOC	1,1,2-Trichloroethane	79-00-5	T	C	11				3.00E-04	1.20E-01	5.0E-03		5.0E-03	
Deep	VOC	Trichloroethene	79-01-6	T	C-B2	11				1.40E-04	1.40E-01	5.0E-03		5.0E-03	
Deep	VOC	Trichlorofluoromethane	75-69-4	T		11				2.80E-04	1.80E-01	7.3E+00		2.6E+00	
Deep	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		11				3.20E-04	1.10E-01	1.7E+02		1.7E+02	
Deep	VOC	Vinyl Chloride	75-01-4	T	A	11				1.50E-04	1.20E-01	2.0E-03		2.0E-03	
Deep	VOC	Xylenes (total)	1330-20-7	T	ID	11				3.30E-04	1.50E-01	1.0E+01		1.0E+01	
Deep	SVOC	Acenaphthene	83-32-9	T		11				8.00E-04	5.00E-03	3.8E+00		1.3E+00	
Deep	SVOC	Acenaphthylene	208-96-8	T	D	11				7.10E-04	5.00E-03	1.5E-01		5.2E-02	
Deep	SVOC	Acetophenone	98-86-2	T	D	11				2.60E-03	1.00E-02	4.4E+00		1.5E+00	
Deep	SVOC	Anthracene	120-12-7	T	D	11				6.80E-04	5.00E-03	4.3E-02		4.3E-02	
Deep	SVOC	Atrazine	1912-24-9	T		11				2.50E-03	5.00E-03	3.0E-03		3.0E-03	
Deep	SVOC	Benzaldehyde	100-52-7	T		11				2.80E-03	1.00E-02				
Deep	SVOC	Benzo(a)anthracene	56-55-3	T	B2	11				7.00E-04	5.00E-03	8.5E-03		2.1E-03	
Deep	SVOC	Benzo(a)pyrene	50-32-8	T	B2	11				7.30E-04	5.00E-03	5.0E-03		5.0E-03	

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TABLE 3-47

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	11				9.40E-04	5.00E-03	2.0E-03		2.0E-03	
Deep	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	11				8.50E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	11				8.40E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	Biphenyl	92-52-4	T	D	11				2.60E-03	1.00E-02				
Deep	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	11				8.70E-04	5.00E-03				
Deep	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	11				7.70E-04	5.00E-03	8.3E-03		2.0E-03	
Deep	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	11	1	2.90E-03	2.90E-03	2.70E-03	5.00E-03	6.0E-03	4.8E-01	6.0E-03	4.8E-01
Deep	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	11				8.80E-04	5.00E-03				
Deep	SVOC	Butylbenzylphthalate	85-68-7	T	C	11				8.30E-04	5.00E-03	2.7E+00		1.2E+00	
Deep	SVOC	Caprolactam	105-60-2	T		11				2.50E-03	1.00E-02	1.7E+01		5.8E+00	
Deep	SVOC	Carbazole	86-74-8	T	B2	11				8.20E-04	1.00E-02	3.5E-01		8.5E-02	
Deep	SVOC	4-Chloro-3-methylphenol	59-50-7	T		11				9.90E-04	5.00E-03	4.2E-01		1.5E-01	
Deep	SVOC	4-Chloroaniline	106-47-8	T		11				6.10E-04	1.00E-02				
Deep	SVOC	2-Chloronaphthalene	91-58-7	T		11				8.50E-04	5.00E-03	5.2E+00		1.8E+00	
Deep	SVOC	2-Chlorophenol	95-57-8	T		11				1.00E-03	5.00E-03	1.3E-01		4.5E-02	
Deep	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		11				9.90E-04	5.00E-03				
Deep	SVOC	Chrysene	218-01-9	T	B2	11				7.50E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	11				7.90E-04	5.00E-03	2.0E-03		2.0E-03	
Deep	SVOC	Dibenzofuran	132-64-9	T	D	11				1.10E-03	5.00E-03				
Deep	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	11				9.30E-04	2.00E-02	4.3E-03		1.1E-03	
Deep	SVOC	2,4-Dichlorophenol	120-83-2	T		11				8.50E-04	1.00E-02	2.1E-01		7.3E-02	
Deep	SVOC	Diethylphthalate	84-66-2	T	D	11	1	7.10E-04	7.10E-04	6.50E-04	5.00E-03	1.6E+01	4.4E-05	5.5E+00	1.3E-04
Deep	SVOC	2,4-Dimethylphenol	105-67-9	T		11				8.50E-04	5.00E-03	1.0E+00		3.7E-01	
Deep	SVOC	Dimethylphthalate	131-11-3	T	D	11				7.60E-04	5.00E-03	2.1E+02		7.3E+01	
Deep	SVOC	Di-n-butylphthalate	84-74-2	T	D	11				6.70E-04	5.00E-03	2.5E+00		8.8E-01	
Deep	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		11				1.30E-03	2.00E-02	2.0E-02		2.0E-02	
Deep	SVOC	2,4-Dinitrophenol	51-28-5	T		11				3.00E-03	2.00E-02				
Deep	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	11				7.90E-04	5.00E-03	3.2E-02		7.7E-03	
Deep	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	11				5.70E-04	5.00E-03				
Deep	SVOC	Di-n-octylphthalate	117-84-0	T		11				1.10E-03	5.00E-03	3.8E-01		1.3E-01	
Deep	SVOC	Fluoranthene	206-44-0	T	D	11				8.10E-04	5.00E-03	2.1E-01		2.1E-01	
Deep	SVOC	Fluorene	86-73-7	T	D	11				1.00E-03	5.00E-03	2.0E+00		8.8E-01	
Deep	SVOC	Hexachlorobenzene	118-74-1	T	B2	11				7.40E-04	5.00E-03	1.0E-03		1.0E-03	
Deep	SVOC	Hexachlorobutadiene	87-68-3	T	C	11				7.30E-04	5.00E-03	4.2E-02		1.5E-02	
Deep	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	10				1.10E-03	5.00E-03	5.0E-02		5.0E-02	
Deep	SVOC	Hexachloroethane	67-72-1	T	C	11				7.40E-04	5.00E-03	2.1E-02		7.3E-03	
Deep	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	11				6.30E-04	5.00E-03	2.0E-03		2.0E-03	
Deep	SVOC	Isophorone	78-59-1	T	C	11				6.30E-04	5.00E-03	3.1E+00		7.7E-01	
Deep	SVOC	2-Methylnaphthalene	91-57-6	T	ID	11				6.40E-04	5.00E-03	7.5E-01		2.6E-01	
Deep	SVOC	Methylphenol (total)	1319-77-3	T		11				1.30E-03	5.00E-03	1.0E+00		3.7E-01	
Deep	SVOC	Naphthalene	91-20-3	T	C	11				7.50E-04	5.00E-03	1.5E+00		5.2E-01	
Deep	SVOC	2-Nitroaniline	88-74-4	T		11				7.00E-04	2.00E-02				
Deep	SVOC	3-Nitroaniline	99-09-2	T	C	11				7.10E-04	2.00E-02				
Deep	SVOC	4-Nitroaniline	100-01-6	T	C	11				1.30E-03	2.00E-02				
Deep	SVOC	Nitrobenzene	98-95-3	T	D	11				8.10E-04	5.00E-03	9.6E-03		3.4E-03	
Deep	SVOC	2-Nitrophenol	88-75-5	T		11				2.10E-03	5.00E-03	5.8E-02		2.0E-02	
Deep	SVOC	4-Nitrophenol	100-02-7	T		11				1.90E-03	2.00E-02				
Deep	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	11				1.40E-03	5.00E-03	1.1E+00		2.7E-01	
Deep	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	11				6.70E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	11				7.80E-04	5.00E-03				
Deep	SVOC	Pentachlorophenol	87-86-5	T	B2	11				2.40E-03	5.00E-03	1.0E-03		1.0E-03	
Deep	SVOC	Phenanthrene	85-01-8	T	D	11				8.20E-04	5.00E-03	1.5E-01		5.2E-02	
Deep	SVOC	Phenol	108-95-2	T	ID	11	1	8.80E-03	8.80E-03	2.60E-03	5.00E-03	1.3E+01	6.8E-04	4.4E+00	2.0E-03
Deep	SVOC	Pyrene	129-00-0	T	D	11				1.10E-03	5.00E-03	1.4E-01		1.4E-01	
Deep	SVOC	2,4,5-Trichlorophenol	95-95-4	T		11				1.20E-03	5.00E-03	2.1E+00		7.3E-01	

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TABLE 3-7
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	11				1.70E-03	5.00E-03	4.7E-01		1.2E-01	
Deep	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	5.0E-04		5.0E-04	
Deep	P/PCB	PCBs (total)	1336-36-3	T	B2	11				8.20E-05	4.00E-04	5.0E-04		5.0E-04	
Deep	INORG	Antimony	7440-36-0	D		5	1	2.30E-03	2.30E-03	2.20E-03	2.50E-02	6.0E-03	3.8E-01	6.0E-03	3.8E-01
Deep	INORG	Antimony	7440-36-0	T		11				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
Deep	INORG	Arsenic	7440-38-2	D	A	5	2	4.40E-03	7.10E-03	3.90E-03	1.00E-02	5.0E-02	1.4E-01	5.0E-02	1.4E-01
Deep	INORG	Arsenic	7440-38-2	T	A	11	7	4.40E-03	1.45E-02	3.90E-03	1.00E-02	5.0E-02	2.9E-01	5.0E-02	2.9E-01
Deep	INORG	Barium	7440-39-3	D	D	5	5	1.15E-01	3.73E-01			2.0E+00	1.9E-01	2.0E+00	1.9E-01
Deep	INORG	Barium	7440-39-3	T	D	11	11	1.26E-01	4.58E-01			2.0E+00	2.3E-01	2.0E+00	2.3E-01
Deep	INORG	Beryllium	7440-41-7	D	B1	5				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Beryllium	7440-41-7	T	B1	11				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Cadmium	7440-43-9	D	B1	5				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	INORG	Cadmium	7440-43-9	T	B1	11				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	INORG	Chromium (total)	7440-47-3	D		5	1	2.30E-03	2.30E-03	1.40E-03	1.00E-02	1.0E-01	2.3E-02	1.0E-01	2.3E-02
Deep	INORG	Chromium (total)	7440-47-3	T		11	8	4.30E-03	9.10E-03	1.40E-03	1.00E-02	1.0E-01	9.1E-02	1.0E-01	9.1E-02
Deep	INORG	Cobalt	7440-48-4	D	B1	5	1	2.40E-03	2.40E-03	2.30E-03	2.00E-02	1.0E-01	2.4E-02	4.0E-02	6.0E-02
Deep	INORG	Cobalt	7440-48-4	T	B1	11	5	7.60E-04	2.20E-03	7.40E-04	2.00E-02	1.0E-01	2.2E-02	4.0E-02	5.5E-02
Deep	INORG	Copper	7440-50-8	D	D	5				4.20E-03	5.00E-03	4.0E+00		1.4E+00	
Deep	INORG	Copper	7440-50-8	T	D	11				1.70E-03	5.00E-03	4.0E+00		1.4E+00	
Deep	INORG	Lead	7439-92-1	D	B2	5				2.50E-03	3.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Lead	7439-92-1	T	B2	11	1	1.60E-03	1.60E-03	1.60E-03	3.00E-03	4.0E-03	4.0E-01	4.0E-03	4.0E-01
Deep	INORG	Manganese	7439-96-5	D	D	5	4	3.45E-02	7.03E-02	9.00E-04	9.00E-04	2.5E+00	2.8E-02	8.6E-01	8.2E-02
Deep	INORG	Manganese	7439-96-5	T	D	11	8	2.81E-02	7.12E-02	6.80E-04	9.00E-04	2.5E+00	2.8E-02	8.6E-01	8.3E-02
Deep	INORG	Mercury	7439-97-6	D	D	5	1	7.20E-05	7.20E-05	6.90E-05	6.90E-05	2.0E-03	3.6E-02	2.0E-03	3.6E-02
Deep	INORG	Mercury	7439-97-6	T	D	11				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
Deep	INORG	Nickel	7440-02-0	D	A	5	1	6.40E-03	6.40E-03	2.20E-03	2.00E-02	1.0E-01	6.4E-02	1.0E-01	6.4E-02
Deep	INORG	Nickel	7440-02-0	T	A	11	7	3.00E-03	9.90E-03	2.20E-03	2.00E-02	1.0E-01	9.9E-02	1.0E-01	9.9E-02
Deep	INORG	Selenium	7782-49-2	D	D	5				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
Deep	INORG	Selenium	7782-49-2	T	D	11				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
Deep	INORG	Silver	7440-22-4	D	D	5				1.50E-03	5.00E-03	9.8E-02		3.4E-02	
Deep	INORG	Silver	7440-22-4	T	D	11				9.80E-04	5.00E-03	9.8E-02		3.4E-02	
Deep	INORG	Thallium	7440-28-0	D		5				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
Deep	INORG	Thallium	7440-28-0	T		11				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
Deep	INORG	Vanadium	7440-62-2	D		5				8.20E-04	1.00E-02	6.2E-02		4.5E-03	
Deep	INORG	Vanadium	7440-62-2	T		11				6.70E-04	1.00E-02	6.2E-02		4.5E-03	
Deep	INORG	Zinc	7440-66-6	D	D	5	1	2.36E-02	2.36E-02	1.20E-02	2.00E-02	5.0E+00	4.7E-03	2.4E+00	9.8E-03
Deep	INORG	Zinc	7440-66-6	T	D	11	1	1.65E-02	1.65E-02	1.20E-02	2.00E-02	5.0E+00	3.3E-03	2.4E+00	6.9E-03
Intermediate	VOC	Acetone	67-64-1	T	ID	4	1	3.80E-02	3.80E-02	5.10E-04	7.30E-03	2.1E+00	1.8E-02	7.3E-01	5.2E-02
Intermediate	VOC	Benzene	71-43-2	T	A	4				1.60E-04	2.30E-03	5.0E-03		5.0E-03	
Intermediate	VOC	Bromodichloromethane	75-27-4	T	B2	4				1.70E-04	2.40E-03	1.0E-01		1.0E-01	
Intermediate	VOC	Bromoform	75-25-2	T	B2	4				1.80E-04	2.60E-03	1.0E-01		1.0E-01	
Intermediate	VOC	Bromomethane	74-83-9	T	D	3				2.00E-04	2.90E-03	2.9E-02		1.0E-02	
Intermediate	VOC	2-Butanone	78-93-3	T	ID	4				4.10E-04	5.90E-03	3.8E+01		1.3E+01	
Intermediate	VOC	Carbon Disulfide	75-15-0	T		4				2.00E-04	2.90E-03	2.3E+00		8.0E-01	
Intermediate	VOC	Carbon Tetrachloride	56-23-5	T	B2	4				1.20E-04	1.70E-03	5.0E-03		5.0E-03	
Intermediate	VOC	Chlorobenzene	108-90-7	T	D	4				1.40E-04	2.00E-03	1.0E-01		1.0E-01	
Intermediate	VOC	Chloroethane	75-00-3	T		4				2.60E-04	3.70E-03	1.7E+00		4.3E-01	
Intermediate	VOC	Chloroform	67-66-3	T	B2	4	1	1.70E-04	1.70E-04	3.50E-04	2.00E-03	1.0E-01	1.7E-03	1.0E-01	1.7E-03
Intermediate	VOC	Chloromethane	74-87-3	T	D	4	1	2.10E-04	2.10E-04	4.90E-04	1.90E-03	1.1E+00	1.9E-04	2.6E-01	8.1E-04
Intermediate	VOC	Cumene	98-82-8	T	D	4				1.20E-04	1.70E-03	2.3E+00		8.0E-01	
Intermediate	VOC	Cyclohexane	110-82-7	T	ID	4				1.30E-04	1.90E-03				
Intermediate	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	4				6.20E-04	8.90E-03	2.0E-04		2.0E-04	
Intermediate	VOC	Dibromochloromethane	124-48-1	T	C	4				2.60E-04	3.70E-03	1.0E-01		1.0E-01	
Intermediate	VOC	1,2-Dibromoethane	106-93-4	T	B2	4				2.20E-04	3.10E-03	1.0E-03		1.0E-03	
Intermediate	VOC	1,2-Dichlorobenzene	95-50-1	T	D	4				1.10E-04	1.60E-03	6.0E-01		6.0E-01	

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DATA SUMMARY FOR AOI W-01 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Intermediate	VOC	1,3-Dichlorobenzene	541-73-1	T	D	4				1.50E-04	2.10E-03	1.9E-02		6.6E-03	
Intermediate	VOC	1,4-Dichlorobenzene	106-46-7	T	C	4				1.70E-04	2.40E-03	7.5E-02		7.5E-02	
Intermediate	VOC	Dichlorodifluoromethane	75-71-8	T		4				2.60E-04	3.70E-03	4.8E+00		1.7E+00	
Intermediate	VOC	1,1-Dichloroethane	75-34-3	T	C	4				1.60E-04	2.30E-03	2.5E+00		8.8E-01	
Intermediate	VOC	1,2-Dichloroethane	107-06-2	T	B2	4				2.10E-04	3.00E-03	5.0E-03		5.0E-03	
Intermediate	VOC	1,1-Dichloroethene	75-35-4	T	C	4				2.40E-04	3.40E-03	7.0E-03		7.0E-03	
Intermediate	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4				2.20E-04	3.10E-03	7.0E-02		7.0E-02	
Intermediate	VOC	trans-1,2-Dichloroethene	156-60-5	T		4				1.50E-04	2.10E-03	1.0E-01		1.0E-01	
Intermediate	VOC	1,2-Dichloropropane	78-87-5	T	B2	4				1.70E-04	2.40E-03	5.0E-03		5.0E-03	
Intermediate	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	4				2.70E-04	3.90E-03	3.5E-02		8.5E-03	
Intermediate	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	1.70E-03	7.0E-01		7.0E-01	
Intermediate	VOC	2-Hexanone	591-78-6	T		4				4.60E-04	6.60E-03	2.9E+00		1.0E+00	
Intermediate	VOC	Methyl Acetate	79-20-9	T		4				4.10E-04	5.90E-03				
Intermediate	VOC	Methyl tert-butyl ether	1634-04-4	T		4				1.30E-04	1.90E-03	6.9E-01		2.4E-01	
Intermediate	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	3				2.30E-04	3.30E-03	5.2E+00		1.8E+00	
Intermediate	VOC	Methylcyclohexane	108-87-2	T		4				1.50E-04	2.10E-03				
Intermediate	VOC	Methylene Chloride	75-09-2	T	B2	4				2.90E-04	4.90E-03	5.0E-03		5.0E-03	
Intermediate	VOC	Styrene	100-42-5	T		4				1.50E-04	2.10E-03	1.0E-01		1.0E-01	
Intermediate	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	4				2.50E-04	3.60E-03	3.5E-02		8.5E-03	
Intermediate	VOC	Tetrachloroethene	127-18-4	T	C-B2	4				2.30E-04	3.30E-03	5.0E-03		5.0E-03	
Intermediate	VOC	Toluene	108-88-3	T	D	4				1.80E-04	2.60E-03	1.0E+00		1.0E+00	
Intermediate	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	4				1.70E-04	2.40E-03	7.0E-02		7.0E-02	
Intermediate	VOC	1,1,1-Trichloroethane	71-55-6	T	D	4				1.50E-04	2.10E-03	2.0E-01		2.0E-01	
Intermediate	VOC	1,1,2-Trichloroethane	79-00-5	T	C	4				3.00E-04	4.30E-03	5.0E-03		5.0E-03	
Intermediate	VOC	Trichloroethene	79-01-6	T	C-B2	4				1.40E-04	2.00E-03	5.0E-03		5.0E-03	
Intermediate	VOC	Trichlorofluoromethane	75-69-4	T		4				2.80E-04	4.00E-03	7.3E+00		2.6E+00	
Intermediate	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		4				3.20E-04	4.60E-03	1.7E+02		1.7E+02	
Intermediate	VOC	Vinyl Chloride	75-01-4	T	A	4				1.50E-04	2.10E-03	2.0E-03		2.0E-03	
Intermediate	VOC	Xylenes (total)	1330-20-7	T	ID	4				3.30E-04	4.70E-03	1.0E+01		1.0E+01	
Intermediate	SVOC	Acenaphthene	83-32-9	T		4				8.00E-04	8.00E-04	3.8E+00		1.3E+00	
Intermediate	SVOC	Acenaphthylene	208-96-8	T	D	4				7.10E-04	7.10E-04	1.5E-01		5.2E-02	
Intermediate	SVOC	Acetophenone	98-86-2	T	D	4				2.60E-03	2.60E-03	4.4E+00		1.5E+00	
Intermediate	SVOC	Anthracene	120-12-7	T	D	4				6.80E-04	6.80E-04	4.3E-02		4.3E-02	
Intermediate	SVOC	Atrazine	1912-24-9	T		4				2.50E-03	2.50E-03	3.0E-03		3.0E-03	
Intermediate	SVOC	Benzaldehyde	100-52-7	T		4				2.80E-03	2.80E-03				
Intermediate	SVOC	Benzo(a)anthracene	56-55-3	T	B2	4				7.00E-04	7.00E-04	8.5E-03		2.1E-03	
Intermediate	SVOC	Benzo(a)pyrene	50-32-8	T	B2	4				7.30E-04	7.30E-04	5.0E-03		5.0E-03	
Intermediate	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	4				9.40E-04	9.40E-04	2.0E-03		2.0E-03	
Intermediate	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	4				8.50E-04	8.50E-04	5.0E-03		5.0E-03	
Intermediate	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	4				8.40E-04	8.40E-04	5.0E-03		5.0E-03	
Intermediate	SVOC	Biphenyl	92-52-4	T	D	4				2.60E-03	2.60E-03				
Intermediate	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	4				8.70E-04	8.70E-04				
Intermediate	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	4				9.70E-04	9.70E-04	8.3E-03		2.0E-03	
Intermediate	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	4	1	8.80E-03	8.80E-03	2.70E-03	2.70E-03	6.0E-03	**1.5E+00**	6.0E-03	**1.5E+00**
Intermediate	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	4				8.80E-04	8.80E-04				
Intermediate	SVOC	Butylbenzylphthalate	85-68-7	T	C	4				8.80E-04	8.80E-04	2.7E+00		1.2E+00	
Intermediate	SVOC	Caprolactam	105-60-2	T		4	3	6.70E-03	3.90E-02	2.50E-03	2.50E-03	1.7E+01	2.3E-03	5.8E+00	6.7E-03
Intermediate	SVOC	Carbazole	86-74-8	T	B2	4				8.20E-04	8.20E-04	3.5E-01		8.5E-02	
Intermediate	SVOC	4-Chloro-3-methylphenol	59-50-7	T		4				9.90E-04	9.90E-04	4.2E-01		1.5E-01	
Intermediate	SVOC	4-Chloroaniline	106-47-8	T		4				6.10E-04	6.10E-04				
Intermediate	SVOC	2-Chloronaphthalene	91-58-7	T		4				8.50E-04	8.50E-04	5.2E+00		1.8E+00	
Intermediate	SVOC	2-Chlorophenol	95-57-8	T		4				1.00E-03	1.00E-03	1.3E-01		4.5E-02	
Intermediate	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		4				7.90E-04	7.90E-04				
Intermediate	SVOC	Chrysene	218-01-9	T	B2	4				7.50E-04	7.50E-04	5.0E-03		5.0E-03	
Intermediate	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	4				7.90E-04	7.90E-04	2.0E-03		2.0E-03	

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Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Intermediate	SVOC	Dibenzofuran	132-64-9	T	D	4				1.10E-03	1.10E-03				
Intermediate	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	4				9.30E-04	9.30E-04	4.3E-03		1.1E-03	
Intermediate	SVOC	2,4-Dichlorophenol	120-83-2	T		4				8.50E-04	8.50E-04	2.1E-01		7.3E-02	
Intermediate	SVOC	Diethylphthalate	84-66-2	T	D	4				6.50E-04	6.50E-04	1.6E+01		5.5E+00	
Intermediate	SVOC	2,4-Dimethylphenol	105-67-9	T		4				8.50E-04	8.50E-04	1.0E+00		3.7E-01	
Intermediate	SVOC	Dimethylphthalate	131-11-3	T	D	4				7.60E-04	7.60E-04	2.1E+02		7.3E+01	
Intermediate	SVOC	Di-n-butylphthalate	84-74-2	T	D	4				6.70E-04	6.70E-04	2.5E+00		8.8E-01	
Intermediate	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		4				1.30E-03	1.30E-03	2.0E-02		2.0E-02	
Intermediate	SVOC	2,4-Dinitrophenol	51-28-5	T		4				3.00E-03	3.00E-03				
Intermediate	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	4				7.90E-04	7.90E-04	3.2E-02		7.7E-03	
Intermediate	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	4				5.70E-04	5.70E-04				
Intermediate	SVOC	Di-n-octylphthalate	117-84-0	T		4				1.10E-03	1.10E-03	3.8E-01		1.3E-01	
Intermediate	SVOC	Fluoranthene	206-44-0	T	D	4				8.10E-04	8.10E-04	2.1E-01		2.1E-01	
Intermediate	SVOC	Fluorene	86-73-7	T	D	4				1.00E-03	1.00E-03	2.0E+00		8.8E-01	
Intermediate	SVOC	Hexachlorobenzene	118-74-1	T	B2	4				7.40E-04	7.40E-04	1.0E-03		1.0E-03	
Intermediate	SVOC	Hexachlorobutadiene	87-68-3	T	C	4				7.30E-04	7.30E-04	4.2E-02		1.5E-02	
Intermediate	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	4				1.10E-03	1.10E-03	5.0E-02		5.0E-02	
Intermediate	SVOC	Hexachloroethane	67-72-1	T	C	4				7.40E-04	7.40E-04	2.1E-02		7.3E-03	
Intermediate	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	4				6.30E-04	6.30E-04	2.0E-03		2.0E-03	
Intermediate	SVOC	Isophorone	78-59-1	T	C	4				6.30E-04	6.30E-04	3.1E+00		7.7E-01	
Intermediate	SVOC	2-Methylnaphthalene	91-57-6	T	ID	4				6.40E-04	6.40E-04	7.5E-01		2.6E-01	
Intermediate	SVOC	Methylphenol (total)	1319-77-3	T		4	1	2.65E-03	2.65E-03	1.30E-03	1.30E-03	1.0E+00	2.7E-03	3.7E-01	7.2E-03
Intermediate	SVOC	Naphthalene	91-20-3	T	C	4				7.50E-04	7.50E-04	1.5E+00		5.2E-01	
Intermediate	SVOC	2-Nitroaniline	88-74-4	T		4				7.00E-04	7.00E-04				
Intermediate	SVOC	3-Nitroaniline	99-09-2	T	C	4				7.10E-04	7.10E-04				
Intermediate	SVOC	4-Nitroaniline	100-01-6	T	C	4				1.30E-03	1.30E-03				
Intermediate	SVOC	Nitrobenzene	98-95-3	T	D	4				8.10E-04	8.10E-04	9.6E-03		3.4E-03	
Intermediate	SVOC	2-Nitrophenol	88-75-5	T		4				2.10E-03	2.10E-03	5.8E-02		2.0E-02	
Intermediate	SVOC	4-Nitrophenol	100-02-7	T		4				1.90E-03	1.90E-03				
Intermediate	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	4				1.40E-03	1.40E-03	1.1E+00		2.7E-01	
Intermediate	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	4				6.70E-04	6.70E-04	5.0E-03		5.0E-03	
Intermediate	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	4				7.80E-04	7.80E-04				
Intermediate	SVOC	Pentachlorophenol	87-86-5	T	B2	4				2.40E-03	2.40E-03	1.0E-03		1.0E-03	
Intermediate	SVOC	Phenanthrene	85-01-8	T	D	4				8.20E-04	8.20E-04	1.5E-01		5.2E-02	
Intermediate	SVOC	Phenol	108-95-2	T	ID	4	1	7.00E-03	7.00E-03	2.60E-03	2.60E-03	1.3E+01	5.4E-04	4.4E+00	1.6E-03
Intermediate	SVOC	Pyrene	129-00-0	T	D	4				1.10E-03	1.10E-03	1.4E-01		1.4E-01	
Intermediate	SVOC	2,4,5-Trichlorophenol	95-95-4	T		4				1.20E-03	1.20E-03	2.1E+00		7.3E-01	
Intermediate	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	4				1.70E-03	1.70E-03	4.7E-01		1.2E-01	
Intermediate	P/PCB	PCBs (total)	1336-36-3	D	B2	1				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
Intermediate	P/PCB	PCBs (total)	1336-36-3	T	B2	4				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
Intermediate	INORG	Antimony	7440-36-0	D		2				2.20E-03	2.20E-03	6.0E-03		6.0E-03	
Intermediate	INORG	Antimony	7440-36-0	T		4				2.20E-03	3.40E-03	6.0E-03		6.0E-03	
Intermediate	INORG	Arsenic	7440-38-2	D	A	2	1	6.20E-03	6.20E-03	3.90E-03	3.90E-03	5.0E-02	1.2E-01	5.0E-02	1.2E-01
Intermediate	INORG	Arsenic	7440-38-2	T	A	4	3	2.70E-03	5.20E-03	2.10E-03	2.10E-03	5.0E-02	1.0E-01	5.0E-02	1.0E-01
Intermediate	INORG	Barium	7440-39-3	D	D	2	2	4.00E-02	4.04E-01			2.0E+00	2.0E-01	2.0E+00	2.0E-01
Intermediate	INORG	Barium	7440-39-3	T	D	4	4	6.77E-02	4.32E-01			2.0E+00	2.2E-01	2.0E+00	2.2E-01
Intermediate	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	5.40E-04	4.0E-03		4.0E-03	
Intermediate	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	6.00E-04	4.0E-03		4.0E-03	
Intermediate	INORG	Cadmium	7440-43-9	D	B1	2	1	2.80E-04	2.80E-04	2.80E-04	2.80E-04	5.0E-03	5.6E-02	5.0E-03	5.6E-02
Intermediate	INORG	Cadmium	7440-43-9	T	B1	4	2	2.80E-04	5.70E-04	2.80E-04	2.80E-04	5.0E-03	1.1E-01	5.0E-03	1.1E-01
Intermediate	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.40E-03	1.0E-01		1.0E-01	
Intermediate	INORG	Chromium (total)	7440-47-3	T		4	1	6.80E-03	6.80E-03	1.40E-03	1.50E-03	1.0E-01	6.8E-02	1.0E-01	6.8E-02
Intermediate	INORG	Cobalt	7440-48-4	D	B1	2				1.30E-03	1.30E-03	1.0E-01		4.0E-02	
Intermediate	INORG	Cobalt	7440-48-4	T	B1	4	1	1.40E-03	1.40E-03	7.40E-04	1.30E-03	1.0E-01	1.4E-02	4.0E-02	3.5E-02
Intermediate	INORG	Copper	7440-50-8	D	D	2				4.20E-03	4.20E-03	4.0E+00		1.4E+00	

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TABLE 2-4 (W)
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-01 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Intermediate	INORG	Copper	7440-50-8	T	D	4				1.70E-03	4.20E-03	4.0E+00		1.4E+00	
Intermediate	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	2.50E-03	4.0E-03		4.0E-03	
Intermediate	INORG	Lead	7439-92-1	T	B2	4	1	1.35E-02	1.35E-02	1.60E-03	2.50E-03	4.0E-03	**3.4E+00**	4.0E-03	**3.4E+00**
Intermediate	INORG	Manganese	7439-96-5	D	D	2	2	2.80E-03	1.59E-01			2.5E+00	6.4E-02	8.6E-01	1.8E-01
Intermediate	INORG	Manganese	7439-96-5	T	D	4	4	6.31E-02	1.77E-01			2.5E+00	7.1E-02	8.6E-01	2.1E-01
Intermediate	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	6.90E-05	2.0E-03		2.0E-03	
Intermediate	INORG	Mercury	7439-97-6	T	D	4				6.90E-05	8.70E-05	2.0E-03		2.0E-03	
Intermediate	INORG	Nickel	7440-02-0	D	A	2				2.20E-03	2.20E-03	1.0E-01		1.0E-01	
Intermediate	INORG	Nickel	7440-02-0	T	A	4	1	5.70E-03	5.70E-03	2.20E-03	2.90E-03	1.0E-01	5.7E-02	1.0E-01	5.7E-02
Intermediate	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	4.50E-03	5.0E-02		5.0E-02	
Intermediate	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	4.70E-03	5.0E-02		5.0E-02	
Intermediate	INORG	Silver	7440-22-4	D	D	2				1.50E-03	1.50E-03	9.8E-02		3.4E-02	
Intermediate	INORG	Silver	7440-22-4	T	D	4				9.80E-04	1.50E-03	9.8E-02		3.4E-02	
Intermediate	INORG	Thallium	7440-28-0	D		2				1.80E-03	5.00E-03	2.0E-03		2.0E-03	
Intermediate	INORG	Thallium	7440-28-0	T		4	1	4.40E-05	4.40E-05	3.30E-05	5.00E-03	2.0E-03	2.2E-02	2.0E-03	2.2E-02
Intermediate	INORG	Vanadium	7440-62-2	D		2	1	2.50E-03	2.50E-03	4.20E-04	8.20E-04	6.2E-02	4.0E-02	4.5E-03	5.6E-01
Intermediate	INORG	Vanadium	7440-62-2	T		4	1	4.90E-03	4.90E-03	6.70E-04	8.20E-04	6.2E-02	7.9E-02	4.5E-03	**1.1E+00**
Intermediate	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	1.20E-02	5.0E+00		2.4E+00	
Intermediate	INORG	Zinc	7440-66-6	T	D	4	1	5.92E-01	5.92E-01	1.20E-02	1.40E-02	5.0E+00	1.2E-01	2.4E+00	2.5E-01

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-8 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	43	22	5.70E-03	3.00E-01	1.80E-03	2.00E-01		1.1E+05	2.7E-06	1.6E+05	1.9E-06	1.7E+08	1.8E-09	7.3E+04	4.1E-06	1.1E+05	2.7E-06	1.3E+05	2.3E-06	3.9E+08	7.7E-10	2.3E+04	1.3E-05
VOC	Benzene	71-43-2	A	42	5	8.40E-04	5.70E-02	3.00E-04	2.00E-02		8.4E+00	6.8E-03	4.5E+01	1.3E-03	4.7E+05	1.2E-07	4.0E+02	1.4E-04	1.6E+00	3.6E-02	1.3E+01	4.4E-03	3.8E+05	1.5E-07	1.8E+02	3.2E-04
VOC	Bromodichloromethane	75-27-4	B2	42				4.70E-04	1.80E-02		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	42				5.20E-04	1.90E-02		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	43	1	2.23E-02	2.23E-02	1.20E-03	5.60E-02		1.6E+00	1.4E-02	1.3E+01	1.7E-03	1.5E+05	1.5E-07	1.0E+03	2.2E-05	8.6E-01	2.6E-02	1.1E+01	2.0E-03	3.3E+05	6.8E-08	3.2E+02	7.0E-05
VOC	2-Butanone	78-93-3	ID	43	14	2.20E-03	1.30E-01	1.30E-03	1.30E-01		2.7E+04	4.8E-06	3.5E+04	3.7E-06	2.9E+07	4.5E-09	2.7E+04	4.8E-06	2.7E+04	4.8E-06	2.9E+04	4.5E-06	6.7E+07	1.9E-09	2.7E+04	4.8E-06
VOC	Carbon Disulfide	75-15-0		43	3	3.10E-04	1.60E-03	2.40E-04	4.20E-02		1.4E+02	1.1E-05	1.6E+03	1.0E-06	2.1E+07	7.6E-11	2.8E+02	5.7E-06	7.6E+01	2.1E-05	1.3E+03	1.2E-06	4.7E+07	3.4E-11	2.8E+02	5.7E-06
VOC	Carbon Tetrachloride	56-23-5	B2	42				4.20E-04	2.40E-02		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00		1.3E+05		9.6E+01	
VOC	Chlorobenzene	108-90-7	D	43				3.40E-04	1.80E-02		2.2E+02		9.2E+02		2.1E+06		2.6E+02		1.2E+02		7.7E+02		4.7E+06		2.6E+02	
VOC	Chloroethane	75-00-3		43				8.20E-04	5.10E-02		9.5E+02		3.6E+04		2.9E+08		9.5E+02		9.5E+02		3.0E+04		6.7E+08		9.5E+02	
VOC	Chloroform	67-66-3	B2	43				4.60E-04	1.80E-02		3.8E+01		1.5E+02		1.6E+06		1.5E+03		7.2E+00		4.5E+01		1.3E+06		1.2E+03	
VOC	Chloromethane	74-87-3	D	43				4.20E-04	3.70E-02		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	43	7	8.60E-04	4.60E-02	4.80E-04	8.50E-03		3.9E+02	1.2E-04	2.0E+03	2.3E-05	2.6E+06	1.5E-08	3.9E+02	1.2E-04	3.9E+02	1.2E-04	1.7E+03	2.7E-05	5.8E+06	7.9E-09	3.9E+02	1.2E-04
VOC	Cyclohexane	110-82-7	ID	43	4	1.30E-03	8.30E-02	4.10E-04	2.50E-02																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	43				9.90E-04	9.70E-02		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	42				5.50E-04	1.50E-02		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	42				3.20E-04	2.30E-02		3.6E+00		5.8E+00		1.8E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	1,2-Dichlorobenzene	95-50-1	D	43	2	6.30E-03	3.20E-02	3.90E-04	1.90E-02		2.1E+02	1.5E-04	4.6E+04	7.0E-07	4.4E+07	7.3E-10	2.1E+02	1.5E-04	2.1E+02	1.5E-04	3.9E+04	8.2E-07	1.0E+08	3.2E-10	2.1E+02	1.5E-04
VOC	1,3-Dichlorobenzene	541-73-1	D	43				5.90E-04	1.80E-02								1.7E+02								1.7E+02	
VOC	1,4-Dichlorobenzene	106-46-7	C	43	3	7.60E-04	1.95E-02	4.20E-04	1.90E-02		1.0E+02	2.0E-04	2.6E+02	7.5E-05	5.7E+05	3.4E-08	1.9E+03	1.0E-05	1.9E+01	1.0E-03	7.7E+01	2.5E-04	4.5E+05	4.3E-08	4.0E+02	4.9E-05
VOC	Dichlorodifluoromethane	75-71-8		43				7.70E-04	4.50E-02		1.7E+03		6.3E+04		1.5E+09		1.0E+03		9.0E+02		5.3E+04		3.3E+09		1.0E+03	
VOC	1,1-Dichloroethane	75-34-3	C	43	1	1.10E-03	1.10E-03	2.70E-04	2.20E-02		4.3E+02	2.6E-06	2.5E+03	4.4E-07	1.5E+07	7.3E-11	8.9E+02	1.2E-06	2.3E+02	4.8E-06	2.1E+03	5.2E-07	3.3E+07	3.3E-11	8.9E+02	1.2E-06
VOC	1,2-Dichloroethane	107-06-2	B2	43				3.80E-04	1.30E-02		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00		1.2E+05		9.1E+01	
VOC	1,1-Dichloroethene	75-35-4	C	43	2	6.80E-04	1.00E-03	4.70E-04	3.10E-02		3.3E-01	3.0E-03	3.7E+03	2.7E-04	7.8E+04	3.5E-08	5.7E+02	1.8E-06	6.2E-02	1.6E-02	1.1E+00	9.1E-04	6.2E+04	1.6E-08	2.0E+02	5.0E-06
VOC	cis-1,2-Dichloroethene	156-59-2	D	43				2.80E-04	2.30E-02		4.1E+01		2.0E+02		1.0E+06		6.4E+02		2.2E+01		1.8E+02		2.3E+06		6.4E+02	
VOC	trans-1,2-Dichloroethene	156-60-5		43				3.40E-04	3.20E-02		4.3E+01		3.3E+02		2.1E+06		1.4E+03		2.3E+01		2.8E+02		4.7E+06		1.4E+03	
VOC	1,2-Dichloropropane	78-87-5	B2	43				3.00E-04	1.90E-02		7.4E+00		1.0E+01		1.2E+05		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	42				4.40E-04	1.70E-02		5.4E+00		6.0E+02		8.8E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	Ethyl Benzene	100-41-4	D	43	12	6.80E-04	1.30E-01	5.10E-04	1.45E-02		1.4E+02	9.3E-04	2.3E+03	5.7E-05	2.3E+07	1.0E-08	1.4E+02	9.3E-04	8.7E+01	1.5E-03	7.2E+02	1.8E-04	1.0E+07	1.3E-08	1.4E+02	9.3E-04
VOC	2-Hexanone	591-78-6		43				1.20E-03	9.50E-02		1.8E+03		1.3E+03		1.2E+06		2.5E+03		9.9E+02		1.1E+03		2.7E+06		2.5E+03	
VOC	Methyl Acetate	79-20-9		43	6	1.40E-03	2.30E-01	9.50E-04	5.40E-02																	
VOC	Methyl tert-butyl ether	1634-04-4		43				2.70E-04	2.20E-02		5.9E+03		6.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	43	4	2.40E-03	3.40E-03	8.00E-04	6.30E-02		2.7E+03	1.3E-06	3.3E+04	6.4E-08	6.0E+07	5.7E-11	2.7E+03	1.3E-06	2.7E+03	1.3E-06	4.5E+04	7.6E-08	1.4E+08	2.4E-11	2.7E+03	1.3E-06
VOC	Methylcyclohexane	108-87-2		43	10	7.00E-04	1.00E-01	4.10E-04	2.80E-02																	
VOC	Methylene Chloride	75-09-2	B2	43	4	1.70E-03	7.50E-02	1.10E-03	6.50E-02		2.4E+02	3.1E-04	7.0E+03	1.1E-04	8.3E+06	9.0E-09	2.3E+03	3.3E-05	4.5E+01	1.7E-03	2.1E+02	3.6E-04	6.6E+06	1.1E-08	1.3E+03	5.8E-05
VOC	Styrene	100-42-5		42				2.80E-04	2.00E-02		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	43				3.70E-04	1.80E-02		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	43	1	1.10E-03	1.10E-03	4.60E-04	1.90E-02		6.0E+01	1.8E-05	6.0E+02	1.8E-06	6.8E+06	1.6E-10	8.8E+01	1.3E-05	1.1E+01	1.0E-04	1.8E+02	6.1E-06	5.4E+06	2.0E-10	8.8E+01	1.3E-05
VOC	Toluene	108-88-3	D	43	25	7.30E-04	5.60E-02	3.20E-04	1.50E-02		2.5E+02	2.2E-04	3.3E+03	1.7E-05	1.2E+07	4.7E-09	2.5E+02	2.2E-04	2.5E+02	2.2E-04	2.8E+03	2.0E-05	2.7E+07	2.1E-09	2.5E+02	2.2E-04
VOC	1,2,4-Trichlorobenzene	120-82-1	D	43				5.30E-04	2.40E-02		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	42				3.70E-04	1.90E-02		4.6E+02		4.5E+03		2.9E+07		4.6E+02		2.5E+02		3.8E+03		6.7E+07		4.6E+02	
VOC	1,1,2-Trichloroethane	79-00-5	C	42				3.20E-04	2.60E-02		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01		1.9E+05		1.8E+02	
VOC	Trichloroethene	79-01-6	C-B2	43				5.70E-04	2.40E-02		3.7E+01		2.6E+02		2.3E+06		5.0E+02		7.1E+00		7.8E+01		1.8E+06		5.0E+02	
VOC	Trichlorofluoromethane	75-69-4		43				3.40E-04	3.70E-02		5.6E+02		1.1E+05		1.7E+09		5.6E+02		5.6E+02		9.2E+04		3.8E+09		5.6E+02	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		43				8.00E-04	6.10E-02		5.5E+02		2.1E+05		2.3E+09		5.5E+02		5.5E+02		1.8E+05		5.1E+09		5.5E+02	
VOC	Vinyl Chloride	75-01-4	A	43				4.10E-04	4.10E-02		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00		3.5E+05		3.8E+00	
VOC	Xylenes (total)	1330-20-7	ID	43	13	1.20E-03	7.70E-01	1.10E-03	1.60E-02		1.5E+02	5.1E-03	5.4E+04	1.4E-05	1.3E+08	5.9E-09	1.5E+02	5.1E-03	1.5E+02	5.1E-03	4.6E+04	1.7E-05	2.9E+08	2.7E-09	1.5E+02	5.1E-03
SVOC	Acenaphthene	83-32-9		43	7	2.70E-02	6.90E-01	2.00E-02	3.00E+00		3.5E+05	2.0E-06	9.7E+04	7.1E-06	6.2E+06	1.1E-07	1.3E+05	5.3E-06	1.9E+05	3.6E-06	8.1E+04	8.5E-06	1.4E+07	4.9E-08	4.1E+04	1.7E-05
SVOC	Acenaphthylene	208-96-8	D	43				2.00E-02	2.80E+00		3.0E+03		2.7E+03		1.0E+06		5.2E+03		1.6E+03		2.2E+03		2.3E+06		1.6E+03	
SVOC	Acetophenone	98-86-2	D	43				1.90E-02	3.00E+00		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	Anthracene	120-12-7	D	43	16	2.20E-02	3.50E+00	1.90E-02	2.90E+00		1.0E+06	3.5E-06	1.6E+06	2.2E-06	2.9E+07	1.2E-07	7.3E+05	4.8E-06	1.0E+06	3.5E-06	1.4E+06	2.5E-06	6.7E+07	5.2E-08	2.3E+05	1.5E-05
SVOC	Atrazine	1912-24-9		43				1.90E-02	8.90E+00								3.3E+02								7.1E+01	
SVOC	Benzaldehyde	100-52-7		43				2.20E-02	1.00E+01																	
SVOC	Benzo(a)anthracene	56-55-3	B2	43	18	2.30E-02	3.90E+00	1.90E-02	3.30E+00								8.0E+01	4.9E-02							2.0E+01	2.0E-01
SVOC	Benzo(a)pyrene	50-32-8	B2	43	11	4.00E-02	6.10E+00	2.00E-02	3.60E+00						1.9E+03	3.2E-03	8.0E+00	7.6E-01					1.5E+03	4.1E-03	2.0E+00	**3.1E+00**
SVOC	Benzo(b)fluoranthene	205-99-2	B2	43	16	3.10E-02	6.90E+00	2.20E-02	3.40E+00								8.0E+01	8.6E-02							2.0E+01	3.5E-01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	43	8	3.20E-02	3.40E+00	2.40E-02	3.30E+00						3.5E+05	9.7E-06	7.0E+03	4.9E-04					8.0E+05	4.3E-06	2.5E+03	1.4E-03
SVOC	Benzo(k)fluoranthene	207-08-9	B2	43	10	2.70E-02	3.30E+00	2.00E-02	3.10E+00								8.0E+02	4.1E-03							2.0E+02	1.7E-02
SVOC	Biphenyl	92-52-4	D	43	3	3.40E-02	2.40E-01	2.20E-02	8.30E+00																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	43				1.80E-02	2.80E+00																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	43				1.90E-02	3.00E+00		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	43	16	2.50E-02	1.80E+00	2.30E-02	3.20E+00						8.9E+05	2.0E-06	1.0E+04	1.8E-04					7.0E+05	2.6E-06	2.8E+03	6.4E-04
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	43				2.00E-02	3.60E+00																	
SVOC	Butylbenzylphthalate	85-68-7	C	43	1	7.70E-01	7.70E-01	1.80E-02	3.00E+00						2.1E+07	3.7E-08	3.1E+02	2.5E-03					4.7E+07	1.6E-08	3.1E+02	2.5E-03
SVOC	Caprolactam	105-60-2		43				2.20E-02	1.10E+01						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	43	3	6.50E-02	1.00E+00	2.30E-02	3.10E+00								2.4E+03	4.2E-04							5.3E+02	1.9E-03
SVOC	4-Chloro-3-methylphenol	59-50-7		43				1.90E-02	3.00E+00								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		43				6.40E-03	3.00E+00																	
SVOC	2-Chloronaphthalene	91-58-7		43				2.00E-02	2.80E+00								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		43				1.90E-02	3.10E+00								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		43				2.00E-02	3.10E+00																	

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TABLE 4-8
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI W-8 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Chrysene	218-01-9	B2	43	19	3.50E-02	5.90E+00	1.90E-02	2.70E+00								8.0E+03	7.4E-04								2.0E+03	3.0E-03
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	43	1	1.00E+00	1.00E+00	2.20E-02	3.00E+00								8.0E+00	1.3E-01								2.0E+00	5.0E-01
SVOC	Dibenzofuran	132-64-9	D	43	6	3.10E-02	6.10E-01	2.00E-02	3.00E+00																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	43				9.80E-03	2.40E+00						8.2E+03		3.0E+01							6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		43				1.70E-02	3.00E+00						2.3E+06		1.8E+03							5.1E+06		6.6E+02	
SVOC	Diethylphthalate	84-66-2	D	43				2.10E-02	8.90E+00						1.5E+06		7.4E+02							3.3E+06		7.4E+02	
SVOC	2,4-Dimethylphenol	105-67-9		43				3.40E-02	4.70E+00						2.1E+06		3.6E+04							4.7E+06		1.1E+04	
SVOC	Dimethylphthalate	131-11-3	D	43				2.00E-02	9.50E+00						1.5E+06		7.9E+02							3.3E+06		7.9E+02	
SVOC	Di-n-butylphthalate	84-74-2	D	43	1	3.60E+00	3.60E+00	2.40E-02	8.90E+00						1.5E+06	2.4E-06	7.6E+02	4.7E-03						3.3E+06	1.1E-06	7.6E+02	4.7E-03
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		43				7.70E-02	9.50E+00								2.6E+02									7.9E+01	
SVOC	2,4-Dinitrophenol	51-28-5		43				1.00E-01	6.50E+00																		
SVOC	2,4-Dinitrotoluene	121-14-2	B2	43				1.90E-02	2.70E+00						2.0E+04		2.2E+02							1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	43				1.90E-02	2.80E+00																		
SVOC	Di-n-octylphthalate	117-84-0		43				1.90E-02	3.20E+00								2.0E+04									6.9E+03	
SVOC	Fluoranthene	206-44-0	D	43	24	6.80E-02	6.90E+00	2.55E-02	3.30E+00		1.0E+06	6.9E-06	8.9E+05	7.8E-06	4.1E+06	1.7E-06	1.3E+05	5.3E-05	1.0E+06	6.9E-06	7.4E+05	9.3E-06	9.3E+06	7.4E-07	4.6E+04	1.5E-04
SVOC	Fluorene	86-73-7	D	43	15	5.70E-02	2.10E+01	2.10E-02	2.80E+00		1.0E+06	2.1E-05	1.5E+05	1.4E-04	4.1E+06	5.1E-06	8.7E+04	2.4E-04	5.8E+05	3.6E-05	1.3E+05	1.6E-04	9.3E+06	2.3E-06	2.7E+04	7.8E-04
SVOC	Hexachlorobenzene	118-74-1	B2	43				1.90E-02	3.30E+00		2.2E+02		5.6E+01		8.5E+05		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	43				1.80E-02	2.70E+00		3.5E+02		4.6E+02		1.8E+06		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	41				1.60E-02	3.60E+00		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	43				1.90E-02	2.80E+00		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	43	8	2.70E-02	2.90E+00	2.40E-02	4.10E+00						1.2E+06		8.0E+01	3.6E-02								2.0E+01	1.5E-01
SVOC	Isophorone	78-59-1	C	43				2.00E-02	2.60E+00						4.2E+06		2.4E+03							1.2E+07		2.4E+03	
SVOC	2-Methylnaphthalene	91-57-6	ID	43	14	2.50E-02	6.70E+00	1.90E-02	2.80E+00								2.6E+04	2.6E-04								8.1E+03	8.3E-04
SVOC	Methylphenol (total)	1319-77-3		43				1.60E-02	2.80E+00						2.9E+06		3.6E+04							6.7E+06		1.1E+04	
SVOC	Naphthalene	91-20-3	C	43	10	2.40E-02	6.60E-01	2.00E-02	2.90E+00		4.7E+02	1.4E-03	3.5E+05	1.9E-03	8.8E+04	3.5E-06	5.2E+04	1.3E-05	2.5E+02	2.6E-03	3.0E+02	2.2E-03	2.0E+05	3.3E-06	1.6E+04	4.1E-05
SVOC	2-Nitroaniline	88-74-4		43				2.00E-02	2.70E+00																	
SVOC	3-Nitroaniline	99-09-2	C	43				1.30E-02	8.30E+00																	
SVOC	4-Nitroaniline	100-01-6	C	43				1.90E-02	4.00E+00																	
SVOC	Nitrobenzene	98-95-3	D	43				1.90E-02	2.70E+00		1.7E+02		6.4E+02		3.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		43				1.70E-02	2.70E+00								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		43				1.20E-01	1.10E+01																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	43				2.10E-02	2.90E+00								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	43				2.00E-02	2.60E+00						2.0E+03		5.4E+00						1.6E+03		1.2E+00	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	43				2.00E-02	3.10E+00																	
SVOC	Pentachlorophenol	87-86-5	B2	39				9.10E-02	7.10E+00						1.3E+05		3.2E+02						1.0E+05		9.0E+01	
SVOC	Phenanthrene	85-01-8	D	43	29	1.95E-02	4.20E+01	2.30E-02	3.90E-01		5.1E+03	8.2E-03	1.9E+02	2.2E-01	2.9E+03	1.4E-02	5.2E+03	8.1E-03	2.8E+03	1.5E-02	1.6E+02	2.6E-01	6.7E+03	6.3E-03	1.6E+03	2.6E-02
SVOC	Phenol	108-95-2	ID	43	1	1.10E-01	1.10E-01	1.90E-02	2.90E+00						1.8E+07	6.1E-09	1.2E+04	9.2E-06					4.0E+07	2.8E-09	1.2E+04	9.2E-06
SVOC	Pyrene	129-00-0	D	43	24	6.30E-02	1.10E+01	1.90E-02	3.00E+00		1.0E+06	1.1E-05	7.8E+05	1.4E-05	2.9E+06	3.8E-06	8.4E+04	1.3E-04	1.0E+06	1.1E-05	6.5E+05	1.7E-05	6.7E+06	1.6E-06	2.9E+04	3.8E-04
SVOC	2,4,5-Trichlorophenol	95-95-4		43				2.20E-02	3.30E+00						1.0E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	43				1.80E-02	3.70E+00						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
P/PCB	PCBs (total)	1336-36-3	B2	46	22	1.72E-02	9.60E-01	3.20E-03	3.90E-02		1.6E+04	6.0E-05	8.1E+02	1.2E-03	6.5E+03	1.5E-04	1.6E+01	6.0E-02	3.0E+03	3.2E-04	2.4E+02	4.0E-03	5.2E+03	1.8E-04	4.0E+00	2.4E-01
INORG	Antimony	7440-36-0		43	19	1.63E-01	1.01E+02	2.71E-01	2.39E+00						5.9E+03	1.7E-02	6.7E+02	1.5E-01					1.3E+04	7.8E-03	1.8E+02	5.6E-01
INORG	Arsenic	7440-38-2	A	43	43	2.17E+00	5.40E+01			1.3E+01					9.1E+02	4.5E-02	3.7E+01	**1.1E+00**					7.2E+02	5.7E-02	7.6E+00	**5.4E+00**
INORG	Barium	7440-39-3	D	43	43	7.06E+00	4.04E+03			1.1E+02					1.5E+05	2.6E-02	1.3E+05	3.0E-02					3.3E+05	1.2E-02	3.7E+04	1.1E-01
INORG	Beryllium	7440-41-7	B1	43	29	3.21E-02	1.07E+00	3.68E-02	5.66E-02	1.5E+00					5.9E+02		1.6E+03						1.3E+03		4.1E+02	
INORG	Cadmium	7440-43-9	B1	43	34	3.96E-02	3.85E+01	8.90E-03	1.82E-01	1.2E+00					2.2E+03	1.7E-02	2.1E+03	1.8E-02					1.7E+03	2.2E-02	5.5E+02	6.8E-02
INORG	Chromium (total)	7440-47-3		45	45	4.17E+00	1.26E+03			4.9E+01					2.4E+02	**5.0E+00**	9.2E+03	1.3E-01					2.6E+02	**4.7E+00**	2.5E+03	4.8E-01
INORG	Chromium III	16065-83-1	D	2	2	3.14E+01	3.17E+02								1.5E+05	2.1E-03	1.0E+06	3.2E-04					3.3E+05	9.6E-04	7.9E+05	4.0E-04
INORG	Chromium VI	18540-29-9	A	2	2	6.00E-01	1.38E+00								2.4E+02	5.7E-03	9.2E+03	1.5E-04					2.6E+02	5.3E-03	2.5E+03	5.5E-04
INORG	Cobalt	7440-48-4	B1	43	43	1.62E+00	6.42E+01			1.7E+01					5.9E+03	7.9E-03	9.0E+03	5.2E-03					1.3E+04	3.6E-03	2.6E+03	1.8E-02
INORG	Copper	7440-50-8	D	43	43	5.82E+00	2.58E+04			3.2E+01					5.9E+04	4.4E-01	7.3E+04	3.5E-01					1.3E+05	2.0E-01	2.0E+04	**1.3E+00**
INORG	Cyanide (total)	57-12-5	D	2				1.88E-01	2.09E-01						2.5E+02		2.5E+02						2.5E+02		1.2E+01	
INORG	Lead	7439-92-1	B2	43	43	2.03E+00	8.44E+03			4.9E+01					4.4E+04	1.9E-01	9.0E+02	**9.3E+00**					1.0E+05	8.4E-02	4.0E+02	**2.1E+01**
INORG	Manganese	7439-96-5	D	51	51	1.14E+02	2.78E+03			5.1E+02					1.5E+03	**1.5E+00**	9.0E+04	2.5E-02					3.3E+03	6.9E-01	2.5E+04	9.1E-02
INORG	Mercury	7439-97-6	D	43	28	1.17E-02	6.55E+00	8.90E-03	1.87E-02	1.3E-01	8.9E+01	7.2E-02	6.2E+01	1.0E-01	8.8E+03	7.3E-04	5.8E+02	1.1E-02	4.8E+01	1.3E-01	5.2E+01	1.2E-01	2.0E+04	3.2E-04	1.6E+02	4.0E-02
INORG	Nickel	7440-02-0	A	43	43	4.82E+00	1.89E+03			3.0E+01					1.6E+04	1.2E-01	1.5E+05	1.2E-02					1.3E+04	1.4E-01	4.0E+04	4.6E-02
INORG	Selenium	7782-49-2	D	43	12	1.56E-01	8.62E+00	1.71E-01	4.82E+00	4.1E-01					5.9E+04	1.4E-04	9.6E+03	8.6E-04					1.3E+05	6.3E-05	2.6E+03	3.2E-03
INORG	Silver	7440-22-4	D	43	5	5.96E-02	2.61E+00	5.25E-02	5.97E-01						2.9E+03	9.0E-04	9.0E+03	2.9E-04					6.7E+03	3.9E-04	2.5E+03	1.0E-03
INORG	Thallium	7440-28-0		43	20	4.22E-01	2.12E+00	5.24E-01	6.58E+00								1.3E+02	1.6E-02							3.5E+01	6.1E-02
INORG	Vanadium	7440-62-2		43	43	4.94E+00	5.20E+01			3.3E+01							5.5E+03	3.5E-03							7.5E+02	2.6E-02
INORG	Zinc	7440-66-6	D	43	43	1.78E+01	5.82E+03			1.9E+02							6.3E+05	8.9E-03							1.7E+05	3.3E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-8

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-08 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	19	6	1.63E-03	1.60E-01	5.10E-04	1.10E-03	1.0E+06	1.6E-07	3.1E+04	5.2E-06	7.3E-01	2.2E-01
Shallow	VOC	Benzene	71-43-2	T	A	19	7	1.80E-04	6.25E-04	1.60E-04	4.00E-03	3.5E+03	1.8E-05	1.1E+01	5.7E-05	5.0E-03	1.3E-01
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	19				1.70E-04	4.00E-03	3.7E+01		1.4E+01		1.0E-01	
Shallow	VOC	Bromoform	75-25-2	T	B2	19				1.80E-04	4.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	16				1.60E-04	4.00E-03	9.8E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	19	3	5.40E-04	4.40E-03	3.60E-04	4.00E-02	2.4E+05	1.8E-08	2.4E+05	1.8E-08	1.3E+01	3.4E-04
Shallow	VOC	Carbon Disulfide	75-15-0	T		19	8	2.40E-04	1.10E-03	2.00E-04	4.00E-03	5.5E+02	2.0E-06	1.2E+03	9.2E-07	8.0E-01	1.4E-03
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	19				1.20E-04	4.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	19				1.40E-04	4.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		19				2.20E-04	4.00E-03	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	19	4	1.40E-04	2.40E-04	1.40E-04	4.00E-03	1.8E+02	1.3E-06	1.5E+02	1.6E-06	1.0E-01	2.4E-03
Shallow	VOC	Chloromethane	74-87-3	T	D	19	1	2.60E-04	2.60E-04	1.30E-04	4.00E-03	4.5E+01	5.8E-06	4.9E+02	5.3E-07	2.6E-01	1.0E-03
Shallow	VOC	Cumene	98-82-8	T	D	19	6	1.80E-04	7.0E-03	1.60E-04	4.00E-03	5.6E+01	3.0E-05	5.6E+01	3.0E-05	8.0E-01	2.1E-03
Shallow	VOC	Cyclohexane	110-82-7	T	ID	19	1	2.20E-04	2.20E-04	1.30E-04	4.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	19				5.30E-04	8.00E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	19				2.50E-04	4.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	19				2.20E-04	4.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	19				1.10E-04	4.00E-03	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	19				1.50E-04	4.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	19				1.60E-04	4.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		19				2.30E-04	8.00E-03	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	19	6	1.60E-04	3.00E-03	1.60E-04	4.00E-03	2.3E+03	1.3E-06	2.4E+03	1.3E-06	8.8E-01	3.4E-03
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	19				2.10E-04	4.00E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	19				2.20E-04	4.00E-03	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	19	2	3.00E-04	2.30E-03	2.20E-04	2.00E-03	2.1E+02	1.1E-05	2.0E+02	1.2E-05	7.0E-02	3.3E-02
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		19	1	6.30E-04	6.30E-04	1.50E-04	2.00E-03	2.0E+02	3.2E-06	2.2E+02	2.9E-06	1.0E-01	6.3E-03
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	19				1.70E-04	4.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	19				1.50E-04	4.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	19	8	1.50E-04	7.00E-04	1.20E-04	4.00E-03	1.7E+02	4.1E-06	1.7E+02	4.1E-06	7.0E-01	1.0E-03
Shallow	VOC	2-Hexanone	591-78-6	T		19				3.10E-04	4.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		19				4.10E-04	4.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		19				1.30E-04	2.00E-02	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	18	8	4.30E-04	4.90E-03	2.30E-04	4.00E-02	2.0E+04	2.5E-07	1.3E+04	3.8E-07	1.8E+00	2.7E-03
Shallow	VOC	Methylcyclohexane	108-87-2	T		19	1	1.90E-04	1.90E-04	1.50E-04	4.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	18	1	5.00E-04	5.00E-04	2.80E-04	4.00E-03	1.4E+03	3.6E-07	2.2E+02	2.3E-06	5.0E-03	1.0E-01
Shallow	VOC	Styrene	100-42-5	T		19				1.50E-04	4.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	19				2.30E-04	4.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	19	1	8.90E-04	8.90E-04	1.20E-04	4.00E-03	1.7E+02	5.2E-06	1.2E+01	7.4E-05	5.0E-03	1.8E-01
Shallow	VOC	Toluene	108-88-3	T	D	19	9	2.00E-04	2.00E-03	1.80E-04	4.00E-03	5.3E+02	3.8E-06	5.3E+02	3.8E-06	1.0E+00	2.0E-03
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	19				1.50E-04	4.00E-03	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	19				1.50E-04	4.00E-03	1.3E+03		1.3E+03		2.0E-01	
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	19				2.10E-04	4.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	19	2	2.00E-04	2.60E-03	1.40E-04	4.00E-03	9.7E+01	2.7E-05	2.2E+01	1.2E-04	5.0E-03	5.2E-01
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		19				2.50E-04	4.00E-03	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		19				2.30E-04	4.00E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	19	1	3.10E-04	3.10E-04	1.50E-04	4.00E-03	1.3E+01	2.4E-05	1.0E+00	3.1E-04	2.0E-03	1.6E-01
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	19	9	5.10E-04	2.80E-03	3.30E-04	4.00E-03	1.9E+02	1.5E-05	1.9E+02	1.5E-05	1.0E+01	2.8E-04
Shallow	SVOC	Acenaphthene	83-32-9	T		19	2	2.20E-03	3.10E-03	8.00E-04	1.40E-01	4.2E+00	7.4E-04	4.2E+00	7.4E-04	1.3E+00	2.4E-03
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	19				7.10E-04	8.20E-02	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	19				2.60E-03	1.30E-01	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	19	2	7.30E-04	7.90E-04	6.80E-04	1.20E-01	4.3E-02	1.8E-02	4.3E-02	1.8E-02	4.3E-02	1.8E-02
Shallow	SVOC	Atrazine	1912-24-9	T		19				2.50E-03	7.00E-02			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		19				1.90E-03	1.20E-01						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	19				7.00E-04	1.40E-01			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	19				7.30E-04	1.10E-01			2.0E-03		5.0E-03	

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TABLE 4-3
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-08 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	19				9.40E-04	1.40E-01			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	19				8.50E-04	1.40E-01			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	19				8.40E-04	1.30E-01			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	19				2.60E-03	1.30E-01						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	19				8.70E-04	2.00E-01						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	19				9.70E-04	3.40E-01	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	19				2.70E-03	5.40E-02			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	19				8.80E-04	1.60E-01						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	19				8.80E-04	4.60E-02			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		19	1	5.50E+00	5.50E+00	2.50E-03	9.00E-02			3.9E+05	1.4E-05	5.8E+00	9.5E-01
Shallow	SVOC	Carbazole	86-74-8	T	B2	19				8.20E-04	1.50E-01			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		19				9.90E-04	1.10E-01			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		18				9.60E-04	1.80E-01						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		19				8.50E-04	1.50E-01			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		19				1.00E-03	2.60E-01			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		19				7.90E-04	1.20E-01						
Shallow	SVOC	Chrysene	218-01-9	T	B2	19				7.50E-04	1.30E-01			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	19				7.90E-04	1.40E-01			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	19				1.10E-03	1.30E-01						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	17				9.30E-04	9.40E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		19				8.50E-04	1.40E-01			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	19				6.50E-04	5.00E-02			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		19	1	2.50E+00	2.50E+00	8.50E-04	1.70E-02			5.2E+02	4.8E-03	3.7E-01	**6.8E+00**
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	19				7.60E-04	4.00E-02			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	19				6.70E-04	7.40E-02			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		19				1.30E-03	4.20E-01			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		19				3.00E-03	6.60E-01						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	19				7.90E-04	9.20E-02			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	19				5.70E-04	1.40E-01						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		19				1.10E-03	1.40E-01			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	19				8.10E-04	1.40E-01	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	19	8	1.50E-03	2.10E-02	1.00E-03	1.50E-01	2.0E+00	1.1E-02	2.0E+00	1.1E-02	8.8E-01	2.4E-02
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	19				7.40E-04	1.50E-01	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	19				7.30E-04	3.00E-01	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	17				1.10E-03	2.20E-01	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	19				7.40E-04	3.20E-01	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	19				6.30E-04	1.40E-01			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	19				6.30E-04	1.70E-01			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	19	4	6.50E-04	5.10E-03	6.40E-04	1.90E-01			2.5E+01	2.0E-04	2.6E-01	2.0E-02
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		19	1	4.69E+00	4.69E+00	1.30E-03	2.60E-02			8.1E+02	5.8E-03	3.7E-01	**1.3E+01**
Shallow	SVOC	Naphthalene	91-20-3	T	C	19	4	1.70E-03	2.60E-03	7.50E-04	2.60E-01	3.1E+01	8.4E-05	3.1E+01	8.4E-05	5.2E-01	5.0E-03
Shallow	SVOC	2-Nitroaniline	88-74-4	T		19				7.00E-04	9.80E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	18				7.10E-04	9.60E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	19				1.30E-03	1.20E-01						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	19				8.10E-04	2.60E-01	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		19				2.10E-03	1.90E-01			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		19				1.90E-03	7.00E-01						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	19				1.40E-03	1.30E-01			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	19				6.70E-04	2.20E-01			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	19				7.80E-04	3.60E-01						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	19				2.40E-03	5.20E-01			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	19	9	1.00E-03	2.80E-02	8.20E-04	1.40E-01	1.0E+00	2.8E-02	1.0E+00	2.8E-02	5.2E-02	5.4E-01
Shallow	SVOC	Phenol	108-95-2	T	ID	19	2	4.60E-03	1.10E-02	1.60E-03	5.20E-02			2.9E+04	4.1E-05	4.4E+00	2.7E-01
Shallow	SVOC	Pyrene	129-00-0	T	D	19				1.10E-03	1.30E-01	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		19				1.20E-03	1.70E-01			1.7E+02		7.3E-01	

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TABLE 4-8

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-08 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	19				1.70E-03	1.40E-01			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	5				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	19	1	7.36E-04	7.36E-04	8.20E-05	4.00E-04	4.5E-03	1.6E-02	3.3E-03	2.2E-01	5.0E-04	**1.5E+00**
Shallow	INORG	Antimony	7440-36-0	D		14	3	2.50E-03	8.00E-03	2.20E-03	2.20E-03			6.8E+01	1.2E-04	6.0E-03	**1.3E+00**
Shallow	INORG	Antimony	7440-36-0	T		19	3	2.80E-03	7.90E-03	2.20E-03	3.40E-03			6.8E+01	1.2E-04	6.0E-03	**1.3E+00**
Shallow	INORG	Arsenic	7440-38-2	D	A	14	10	4.10E-03	3.41E-02	3.90E-03	1.00E-02			4.3E+00	7.9E-03	5.0E-02	6.8E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	19	15	4.10E-03	8.49E-02	3.90E-03	1.00E-02			4.3E+00	2.0E-02	5.0E-02	**1.7E+00**
Shallow	INORG	Barium	7440-39-3	D	D	14	14	2.60E-02	3.01E-01					1.4E+04	2.2E-05	2.0E+00	1.5E-01
Shallow	INORG	Barium	7440-39-3	T	D	19	18	2.65E-02	1.03E+00	8.20E-03	8.20E-04			1.4E+04	7.4E-05	2.0E+00	5.2E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	14				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	19	2	6.20E-04	5.40E-03	4.70E-04	1.00E-03			2.9E+02	1.9E-05	4.0E-03	**1.4E+00**
Shallow	INORG	Cadmium	7440-43-9	D	B1	14	3	2.80E-04	5.50E-04	2.80E-04	2.80E-04			1.9E+02	2.9E-06	5.0E-03	1.1E-01
Shallow	INORG	Cadmium	7440-43-9	T	B1	19	7	2.90E-04	3.90E-03	2.80E-04	3.60E-04			1.9E+02	2.1E-05	5.0E-03	7.8E-01
Shallow	INORG	Chromium (total)	7440-47-3	D		14	2	5.00E-03	4.76E-02	1.40E-03	1.00E-02			4.6E+02	1.0E-04	1.0E-01	4.8E-01
Shallow	INORG	Chromium (total)	7440-47-3	T		19	6	1.50E-03	2.93E-01	1.00E-03	1.00E-02			4.6E+02	6.4E-04	1.0E-01	**3.0E+00**
Shallow	INORG	Cobalt	7440-48-4	D	B1	14	5	1.40E-03	9.30E-03	1.30E-03	2.00E-02			2.4E+03	3.9E-06	4.0E-02	2.3E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	19	6	1.90E-03	8.79E-02	7.40E-04	2.00E-02			2.4E+03	3.7E-05	4.0E-02	**2.2E+00**
Shallow	INORG	Copper	7440-50-8	D	D	14	2	4.40E-03	5.20E-03	4.20E-03	3.00E-03			7.4E+03	7.0E-07	1.4E+00	3.7E-03
Shallow	INORG	Copper	7440-50-8	T	D	19	3	6.50E-03	2.14E-01	1.70E-03	5.00E-03			7.4E+03	2.9E-05	1.4E+00	1.5E-01
Shallow	INORG	Lead	7439-92-1	D	B2	14				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	19	3	5.70E-03	1.22E-01	1.60E-03	3.00E-03					4.0E-03	**3.1E+01**
Shallow	INORG	Manganese	7439-96-5	D	D	14	14	1.10E-03	3.24E+00					9.1E+03	3.6E-04	8.6E-01	**3.8E+00**
Shallow	INORG	Manganese	7439-96-5	T	D	19	19	3.50E-03	5.44E+00					9.1E+03	5.9E-04	8.6E-01	**6.3E+00**
Shallow	INORG	Mercury	7439-97-6	D	D	14	2	1.10E-04	1.90E-04	6.90E-05	2.00E-04	5.6E-02	3.4E-03	5.6E-02	3.4E-03	2.0E-03	9.5E-02
Shallow	INORG	Mercury	7439-97-6	T	D	19	5	7.00E-05	2.60E-04	6.90E-05	2.00E-04	5.6E-02	4.6E-03	5.6E-02	4.6E-03	2.0E-03	1.3E-01
Shallow	INORG	Nickel	7440-02-0	D	A	14	11	2.30E-03	1.56E-02	2.20E-03	2.20E-03			7.4E+04	2.1E-07	1.0E-01	1.6E-01
Shallow	INORG	Nickel	7440-02-0	T	A	19	14	3.40E-03	3.07E-01	2.20E-03	2.00E-02			7.4E+04	4.1E-06	1.0E-01	**3.1E+00**
Shallow	INORG	Selenium	7782-49-2	D	D	14				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	19				3.90E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	14				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	19				9.80E-04	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		14	3	2.10E-05	7.40E-03	1.80E-05	5.00E-03			1.3E+01	5.7E-04	2.0E-03	**3.7E+00**
Shallow	INORG	Thallium	7440-28-0	T		19	3	1.00E-03	6.10E-03	1.50E-05	1.00E-02			1.3E+01	4.7E-04	2.0E-03	**3.1E+00**
Shallow	INORG	Vanadium	7440-62-2	D		14	4	6.40E-04	3.80E-03	8.20E-04	1.00E-02			9.7E+02	3.9E-06	4.5E-03	8.4E-01
Shallow	INORG	Vanadium	7440-62-2	T		19	8	6.70E-04	2.39E-01	6.70E-04	1.00E-02			9.7E+02	2.5E-04	4.5E-03	**5.3E+01**
Shallow	INORG	Zinc	7440-66-6	D	D	14	2	2.25E-02	3.21E-02	1.20E-02	2.00E-02			1.1E+05	2.9E-07	2.4E+00	1.3E-02
Shallow	INORG	Zinc	7440-66-6	T	D	19	3	3.38E-02	6.31E-01	1.20E-02	2.00E-02			1.1E+05	5.7E-06	2.4E+00	2.6E-01
Shallow	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	4	4	1.95E-09	1.97E-08					1.0E-08	**2.0E+00**	3.0E-08	6.6E-01

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The concentrations for the Target Dioxin congeners were used to calculate a 2,3,7,8-TCDD Equivalent, using EPA 1998 TEFs, before comparing to the Screening Levels for 2,3,7,8-TCDD.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-9 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	43	7	3.20E-03	3.10E-01	1.80E-03	2.90E-02		1.1E+05	2.8E-06	1.6E+05	1.9E-06	1.7E+08	1.8E-09	7.3E+04	4.2E-06	1.1E+05	2.8E-06	1.3E+05	2.4E-06	3.9E+08	7.9E-10	2.3E+04	1.3E-05
VOC	Benzene	71-43-2	A	43	4	3.70E-04	8.00E-04	3.00E-04	2.60E-02		8.4E+00	9.5E-05	4.5E+01	1.8E-05	4.7E+05	1.7E-09	4.0E+02	2.0E-06	1.6E+00	5.0E-04	1.3E+01	6.2E-05	3.8E+05	2.1E-09	1.8E+02	4.4E-06
VOC	Bromodichloromethane	75-27-4	B2	43				3.50E-04	1.50E-02		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	43				4.60E-04	2.40E-02		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	43				9.50E-04	4.00E-02		1.6E+00		1.3E+01		1.5E+05		1.0E+03		8.6E-01		1.1E+01		3.3E+05		3.2E+02	
VOC	2-Butanone	78-93-3	ID	43	4	2.30E-03	7.80E-03	1.30E-03	1.20E-01		2.7E+04	2.9E-07	3.5E+04	2.2E-07	2.9E+07	2.7E-10	2.7E+04	2.9E-07	2.7E+04	2.9E-07	2.9E+04	2.7E-07	6.7E+07	1.2E-10	2.7E+04	2.9E-07
VOC	Carbon Disulfide	75-15-0		43	4	3.10E-04	1.20E-03	2.50E-04	5.30E-02		1.4E+02	8.6E-06	1.6E+03	7.5E-07	2.1E+07	5.7E-11	2.8E+02	4.3E-06	7.6E+01	1.6E-05	1.3E+03	9.2E-07	4.7E+07	2.6E-11	2.8E+02	4.3E-06
VOC	Carbon Tetrachloride	56-23-5	B2	43				4.20E-04	1.50E-02		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00		1.3E+05		9.6E+01	
VOC	Chlorobenzene	108-90-7	D	43				3.40E-04	1.20E-02		2.2E+02		9.2E+02		2.1E+06		2.6E+02		1.2E+02		7.7E+02		4.7E+06		2.6E+02	
VOC	Chloroethane	75-00-3		43				8.20E-04	5.70E-02		9.5E+02		3.6E+04		2.9E+08		9.5E+02		9.5E+02		3.0E+04		6.7E+08		9.5E+02	
VOC	Chloroform	67-66-3	B2	43				3.70E-04	1.50E-02		3.8E+01		1.5E+02		1.6E+06		1.5E+03		7.2E+00		4.5E+01		1.3E+06		1.2E+03	
VOC	Chloromethane	74-87-3	D	43				4.10E-04	2.30E-02		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	43	2	5.30E-04	3.11E-03	3.70E-04	1.20E-02		3.9E+02	8.0E-06	2.0E+03	1.6E-06	2.6E+06	1.2E-09	3.9E+02	8.0E-06	3.9E+02	8.0E-06	1.7E+03	1.8E-06	5.8E+06	5.4E-10	3.9E+02	8.0E-06
VOC	Cyclohexane	110-82-7	ID	43	3	8.30E-04	2.90E-02	4.10E-04	1.50E-02																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	43				9.90E-04	1.20E-01		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	43				4.60E-04	2.00E-02		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	43				3.20E-04	2.90E-02		3.6E+00		5.8E+00		1.2E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	1,2-Dichlorobenzene	95-50-1	D	43				3.90E-04	2.40E-02		2.1E+02		4.6E+04		1.2E+07		2.1E+02		2.1E+02		3.9E+04		1.0E+08		2.1E+02	
VOC	1,3-Dichlorobenzene	541-73-1	D	43				3.90E-04	1.50E-02								1.7E+02								1.7E+02	
VOC	1,4-Dichlorobenzene	106-46-7	C	43				3.50E-04	2.40E-02		1.0E+02		2.6E+02		5.7E+05		1.9E+03		1.9E+01		7.7E+01		4.5E+05		4.0E+02	
VOC	Dichlorodifluoromethane	75-71-8		43				5.00E-04	5.80E-02		1.7E+03		6.3E+04		1.5E+09		1.0E+03		9.0E+02		5.3E+04		3.3E+09		1.0E+03	
VOC	1,1-Dichloroethane	75-34-3	C	43	2	4.18E-04	1.20E-03	2.70E-04	2.10E-02		4.3E+02	2.8E-06	2.5E+03	4.5E-07	1.5E+07	8.0E-11	8.9E+02	1.3E-06	2.3E+02	5.2E-06	2.1E+03	5.7E-07	3.3E+07	3.6E-11	8.9E+02	1.3E-06
VOC	1,2-Dichloroethane	107-06-2	B2	43				3.80E-04	1.70E-02		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00		1.2E+05		9.1E+01	
VOC	1,1-Dichloroethene	75-35-4	C	43	1	5.55E-04	5.55E-04	4.70E-04	2.60E-02		3.3E-01	1.7E-03	3.7E+00	1.5E-04	7.8E+04	7.1E-09	5.7E+02	9.7E-07	6.2E-02	9.0E-03	1.1E+00	5.0E-04	6.2E+04	9.0E-09	2.0E+02	2.8E-06
VOC	cis-1,2-Dichloroethene	156-59-2	D	43				3.00E-04	2.40E-02		4.1E+01		2.0E+02		1.0E+06		6.4E+02		2.2E+01		1.8E+02		2.3E+06		6.4E+02	
VOC	trans-1,2-Dichloroethene	156-60-5		43				3.40E-04	2.70E-02		4.3E+01		3.2E+02		2.1E+06		1.4E+03		2.3E+01		2.8E+02		4.7E+06		1.4E+03	
VOC	1,2-Dichloropropane	78-87-5	B2	43				3.00E-04	1.40E-02		7.4E+00		5.0E+01		1.2E+05		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	43				3.90E-04	1.80E-02		5.4E+00		6.0E+01		3.5E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	Ethyl Benzene	100-41-4	D	43				3.70E-04	2.10E-02		1.4E+02		2.4E+03		1.3E+07		1.4E+02		8.7E+01		7.2E+02		1.0E+07		1.4E+02	
VOC	2-Hexanone	591-78-6		43				1.00E-03	4.60E-02		1.8E+03		3.3E+03		1.2E+06		2.5E+03		9.9E+02		1.1E+03		2.7E+06		2.5E+03	
VOC	Methyl Acetate	79-20-9		43	1	2.60E+00	2.60E+00	9.20E-04	1.50E-02																	
VOC	Methyl tert-butyl ether	1634-04-4		43				2.70E-04	2.90E-02		5.9E+03		7.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	43	1	9.50E-04	9.50E-04	8.00E-04	4.40E-02		2.7E+03	3.5E-07	1.3E+04	1.8E-08	6.0E+07	1.6E-11	2.7E+03	3.5E-07	2.7E+03	3.5E-07	4.5E+04	2.1E-08	1.4E+08	6.8E-12	2.7E+03	3.5E-07
VOC	Methylcyclohexane	108-87-2		43	4	5.50E-04	5.60E-02	3.90E-04	1.50E-02																	
VOC	Methylene Chloride	75-09-2	B2	43	9	1.70E-03	1.30E-01	1.10E-03	7.30E-03		2.4E+02	5.4E-04	7.0E+02	1.9E-04	8.3E+06	1.6E-08	2.3E+03	5.7E-05	4.5E+01	2.9E-03	2.1E+02	6.2E-04	6.6E+06	2.0E-08	1.3E+03	1.0E-04
VOC	Styrene	100-42-5		43				2.90E-04	2.60E-02		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	43				3.70E-04	1.70E-02		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	43				4.60E-04	2.30E-02		6.0E+01		6.0E+02		6.8E+06		8.8E+01		1.1E+01		1.8E+02		5.4E+06		8.8E+01	
VOC	Toluene	108-88-3	D	43	9	4.50E-04	3.70E-02	3.20E-04	7.30E-03		2.5E+02	1.5E-04	3.3E+03	1.1E-05	1.2E+07	3.1E-09	2.5E+02	1.5E-04	2.5E+02	1.5E-04	2.8E+03	1.3E-05	2.7E+07	1.4E-09	2.5E+02	1.5E-04
VOC	1,2,4-Trichlorobenzene	120-82-1	D	43				3.60E-04	1.70E-02		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	43	2	6.20E-04	1.50E-03	3.70E-04	1.50E-02		4.6E+02	3.3E-06	4.5E+03	3.3E-07	2.9E+07	5.2E-11	4.6E+02	3.3E-06	2.5E+02	6.0E-06	3.8E+03	3.9E-07	6.7E+07	2.2E-11	4.6E+02	3.3E-06
VOC	1,1,2-Trichloroethane	79-00-5	C	43				3.20E-04	2.40E-02		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01		1.9E+05		1.8E+02	
VOC	Trichloroethene	79-01-6	C-B2	43	1	4.08E-03	4.08E-03	4.70E-04	2.60E-02		3.7E+01	1.1E-04	2.6E+02	1.6E-05	2.3E+06	1.8E-09	5.0E+02	8.2E-06	7.1E+00	5.7E-04	7.8E+01	5.2E-05	1.8E+06	2.3E-09	5.0E+02	8.2E-06
VOC	Trichlorofluoromethane	75-69-4		43	1	8.40E-04	8.40E-04	3.40E-04	2.90E-02		5.6E+02	1.5E-06	1.1E+05	7.6E-09	1.7E+09	4.9E-13	5.6E+02	1.5E-06	5.6E+02	1.5E-06	9.2E+04	9.1E-09	3.8E+09	2.2E-13	5.6E+02	1.5E-06
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		43	2	6.90E-03	8.20E-03	6.80E-04	5.70E-02		5.5E+02	1.5E-05	2.1E+05	3.9E-08	2.3E+09	3.6E-12	5.5E+02	1.5E-05	5.5E+02	1.5E-05	1.8E+05	4.6E-08	5.1E+09	1.6E-12	5.5E+02	1.5E-05
VOC	Vinyl Chloride	75-01-4	A	43				4.10E-04	1.70E-02		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00		3.5E+05		3.8E+00	
VOC	Xylenes (total)	1330-20-7	ID	43	1	6.30E-02	6.30E-02	1.10E-03	1.50E-02		1.5E+02	4.2E-04	5.4E+04	1.2E-06	1.3E+08	4.8E-10	1.5E+02	4.2E-04	1.5E+02	4.2E-04	4.6E+04	1.4E-06	2.9E+08	2.2E-10	1.5E+02	4.2E-04
SVOC	Acenaphthene	83-32-9		43	7	3.10E-02	2.20E+00	1.90E-02	1.10E+00		3.5E+05	6.3E-06	9.7E+04	2.3E-05	6.2E+06	3.5E-07	1.3E+05	1.7E-05	1.9E+05	1.2E-05	8.1E+04	2.7E-05	1.4E+07	1.6E-07	4.1E+04	5.4E-05
SVOC	Acenaphthylene	208-96-8	D	42				1.90E-02	4.10E+00		3.0E+03		2.7E+03		1.0E+06		5.2E+03		1.6E+03		2.2E+03		2.3E+06		1.6E+03	
SVOC	Acetophenone	98-86-2	D	43				1.80E-02	4.10E+00		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	Anthracene	120-12-7	D	43	13	2.10E-02	3.40E+00	1.80E-02	1.00E+00		1.0E+06	3.4E-06	1.6E+06	2.1E-06	2.9E+07	1.2E-07	7.3E+05	4.7E-06	1.0E+06	3.4E-06	1.4E+06	2.4E-06	6.7E+07	5.1E-08	2.3E+05	1.5E-05
SVOC	Atrazine	1912-24-9		43				1.80E-02	4.10E+00								3.3E+02								7.1E+01	
SVOC	Benzaldehyde	100-52-7		43				2.20E-02	4.10E+00																	
SVOC	Benzo(a)anthracene	56-55-3	B2	43	21	1.80E-02	1.20E+01	1.70E-02	1.20E+00								8.0E+01	1.5E-01							2.0E+01	6.0E-01
SVOC	Benzo(a)pyrene	50-32-8	B2	43	19	2.70E-02	8.80E+00	1.80E-02	1.30E+00						1.9E+03	4.6E-03	8.0E+00	**1.1E+00**					1.5E+03	5.9E-03	2.0E+00	**4.4E+00**
SVOC	Benzo(b)fluoranthene	205-99-2	B2	43	22	4.00E-02	1.00E+01	2.10E-02	1.20E+00								8.0E+01	1.3E-01							2.0E+01	5.0E-01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	43	19	2.40E-02	4.80E+00	2.30E-02	1.20E+00						3.5E+05	1.4E-05	7.0E+03	6.9E-04					8.0E+05	6.0E-06	2.5E+03	1.9E-03
SVOC	Benzo(k)fluoranthene	207-08-9	B2	43	16	2.00E-02	4.50E+00	1.80E-02	1.10E+00								8.0E+02	5.6E-03							2.0E+02	2.3E-02
SVOC	Biphenyl	92-52-4	D	43	5	6.80E-02	3.00E-01	2.20E-02	4.10E+00																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	43				1.70E-02	4.10E+00																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	43				1.80E-02	4.10E+00		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	43	13	9.20E-02	5.30E+01	2.30E-02	4.10E+00						8.9E+05	6.0E-05	1.0E+04	5.3E-03					7.0E+05	7.6E-05	2.8E+03	1.9E-02
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	43				1.90E-02	4.10E+00																	
SVOC	Butylbenzylphthalate	85-68-7	C	43	8	3.60E-02	2.80E+01	1.70E-02	4.10E+00						2.1E+07	1.3E-06	3.1E+02	9.0E-02					4.7E+07	6.0E-07	3.1E+02	9.0E-02
SVOC	Caprolactam	105-60-2		43				2.20E-02	4.10E+00						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	43	7	5.40E-02	1.40E+00	2.30E-02	1.10E+00								2.4E+03	5.8E-04							5.3E+02	2.6E-03
SVOC	4-Chloro-3-methylphenol	59-50-7		43				1.80E-02	4.10E+00								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		43				6.30E-03	1.60E+01																	
SVOC	2-Chloronaphthalene	91-58-7		43				1.90E-02	4.10E+00								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		43				1.80E-02	4.10E+00								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		42				1.90E-02	4.10E+00																	
SVOC	Chrysene	218-01-9	B2	43	21	3.10E-02	1.40E+01	1.70E-02	9.80E-01								8.0E+03	1.8E-03							2.0E+03	7.0E-03
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	43	9	6.40E-02	1.40E+00	2.20E-02	1.10E+00								8.0E+00	1.8E-01							2.0E+00	7.0E-01
SVOC	Dibenzofuran	132-64-9	D	43	13	2.00E-02	1.00E+00	1.90E-02	1.10E+00																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	43				9.50E-03	2.50E+01						6.2E+03		3.0E+01						6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		43				1.60E-02	4.10E+00						2.3E+06		1.8E+03						5.1E+06		6.6E+02	
SVOC	Diethylphthalate	84-66-2	D	43				2.10E-02	4.10E+00						1.5E+06		7.4E+02						3.3E+06		7.4E+02	
SVOC	2,4-Dimethylphenol	105-67-9		43	1	6.20E-02	6.20E-02	3.30E-02	4.10E+00						2.1E+06	3.0E-08	3.6E+04	1.7E-06					4.7E+06	1.3E-08	1.1E+04	5.6E-06

Confidential under FOIA
Lowell McBurney
Arcadis
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Confidential under FOIA
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TABLE 4-10
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI W-9 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Dimethylphthalate	131-11-3	D	43				1.90E-02	4.10E+00						1.5E+06		7.9E+02							3.3E+06		7.9E+02	
SVOC	Di-n-butylphthalate	84-74-2	D	43				2.40E-02	4.10E+00						1.5E+06		7.6E+02							3.3E+06		7.6E+02	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		42				7.50E-02	2.10E+01								2.6E+02									7.9E+01	
SVOC	2,4-Dinitrophenol	51-28-5		42				1.00E-01	2.10E+01																		
SVOC	2,4-Dinitrotoluene	121-14-2	B2	43				1.80E-02	4.10E+00						2.0E+04		2.2E+02							1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	42				1.80E-02	4.10E+00																		
SVOC	Di-n-octylphthalate	117-84-0		43	1	2.90E+00	2.90E+00	1.80E-02	4.10E+00								2.0E+04	1.5E-04								6.9E+03	4.2E-04
SVOC	Fluoranthene	206-44-0	D	43	22	2.80E-02	2.80E+01	2.40E-02	1.20E+00		1.0E+06	2.8E-05	8.9E+05	3.1E-05	4.1E+06	6.8E-06	1.3E+05	2.2E-04	1.0E+06	2.8E-05	7.4E+05	3.8E-05	9.3E+06	3.0E-06	4.6E+04	6.1E-04
SVOC	Fluorene	86-73-7	D	42	6	7.30E-02	1.50E+00	2.10E-02	1.00E+00		1.0E+06	1.5E-06	1.5E+05	1.0E-05	4.1E+06	3.7E-07	8.7E+04	1.7E-05	5.8E+05	2.6E-06	1.3E+05	1.2E-05	9.3E+06	1.6E-07	2.7E+04	5.6E-05
SVOC	Hexachlorobenzene	118-74-1	B2	43				1.80E-02	4.10E+00		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	43				1.70E-02	4.10E+00		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	43				1.50E-02	4.10E+00		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	43				1.80E-02	1.20E+00		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	43	15	2.40E-02	4.50E+00	2.30E-02	1.50E+00								8.0E+01	5.6E-02							2.0E+01	2.3E-01
SVOC	Isophorone	78-59-1	C	43				1.90E-02	4.10E+00						8.2E+06		2.4E+03							1.2E+07		2.4E+03	
SVOC	2-Methylnaphthalene	91-57-6	ID	42	17	2.70E-02	8.70E-01	1.80E-02	1.00E+00								2.6E+04	3.3E-05							8.1E+03	1.1E-04
SVOC	Methylphenol (total)	1319-77-3		43	1	1.11E-01	1.11E-01	1.50E-02	4.10E+00						2.9E+06	3.8E-08	3.6E+04	3.1E-06						6.7E+06	1.7E-08	1.1E+04	1.0E-05
SVOC	Naphthalene	91-20-3	C	42	15	2.70E-02	7.90E-01	1.90E-02	1.00E+00		4.7E+02	1.7E-03	3.5E+02	2.3E-03	9.8E+04	9.0E-06	5.2E+04	1.5E-05	2.5E+02	3.2E-03	3.0E+02	2.6E-03	2.0E+05	4.0E-06	1.6E+04	4.9E-05
SVOC	2-Nitroaniline	88-74-4		43				1.90E-02	2.10E+01																		
SVOC	3-Nitroaniline	99-09-2	C	43				1.20E-02	2.10E+01																		
SVOC	4-Nitroaniline	100-01-6	C	43				1.80E-02	2.10E+01																		
SVOC	Nitrobenzene	98-95-3	D	43				1.80E-02	4.10E+00		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		43				1.60E-02	4.10E+00								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		43				1.10E-01	2.10E+01																		
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	43				2.10E-02	4.10E+00								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	43				1.90E-02	4.10E+00						2.0E+03		5.4E+00							1.6E+03		1.2E+00	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	43				1.90E-02	4.10E+00																		
SVOC	Pentachlorophenol	87-86-5	B2	34				8.90E-02	4.20E+01						3.3E+02		3.2E+02							1.0E+05		9.0E+01	
SVOC	Phenanthrene	85-01-8	D	43	22	3.50E-02	1.60E+01	2.10E-02	1.10E+00		5.1E+03	3.1E-03	1.9E+02	8.4E-02	2.9E+03	5.5E-03	5.2E+03	3.1E-03	2.8E+03	5.7E-03	1.6E+02	1.0E-01	6.7E+03	2.4E-03	1.6E+03	1.0E-02
SVOC	Phenol	108-95-2	ID	43	4	6.10E-02	1.13E+00	1.80E-02	4.10E+00						1.8E+07	6.3E-08	1.2E+04	9.4E-05					4.0E+07	2.8E-08	1.2E+04	9.4E-05
SVOC	Pyrene	129-00-0	D	43	24	2.00E-02	2.80E+01	1.70E-02	1.10E+00		1.0E+06	2.8E-05	1.8E+05	3.6E-05	2.9E+06	9.7E-06	8.4E+04	3.3E-04	1.0E+06	2.8E-05	6.5E+05	4.3E-05	6.7E+06	4.2E-06	2.9E+04	9.7E-04
SVOC	2,4,5-Trichlorophenol	95-95-4		43				2.20E-02	4.10E+00						1.0E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	43				1.70E-02	4.10E+00						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
P/PCB	PCBs (total)	1336-36-3	B2	387	255	1.08E-02	3.95E+02	3.00E-03	4.10E-02		1.6E+04	2.5E-02	1.1E+02	4.9E-01	6.5E+03	6.1E-02	1.6E+01	**2.5E+01**	3.0E+03	1.3E-01	2.4E+02	**1.6E+00**	5.2E+03	7.6E-02	4.0E+00	**9.9E+01**
INORG	Antimony	7440-36-0		43	32	1.27E-01	6.26E+00	5.12E-01	2.54E+00						5.9E+03	1.1E-03	6.7E+02	9.3E-03					1.3E+04	4.8E-04	1.8E+02	3.5E-02
INORG	Arsenic	7440-38-2	A	44	44	1.01E+00	1.92E+01			1.3E+01					9.1E+02	6.6E-03	3.7E+01	1.6E-01					7.2E+02	8.3E-03	7.6E+00	7.9E-01
INORG	Barium	7440-39-3	D	43	43	3.74E+00	3.78E+02			1.1E+02					1.5E+05	1.8E-03	1.3E+05	2.1E-03					3.3E+05	8.1E-04	3.7E+04	7.2E-03
INORG	Beryllium	7440-41-7	B1	43	23	5.15E-02	5.90E-01	3.49E-02	1.24E-01	1.5E+00					5.9E+02		1.6E+03						1.3E+03		4.1E+02	
INORG	Cadmium	7440-43-9	B1	43	32	2.44E-02	5.86E+00	8.40E-03	4.86E-02	1.2E+00					2.2E+03	2.1E-03	2.1E+03	2.2E-03					1.7E+03	2.7E-03	5.5E+02	8.5E-03
INORG	Chromium (total)	7440-47-3		44	44	2.89E+00	5.23E+02			4.9E+01					2.4E+02	**2.0E+00**	9.2E+03	5.1E-02					2.6E+02	**1.8E+00**	2.5E+03	1.9E-01
INORG	Chromium III	16065-83-1	D	1	1	1.94E+02	1.94E+02								1.5E+05	1.3E-03	1.0E+06	1.9E-04					3.3E+05	5.9E-04	7.9E+05	2.5E-04
INORG	Chromium VI	18540-29-9	A	1	1	6.38E-01	6.38E-01								2.4E+02	2.7E-03	9.2E+03	6.9E-05					2.6E+02	2.5E-03	2.5E+03	2.6E-04
INORG	Cobalt	7440-48-4	B1	43	43	7.76E-01	1.41E+01			1.7E+01					5.9E+03		9.0E+03						1.3E+04		2.6E+03	
INORG	Copper	7440-50-8	D	43	43	2.31E+00	4.60E+02			3.2E+01					5.9E+04	7.3E-03	7.3E+04	5.9E-03					1.3E+05	3.3E-03	2.0E+04	2.1E-02
INORG	Cyanide (total)	57-12-5	D	4	2	2.60E-01	6.12E-01	1.80E-01	1.87E-01						2.5E+02	2.4E-03	2.5E+02	2.4E-03					2.5E+02	2.4E-03	1.2E+01	5.1E-02
INORG	Lead	7439-92-1	B2	43	43	3.16E+00	4.29E+02			4.9E+01					4.4E+04	8.6E-03	9.0E+02	4.2E-01					1.0E+05	3.8E-03	4.0E+02	9.5E-01
INORG	Manganese	7439-96-5	D	46	46	1.09E+02	4.82E+03			5.1E+02					1.5E+03	**2.9E+00**	9.0E+04	4.8E-02					3.3E+03	**1.3E+00**	2.5E+04	1.7E-01
INORG	Mercury	7439-97-6	D	43	30	1.07E-02	3.28E-01	8.80E-03	1.88E-02	1.3E-01	8.9E+01	2.2E-03	6.2E+01	3.2E-03	8.8E+03	2.3E-05	5.8E+02	3.4E-04	4.8E+01	4.1E-03	5.2E+01	3.8E-03	2.0E+04	9.9E-06	1.6E+02	1.2E-03
INORG	Nickel	7440-02-0	A	43	43	2.08E+00	1.54E+02			3.0E+01					1.6E+04	7.7E-03	1.5E+05	8.3E-04					1.3E+04	9.5E-03	4.0E+04	3.1E-03
INORG	Selenium	7782-49-2	D	43	4	2.56E-01	1.71E+00	2.21E-01	6.18E+00	4.1E-01					5.9E+04	2.2E-05	9.6E+03	1.4E-04					1.3E+05	1.0E-05	2.6E+03	5.0E-04
INORG	Silver	7440-22-4	D	43	9	2.29E-01	6.53E-01	4.24E-02	6.14E-01						2.9E+03	2.3E-04	9.0E+03	7.3E-05					6.7E+03	9.7E-05	2.5E+03	2.6E-04
INORG	Thallium	7440-28-0		43	15	3.88E-01	3.32E+00	2.31E-01	1.24E+01								1.3E+02	2.6E-02							3.5E+01	9.5E-02
INORG	Vanadium	7440-62-2		43	43	4.48E+00	2.32E+01			3.3E+01							5.5E+03								7.5E+02	
INORG	Zinc	7440-66-6	D	43	43	5.19E+00	2.34E+03			1.9E+02							6.3E+05	3.4E-03							1.7E+05	1.3E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

Confidential under FOIA
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TABLE 4-17A
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-09 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	6	2	1.50E-02	3.50E-02	5.10E-04	6.60E-04	1.0E+06	3.5E-08	3.1E+04	1.1E-06	7.3E-01	4.8E-02
Shallow	VOC	Benzene	71-43-2	T	A	6	1	2.85E-04	2.85E-04	1.60E-04	1.00E-03	3.5E+03	8.1E-06	1.1E+01	2.6E-05	5.0E-03	5.7E-02
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	6				1.70E-04	1.00E-03	3.7E+01		1.4E+01		1.0E-01	
Shallow	VOC	Bromoform	75-25-2	T	B2	6				1.80E-04	1.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	6				1.60E-04	1.00E-03	9.8E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	6	1	2.05E-03	2.05E-03	3.60E-04	1.00E-02	2.4E+05	8.5E-09	2.4E+05	8.5E-09	1.3E+01	1.6E-04
Shallow	VOC	Carbon Disulfide	75-15-0	T		6	1	1.40E-03	1.40E-03	2.00E-04	1.00E-03	5.5E+02	2.5E-06	1.2E+03	1.2E-06	8.0E-01	1.8E-03
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.20E-04	1.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	6				1.40E-04	1.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		6				2.20E-04	1.00E-03	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	6				1.40E-04	1.00E-03	1.8E+02		1.5E+02		1.0E-01	
Shallow	VOC	Chloromethane	74-87-3	T	D	6				1.30E-04	1.00E-03	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	6	1	2.55E-04	2.55E-04	1.60E-04	1.00E-03	5.6E+01	4.6E-06	5.6E+01	4.6E-06	8.0E-01	3.2E-04
Shallow	VOC	Cyclohexane	110-82-7	T	ID	6	1	7.90E-04	7.90E-04	1.30E-04	1.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				5.30E-04	2.00E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	6				2.50E-04	1.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	1.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.10E-04	1.00E-03	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				1.50E-04	1.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.60E-04	1.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		6				2.30E-04	2.00E-03	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	6				1.60E-04	1.00E-03	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.10E-04	1.00E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.20E-04	1.00E-03	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	6				2.20E-04	5.00E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		6				1.50E-04	5.00E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.70E-04	1.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				1.50E-04	1.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	6				1.20E-04	1.00E-03	1.7E+02		1.7E+02		7.0E-01	
Shallow	VOC	2-Hexanone	591-78-6	T		6				3.10E-04	1.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		6				4.10E-04	1.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		6				1.30E-04	5.00E-03	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	4	1	2.55E-03	2.55E-03	2.30E-04	1.00E-02	2.0E+04	1.3E-07	1.3E+04	2.0E-07	1.8E+00	1.4E-03
Shallow	VOC	Methylcyclohexane	108-87-2	T		6	1	8.55E-04	8.55E-04	1.50E-04	1.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	6				2.80E-04	1.00E-03	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		6				1.50E-04	1.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.30E-04	1.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	6				1.20E-04	1.00E-03	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	6	1	2.75E-04	2.75E-04	1.70E-04	1.00E-03	5.3E+02	5.2E-07	5.3E+02	5.2E-07	1.0E+00	2.8E-04
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				1.50E-04	1.00E-03	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6	1	2.50E-04	2.50E-04	1.80E-04	1.00E-03	1.3E+03	1.9E-07	1.3E+03	1.9E-07	2.0E-01	1.3E-03
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				2.10E-04	1.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	6				1.40E-04	1.00E-03	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		6	2	9.50E-04	2.20E-03	2.50E-04	2.50E-04	1.1E+03	2.0E-06	1.1E+03	2.0E-06	2.6E+00	8.5E-04
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		6				2.30E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	6				1.50E-04	1.00E-03	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	6	1	1.25E-03	1.25E-03	3.30E-04	1.00E-03	1.9E+02	6.6E-06	1.9E+02	6.6E-06	1.0E+01	1.3E-04
Shallow	SVOC	Acenaphthene	83-32-9	T		6				6.90E-04	5.00E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	6				4.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	6				6.50E-04	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	6				5.30E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		6				3.50E-04	5.00E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		6				1.00E-03	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				6.80E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				5.30E-04	5.00E-03			2.0E-03		5.0E-03	

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TABLE 4-17A
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-09 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				7.00E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				7.00E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				6.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	6				6.50E-04	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	6				9.70E-04	8.50E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6	1	5.80E-04	5.80E-04	2.00E-04	5.00E-03			3.2E-01	1.8E-03	6.0E-03	9.7E-02
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				7.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				2.30E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		6				4.50E-04	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	6				6.10E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				5.50E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		5				9.60E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		6				7.30E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		6				1.00E-03	6.50E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				6.60E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	6				6.70E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				6.80E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	6				6.60E-04	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	5				4.70E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		6				7.00E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	6				2.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		6	1	1.04E-02	1.04E-02	8.50E-04	5.00E-03			5.2E+02	2.0E-05	3.7E-01	2.8E-02
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	6				2.00E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				3.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				4.60E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		6				6.90E-04	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	6				7.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	6				7.50E-04	5.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	6				7.30E-04	7.50E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	6				1.10E-03	5.50E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	6				7.40E-04	8.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	6				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	6				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		6				9.00E-04	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	6				7.50E-04	6.50E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		6				4.90E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	5				4.80E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	6				5.90E-04	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	6				8.10E-04	6.50E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		6				9.50E-04	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		6				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				6.40E-04	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				6.70E-04	5.50E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				7.80E-04	9.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	6				2.40E-03	1.30E-02			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	6				6.80E-04	5.00E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	6				1.20E-03	6.50E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	6				6.30E-04	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				8.60E-04	5.00E-03			1.7E+02		7.3E-01	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-09 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				7.10E-04	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	6				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		2				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Antimony	7440-36-0	T		6				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Arsenic	7440-38-2	D	A	2				3.90E-03	1.00E-02			4.3E+00		5.0E-02	
Shallow	INORG	Arsenic	7440-38-2	T	A	6	3	3.70E-03	1.54E-02	2.90E-03	1.00E-02			4.3E+00	3.6E-03	5.0E-02	3.1E-01
Shallow	INORG	Barium	7440-39-3	D	D	2	2	5.40E-02	1.47E-01					1.4E+04	1.1E-05	2.0E+00	7.4E-02
Shallow	INORG	Barium	7440-39-3	T	D	6	6	1.73E-02	4.20E-01					1.4E+04	3.0E-05	2.0E+00	2.1E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	6				4.70E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	2				2.80E-04	5.00E-03			1.9E+02		5.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	6				2.80E-04	5.00E-03			1.9E+02		5.0E-03	
Shallow	INORG	Chromium (total)	7440-47-3	D		2	1	1.04E-02	1.04E-02	1.00E-02	1.00E-02			4.6E+02	2.3E-05	1.0E-01	1.0E-01
Shallow	INORG	Chromium (total)	7440-47-3	T		6	2	1.32E-02	5.68E-02	1.00E-03	1.00E-02			4.6E+02	1.2E-04	1.0E-01	5.7E-01
Shallow	INORG	Cobalt	7440-48-4	D	B1	2	1	1.40E-03	1.40E-03	1.30E-03	1.30E-03			2.4E+03	5.8E-07	4.0E-02	3.5E-02
Shallow	INORG	Cobalt	7440-48-4	T	B1	6	3	2.35E-03	2.90E-03	1.10E-03	1.30E-03			2.4E+03	1.2E-06	4.0E-02	7.3E-02
Shallow	INORG	Copper	7440-50-8	D	D	2				4.20E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Copper	7440-50-8	T	D	6	1	2.80E-03	2.80E-03	1.80E-03	5.00E-03			7.4E+03	3.8E-07	1.4E+00	2.0E-03
Shallow	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	6	1	3.91E-02	3.91E-02	2.30E-03	3.00E-03					4.0E-03	**9.8E+00**
Shallow	INORG	Manganese	7439-96-5	D	D	2	2	1.98E-02	2.42E-01					9.1E+03	2.7E-05	8.6E-01	2.8E-01
Shallow	INORG	Manganese	7439-96-5	T	D	6	6	1.65E-02	6.50E-01					9.1E+03	7.4E-05	8.6E-01	7.8E-01
Shallow	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	6	1	8.60E-05	8.60E-05	6.70E-05	2.00E-04	5.6E-02	1.5E-03	5.6E-02	1.5E-03	2.0E-03	4.3E-02
Shallow	INORG	Nickel	7440-02-0	D	A	2	1	2.20E-03	2.20E-03	2.20E-03	2.20E-03			7.4E+04	3.0E-08	1.0E-01	2.2E-02
Shallow	INORG	Nickel	7440-02-0	T	A	6	3	3.80E-03	3.85E-02	2.10E-03	2.20E-03			7.4E+04	5.2E-07	1.0E-01	3.9E-01
Shallow	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	6				3.90E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	2				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	6				1.10E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		2	2	3.80E-05	5.30E-03					1.3E+01	4.1E-04	2.0E-03	**2.7E+00**
Shallow	INORG	Thallium	7440-28-0	T		6	1	1.24E-02	1.24E-02	1.50E-05	1.80E-05			1.3E+01	9.5E-04	2.0E-03	**6.2E+00**
Shallow	INORG	Vanadium	7440-62-2	D		2				8.20E-04	1.00E-02			9.7E+02		4.5E-03	
Shallow	INORG	Vanadium	7440-62-2	T		6	2	1.90E-03	4.50E-03	8.20E-04	1.00E-02			9.7E+02	4.6E-06	4.5E-03	1.0E+00
Shallow	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	2.00E-02			1.1E+05		2.4E+00	
Shallow	INORG	Zinc	7440-66-6	T	D	6	1	5.44E-02	5.44E-02	1.20E-02	2.00E-02			1.1E+05	4.9E-07	2.4E+00	2.3E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-4.5
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-09 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	VOC	Acetone	67-64-1	T	ID	6	2	6.60E-04	1.60E-03	1.10E-03	1.10E-03	2.1E+00	7.6E-04	7.3E-01	2.2E-03
Deep	VOC	Benzene	71-43-2	T	A	6				1.60E-04	3.70E-04	5.0E-03		5.0E-03	
Deep	VOC	Bromodichloromethane	75-27-4	T	B2	6				1.70E-04	3.20E-04	1.0E-01		1.0E-01	
Deep	VOC	Bromoform	75-25-2	T	B2	6				1.80E-04	3.70E-04	1.0E-01		1.0E-01	
Deep	VOC	Bromomethane	74-83-9	T	D	6				2.00E-04	3.00E-04	2.9E-02		1.0E-02	
Deep	VOC	2-Butanone	78-93-3	T	ID	6				4.10E-04	5.90E-04	3.8E+01		1.3E+01	
Deep	VOC	Carbon Disulfide	75-15-0	T		6	3	2.40E-04	9.30E-04	2.40E-04	2.40E-04	2.3E+00	4.0E-04	8.0E-01	1.2E-03
Deep	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.20E-04	3.70E-04	5.0E-03		5.0E-03	
Deep	VOC	Chlorobenzene	108-90-7	T	D	6				1.40E-04	3.80E-04	1.0E-01		1.0E-01	
Deep	VOC	Chloroethane	75-00-3	T		6				2.60E-04	2.90E-04	1.7E+00		4.3E-01	
Deep	VOC	Chloroform	67-66-3	T	B2	6	1	2.80E-04	2.80E-04	1.30E-04	3.50E-04	1.0E-01	2.8E-03	1.0E-01	2.8E-03
Deep	VOC	Chloromethane	74-87-3	T	D	6				1.30E-04	4.90E-04	1.1E+00		2.6E-01	
Deep	VOC	Cumene	98-82-8	T	D	6				1.20E-04	3.90E-04	2.3E+00		8.0E-01	
Deep	VOC	Cyclohexane	110-82-7	T	ID	6				1.30E-04	3.90E-04				
Deep	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				6.20E-04	8.20E-04	2.0E-04		2.0E-04	
Deep	VOC	Dibromochloromethane	124-48-1	T	C	6				2.60E-04	3.70E-04	1.0E-01		1.0E-01	
Deep	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	3.40E-04	1.0E-03		1.0E-03	
Deep	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.10E-04	3.80E-04	6.0E-01		6.0E-01	
Deep	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				1.50E-04	3.80E-04	1.9E-02		6.6E-03	
Deep	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.70E-04	3.80E-04	7.5E-02		7.5E-02	
Deep	VOC	Dichlorodifluoromethane	75-71-8	T		6				2.60E-04	4.90E-04	4.8E+00		1.7E+00	
Deep	VOC	1,1-Dichloroethane	75-34-3	T	C	6				1.60E-04	3.00E-04	2.5E+00		8.8E-01	
Deep	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.10E-04	2.80E-04	5.0E-03		5.0E-03	
Deep	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.40E-04	3.10E-04	7.0E-03		7.0E-03	
Deep	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	6				2.20E-04	3.50E-04	7.0E-02		7.0E-02	
Deep	VOC	trans-1,2-Dichloroethene	156-60-5	T		6				1.50E-04	3.30E-04	1.0E-01		1.0E-01	
Deep	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.70E-04	4.10E-04	5.0E-03		5.0E-03	
Deep	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				2.70E-04	3.50E-04	3.5E-02		8.5E-03	
Deep	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	4.10E-04	7.0E-01		7.0E-01	
Deep	VOC	2-Hexanone	591-78-6	T		6				4.60E-04	5.80E-04	2.9E+00		1.0E+00	
Deep	VOC	Methyl Acetate	79-20-9	T		6				4.10E-04	5.40E-04				
Deep	VOC	Methyl tert-butyl ether	1634-04-4	T		6	4	2.40E-04	5.20E-03	2.70E-04	2.70E-04	6.9E-01	7.5E-03	2.4E-01	2.2E-02
Deep	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	6				2.30E-04	2.60E-04	5.2E+00		1.8E+00	
Deep	VOC	Methylcyclohexane	108-87-2	T		6				1.50E-04	4.20E-04				
Deep	VOC	Methylene Chloride	75-09-2	T	B2	7	1	1.80E-02	1.80E-02	2.80E-04	3.40E-04	5.0E-03	**3.6E+00**	5.0E-03	**3.6E+00**
Deep	VOC	Styrene	100-42-5	T		6				1.50E-04	3.50E-04	1.0E-01		1.0E-01	
Deep	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.50E-04	3.60E-04	3.5E-02		8.5E-03	
Deep	VOC	Tetrachloroethene	127-18-4	T	C-B2	6				2.30E-04	4.20E-04	5.0E-03		5.0E-03	
Deep	VOC	Toluene	108-88-3	T	D	6				1.80E-04	3.90E-04	1.0E+00		1.0E+00	
Deep	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				1.70E-04	4.00E-04	7.0E-02		7.0E-02	
Deep	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6				1.50E-04	3.90E-04	2.0E-01		2.0E-01	
Deep	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				3.00E-04	3.60E-04	5.0E-03		5.0E-03	
Deep	VOC	Trichloroethene	79-01-6	T	C-B2	6				1.40E-04	4.20E-04	5.0E-03		5.0E-03	
Deep	VOC	Trichlorofluoromethane	75-69-4	T		6				2.80E-04	5.40E-04	7.3E+00		2.6E+00	
Deep	VOC	1,1,2-Trichloro-1,2,2-trifluoroeth	76-13-1	T		6				3.20E-04	3.20E-04	1.7E+02		1.7E+02	
Deep	VOC	Vinyl Chloride	75-01-4	T	A	6				1.50E-04	3.60E-04	2.0E-03		2.0E-03	
Deep	VOC	Xylenes (total)	1330-20-7	T	ID	6				3.30E-04	4.40E-04	1.0E+01		1.0E+01	
Deep	SVOC	Acenaphthene	83-32-9	T		6				8.00E-04	8.00E-04	3.8E+00		1.3E+00	
Deep	SVOC	Acenaphthylene	208-96-8	T	D	6				7.10E-04	7.10E-04	1.5E-01		5.2E-02	
Deep	SVOC	Acetophenone	98-86-2	T	D	6				2.60E-03	2.60E-03	4.4E+00		1.5E+00	
Deep	SVOC	Anthracene	120-12-7	T	D	6				6.80E-04	6.80E-04	4.3E-02		4.3E-02	
Deep	SVOC	Atrazine	1912-24-9	T		6				2.50E-03	2.50E-03	3.0E-03		3.0E-03	
Deep	SVOC	Benzaldehyde	100-52-7	T		6				2.80E-03	2.80E-03				
Deep	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				7.00E-04	7.00E-04	8.5E-03		2.1E-03	
Deep	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				7.30E-04	7.30E-04	5.0E-03		5.0E-03	

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TABLE 4-4.5
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-09 (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				9.40E-04	9.40E-04	2.0E-03		2.0E-03	
Deep	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				8.50E-04	8.50E-04	5.0E-03		5.0E-03	
Deep	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				8.40E-04	8.40E-04	5.0E-03		5.0E-03	
Deep	SVOC	Biphenyl	92-52-4	T	D	6				2.60E-03	2.60E-03				
Deep	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				8.70E-04	8.70E-04				
Deep	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	5				9.70E-04	9.70E-04	8.3E-03		2.0E-03	
Deep	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6				2.70E-03	2.70E-03	6.0E-03		6.0E-03	
Deep	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				8.80E-04	8.80E-04				
Deep	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				8.80E-04	8.80E-04	2.7E+00		1.2E+00	
Deep	SVOC	Caprolactam	105-60-2	T		6	1	3.10E-03	3.10E-03	2.50E-03	2.50E-03	1.7E+01	1.8E-04	5.8E+00	5.3E-04
Deep	SVOC	Carbazole	86-74-8	T	B2	6				8.20E-04	8.20E-04	3.5E-01		8.5E-02	
Deep	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				9.90E-04	9.90E-04	4.2E-01		1.5E-01	
Deep	SVOC	4-Chloroaniline	106-47-8	T		6				6.10E-04	6.10E-04				
Deep	SVOC	2-Chloronaphthalene	91-58-7	T		6				8.50E-04	8.50E-04	5.2E+00		1.8E+00	
Deep	SVOC	2-Chlorophenol	95-57-8	T		6				1.00E-03	1.00E-03	1.3E-01		4.5E-02	
Deep	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				7.90E-04	7.90E-04				
Deep	SVOC	Chrysene	218-01-9	T	B2	6				7.50E-04	7.50E-04	5.0E-03		5.0E-03	
Deep	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				7.90E-04	7.90E-04	2.0E-03		2.0E-03	
Deep	SVOC	Dibenzofuran	132-64-9	T	D	6				1.10E-03	1.10E-03				
Deep	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	6				9.30E-04	9.30E-04	4.3E-03		1.1E-03	
Deep	SVOC	2,4-Dichlorophenol	120-83-2	T		6				8.50E-04	8.50E-04	2.1E-01		7.3E-02	
Deep	SVOC	Diethylphthalate	84-66-2	T	D	6				6.50E-04	6.50E-04	1.6E+01		5.5E+00	
Deep	SVOC	2,4-Dimethylphenol	105-67-9	T		6				8.50E-04	8.50E-04	1.0E+00		3.7E-01	
Deep	SVOC	Dimethylphthalate	131-11-3	T	D	6				7.60E-04	7.60E-04	2.1E+02		7.3E+01	
Deep	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				6.70E-04	6.70E-04	2.5E+00		8.8E-01	
Deep	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				1.30E-03	1.30E-03	2.0E-02		2.0E-02	
Deep	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.00E-03	3.00E-03				
Deep	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				7.90E-04	7.90E-04	3.2E-02		7.7E-03	
Deep	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				5.70E-04	5.70E-04				
Deep	SVOC	Di-n-octylphthalate	117-84-0	T		6				1.10E-03	1.10E-03	3.8E-01		1.3E-01	
Deep	SVOC	Fluoranthene	206-44-0	T	D	6				8.10E-04	8.10E-04	2.1E-01		2.1E-01	
Deep	SVOC	Fluorene	86-73-7	T	D	6				1.00E-03	1.00E-03	2.0E+00		8.8E-01	
Deep	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.40E-04	7.40E-04	1.0E-03		1.0E-03	
Deep	SVOC	Hexachlorobutadiene	87-68-3	T	C	5				7.30E-04	7.30E-04	4.2E-02		1.5E-02	
Deep	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	5				1.10E-03	1.10E-03	5.0E-02		5.0E-02	
Deep	SVOC	Hexachloroethane	67-72-1	T	C	6				7.40E-04	7.40E-04	2.1E-02		7.3E-03	
Deep	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.30E-04	6.30E-04	2.0E-03		2.0E-03	
Deep	SVOC	Isophorone	78-59-1	T	C	6				6.30E-04	6.30E-04	3.1E+00		7.7E-01	
Deep	SVOC	2-Methylnaphthalene	91-57-6	T	ID	5				6.40E-04	6.40E-04	7.5E-01		2.6E-01	
Deep	SVOC	Methylphenol (total)	1319-77-3	T		6				1.30E-03	1.30E-03	1.0E+00		3.7E-01	
Deep	SVOC	Naphthalene	91-20-3	T	C	5				7.50E-04	7.50E-04	1.5E+00		5.2E-01	
Deep	SVOC	2-Nitroaniline	88-74-4	T		6				7.00E-04	7.00E-04				
Deep	SVOC	3-Nitroaniline	99-09-2	T	C	6				7.10E-04	7.10E-04				
Deep	SVOC	4-Nitroaniline	100-01-6	T	C	6				1.30E-03	1.30E-03				
Deep	SVOC	Nitrobenzene	98-95-3	T	D	6				8.10E-04	8.10E-04	9.6E-03		3.4E-03	
Deep	SVOC	2-Nitrophenol	88-75-5	T		6				2.10E-03	2.10E-03	5.8E-02		2.0E-02	
Deep	SVOC	4-Nitrophenol	100-02-7	T		6				1.90E-03	1.90E-03				
Deep	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				1.40E-03	1.40E-03	1.1E+00		2.7E-01	
Deep	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				6.70E-04	6.70E-04	5.0E-03		5.0E-03	
Deep	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				7.80E-04	7.80E-04				
Deep	SVOC	Pentachlorophenol	87-86-5	T	B2	6				2.40E-03	2.40E-03	1.0E-03		1.0E-03	
Deep	SVOC	Phenanthrene	85-01-8	T	D	6				8.20E-04	8.20E-04	1.5E-01		5.2E-02	
Deep	SVOC	Phenol	108-95-2	T	ID	6				2.60E-03	2.60E-03	1.3E+01		4.4E+00	
Deep	SVOC	Pyrene	129-00-0	T	D	6				1.10E-03	1.10E-03	1.4E-01		1.4E-01	
Deep	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				1.20E-03	1.20E-03	2.1E+00		7.3E-01	

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RCRA FACILITY INVESTIGATION

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Deep	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				1.70E-03	1.70E-03	4.7E-01		1.2E-01	
Deep	P/PCB	PCBs (total)	1336-36-3	T	B2	6				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
Deep	INORG	Antimony	7440-36-0	D		2	1	2.70E-03	2.70E-03	2.20E-03	2.20E-03	6.0E-03	4.5E-01	6.0E-03	4.5E-01
Deep	INORG	Antimony	7440-36-0	T		6	1	4.90E-03	4.90E-03	2.20E-03	3.40E-03	6.0E-03	8.2E-01	6.0E-03	8.2E-01
Deep	INORG	Arsenic	7440-38-2	D	A	2	2	5.20E-03	2.59E-02			5.0E-02	5.2E-01	5.0E-02	5.2E-01
Deep	INORG	Arsenic	7440-38-2	T	A	6	5	3.10E-03	3.95E-02	2.10E-03	2.10E-03	5.0E-02	7.9E-01	5.0E-02	7.9E-01
Deep	INORG	Barium	7440-39-3	D	D	2	2	9.89E-02	2.02E-01			2.0E+00	1.0E-01	2.0E+00	1.0E-01
Deep	INORG	Barium	7440-39-3	T	D	6	6	3.60E-02	5.85E-01			2.0E+00	2.9E-01	2.0E+00	2.9E-01
Deep	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	5.40E-04	4.0E-03		4.0E-03	
Deep	INORG	Beryllium	7440-41-7	T	B1	6				5.40E-04	6.00E-04	4.0E-03		4.0E-03	
Deep	INORG	Cadmium	7440-43-9	D	B1	2				2.80E-04	2.80E-04	5.0E-03		5.0E-03	
Deep	INORG	Cadmium	7440-43-9	T	B1	6	1	3.80E-04	3.00E-04	2.80E-04	2.80E-04	5.0E-03	6.0E-02	5.0E-03	6.0E-02
Deep	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.40E-03	1.0E-01		1.0E-01	
Deep	INORG	Chromium (total)	7440-47-3	T		6	5	2.80E-03	8.40E-03	1.40E-03	1.40E-03	1.0E-01	8.4E-02	1.0E-01	8.4E-02
Deep	INORG	Cobalt	7440-48-4	D	B1	2				1.30E-03	1.30E-03	1.0E-01		4.0E-02	
Deep	INORG	Cobalt	7440-48-4	T	B1	6	3	7.60E-04	8.40E-03	7.40E-04	1.30E-03	1.0E-01	8.4E-02	4.0E-02	2.1E-01
Deep	INORG	Copper	7440-50-8	D	D	2				4.20E-03	4.20E-03	4.0E+00		1.4E+00	
Deep	INORG	Copper	7440-50-8	T	D	6				1.70E-03	4.20E-03	4.0E+00		1.4E+00	
Deep	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	2.50E-03	4.0E-03		4.0E-03	
Deep	INORG	Lead	7439-92-1	T	B2	6				1.60E-03	2.50E-03	4.0E-03		4.0E-03	
Deep	INORG	Manganese	7439-96-5	D	D	2	2	6.18E-02	6.18E-02	9.00E-04	9.00E-04	2.5E+00	2.5E-02	8.6E-01	7.2E-02
Deep	INORG	Manganese	7439-96-5	T	D	6	5	4.61E-02	2.55E-01	9.00E-04	9.00E-04	2.5E+00	1.0E-01	8.6E-01	3.0E-01
Deep	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	6.90E-05	2.0E-03		2.0E-03	
Deep	INORG	Mercury	7439-97-6	T	D	6				6.90E-05	8.70E-05	2.0E-03		2.0E-03	
Deep	INORG	Nickel	7440-02-0	D	A	2				2.20E-03	2.20E-03	1.0E-01		1.0E-01	
Deep	INORG	Nickel	7440-02-0	T	A	6	4	3.10E-03	9.30E-03	2.20E-03	2.90E-03	1.0E-01	9.3E-02	1.0E-01	9.3E-02
Deep	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	4.50E-03	5.0E-02		5.0E-02	
Deep	INORG	Selenium	7782-49-2	T	D	6				4.50E-03	4.70E-03	5.0E-02		5.0E-02	
Deep	INORG	Silver	7440-22-4	D	D	2				1.50E-03	1.50E-03	9.8E-02		3.4E-02	
Deep	INORG	Silver	7440-22-4	T	D	6	1	1.30E-03	1.30E-03	9.80E-04	1.50E-03	9.8E-02	1.3E-02	3.4E-02	3.8E-02
Deep	INORG	Thallium	7440-28-0	D		2				1.80E-05	1.80E-05	2.0E-03		2.0E-03	
Deep	INORG	Thallium	7440-28-0	T		6				1.80E-05	3.30E-05	2.0E-03		2.0E-03	
Deep	INORG	Vanadium	7440-62-2	D		2				8.20E-04	8.20E-04	6.2E-02		4.5E-03	
Deep	INORG	Vanadium	7440-62-2	T		6				6.70E-04	8.20E-04	6.2E-02		4.5E-03	
Deep	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	1.20E-02	5.0E+00		2.4E+00	
Deep	INORG	Zinc	7440-66-6	T	D	6				1.20E-02	1.40E-02	5.0E+00		2.4E+00	

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-27

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-10 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	10	1	3.10E-03	3.10E-03	5.10E-04	1.10E-03	1.0E+06	3.1E-09	3.1E+04	1.0E-07	7.3E-01	4.2E-03
Shallow	VOC	Benzene	71-43-2	T	A	10	3	1.90E-04	5.80E-04	1.60E-04	3.70E-04	3.3E+01	1.7E-05	1.1E+01	5.3E-05	5.0E-03	1.2E-01
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	10	1	3.00E-04	3.00E-04	1.70E-04	3.20E-04	3.3E+01	8.1E-06	1.4E+01	2.1E-05	1.0E-01	3.0E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	10				1.80E-04	3.70E-04	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	10				2.00E-04	3.00E-04	9.0E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	10	1	1.00E-03	1.00E-03	4.10E-04	5.90E-04	2.4E+05	4.2E-09	2.4E+05	4.2E-09	1.3E+01	7.7E-05
Shallow	VOC	Carbon Disulfide	75-15-0	T		10	1	2.00E-04	2.00E-04	2.00E-04	3.40E-04	5.5E+02	3.6E-07	1.2E+03	1.7E-07	8.0E-01	2.5E-04
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	10				1.20E-04	3.70E-04	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	10				1.40E-04	3.80E-04	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		10				2.60E-04	2.90E-04	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	10	3	2.00E-04	5.70E-04	1.40E-04	3.50E-04	1.8E+02	3.2E-06	1.5E+02	3.8E-06	1.0E-01	5.7E-03
Shallow	VOC	Chloromethane	74-87-3	T	D	10				1.30E-04	4.90E-04	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	10	1	3.00E-04	3.00E-04	1.60E-04	3.90E-04	5.6E+01	5.4E-06	5.6E+01	5.4E-06	8.0E-01	3.8E-04
Shallow	VOC	Cyclohexane	110-82-7	T	ID	10				1.30E-04	3.30E-04						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	10				6.20E-04	8.20E-04	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	10				2.60E-04	3.70E-04	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	10				2.20E-04	3.40E-04	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	10				1.10E-04	3.80E-04	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	10				1.50E-04	3.80E-04			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	10				1.70E-04	3.80E-04	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		10				2.60E-04	4.90E-04	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	10	3	3.00E-04	4.20E-03	1.60E-04	3.00E-04	2.3E+03	5.2E-07	2.4E+03	5.0E-07	8.8E-01	1.4E-03
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	10				2.10E-04	2.80E-04	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	10				2.40E-04	3.10E-04	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	10				2.20E-04	3.50E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		10				1.50E-04	3.30E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	10				1.70E-04	4.10E-04	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	10				2.70E-04	3.50E-04	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	10	4	1.50E-04	1.00E-03	1.20E-04	4.10E-04	1.7E+02	5.9E-06	1.7E+02	5.9E-06	7.0E-01	1.4E-03
Shallow	VOC	2-Hexanone	591-78-6	T		10				4.60E-04	5.80E-04	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		10				4.10E-04	5.40E-04						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		10	4	6.70E-04	2.00E-02	1.30E-04	2.70E-04	4.7E+04	4.3E-07	6.1E+02	3.3E-05	2.4E-01	8.3E-02
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	10	1	2.40E-04	2.40E-04	2.30E-04	2.60E-04	2.0E+04	1.2E-08	1.3E+04	1.8E-08	1.8E+00	1.3E-04
Shallow	VOC	Methylcyclohexane	108-87-2	T		10				1.50E-04	4.20E-04						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	6				2.90E-04	3.40E-04	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		10				1.50E-04	3.50E-04	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	10				2.50E-04	3.60E-04	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	10				2.30E-04	4.20E-04	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	10	4	5.90E-04	1.90E-03	1.80E-04	3.90E-04	5.3E+02	3.6E-06	5.3E+02	3.6E-06	1.0E+00	1.9E-03
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	10				1.70E-04	4.00E-04	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	10	2	4.10E-04	6.20E-04	1.50E-04	3.90E-04	1.3E+03	4.8E-07	1.3E+03	4.8E-07	2.0E-01	3.1E-03
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	10				3.00E-04	3.60E-04	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	10				1.40E-04	4.20E-04	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		10				2.80E-04	5.40E-04	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		10				3.20E-04	3.20E-04	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	10				1.50E-04	3.60E-04	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	10	4	5.80E-04	7.80E-03	3.30E-04	4.40E-04	1.9E+02	4.1E-05	1.9E+02	4.1E-05	1.0E+01	7.8E-04
Shallow	SVOC	Acenaphthene	83-32-9	T		10				8.00E-04	3.20E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	10				7.10E-04	2.80E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	10				2.60E-03	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	10				6.80E-04	2.70E-03	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		10				2.50E-03	1.00E-02			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		10				2.80E-03	1.10E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	10				7.00E-04	2.80E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	10				7.30E-04	2.90E-03			2.0E-03		5.0E-03	

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TABLE 4-27
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-10 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	10				9.40E-04	3.80E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	10				8.50E-04	3.40E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	10				8.40E-04	3.40E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	10				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	10				8.70E-04	3.50E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	10				9.70E-04	3.90E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	10	1	1.50E-01	1.50E-01	2.70E-03	1.10E-02			3.2E-01	4.7E-01	6.0E-03	**2.5E+01**
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	10				8.80E-04	3.50E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	10				8.80E-04	3.50E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		10				2.50E-03	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	10				8.20E-04	3.30E-03			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		10				9.90E-04	4.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		10				5.90E-04	2.40E-03						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		10				8.50E-04	3.40E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		10				1.00E-03	4.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		10				7.90E-04	3.20E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	10				7.50E-04	3.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	10				7.90E-04	3.20E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	10				1.10E-03	4.40E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	10				9.30E-04	3.70E-03			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		10				8.50E-04	3.40E-03			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	10				6.50E-04	2.60E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		10				8.50E-04	3.40E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	10				7.60E-04	3.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	10				6.70E-04	2.70E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		10				1.30E-03	5.20E-03			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		10				3.00E-03	1.20E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	10				7.90E-04	3.20E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	10				5.70E-04	2.30E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		10				1.10E-03	4.40E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	10	1	8.20E-04	8.20E-04	8.10E-04	3.20E-03	2.1E-01	3.9E-03	2.1E-01	3.9E-03	2.1E-01	3.9E-03
Shallow	SVOC	Fluorene	86-73-7	T	D	10	1	1.90E-03	1.90E-03	1.00E-03	4.00E-03	2.0E+00	9.5E-04	2.0E+00	9.5E-04	8.8E-01	2.2E-03
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	10				7.40E-04	3.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	10				7.30E-04	2.90E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	6				1.10E-03	4.40E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	10				7.40E-04	3.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	10				6.30E-04	2.50E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	10				6.30E-04	2.50E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	10	1	7.50E-03	7.50E-03	6.40E-04	6.40E-04			2.5E+01	3.0E-04	2.6E-01	2.9E-02
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		10				1.30E-03	5.20E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	10	1	6.90E-03	6.90E-03	7.50E-04	7.50E-04	3.1E+01	2.2E-04	3.1E+01	2.2E-04	5.2E-01	1.3E-02
Shallow	SVOC	2-Nitroaniline	88-74-4	T		10				7.00E-04	2.80E-03						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	10				7.10E-04	2.80E-03						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	10				1.30E-03	5.20E-03						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	10				8.10E-04	3.20E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		10				2.10E-03	8.40E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		10				1.90E-03	7.60E-03						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	10				1.40E-03	5.60E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	10				6.70E-04	2.70E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	10				7.80E-04	3.10E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	10				2.40E-03	9.60E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	10				8.20E-04	3.30E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	10				2.50E-03	1.00E-02			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	10				1.10E-03	4.40E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		10				1.20E-03	4.80E-03			1.7E+02		7.3E-01	

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TABLE 4-27

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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

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DATA SUMMARY FOR AOI W-10 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	10				1.70E-03	6.80E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	1				8.20E-05	8.20E-05	4.5E-02		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	10	2	4.09E-04	8.31E-04	8.20E-05	8.20E-05	4.5E-02	1.8E-02	3.3E-03	2.5E-01	5.0E-04	**1.7E+00**
Shallow	INORG	Antimony	7440-36-0	D		5				2.20E-03	2.20E-03			6.8E+01		6.0E-03	
Shallow	INORG	Antimony	7440-36-0	T		10	1	2.30E-03	2.30E-03	2.20E-03	3.40E-03			6.8E+01	3.4E-05	6.0E-03	3.8E-01
Shallow	INORG	Arsenic	7440-38-2	D	A	5	2	5.00E-03	5.91E-02	3.90E-03	3.90E-03			4.3E+00	1.4E-02	5.0E-02	**1.2E+00**
Shallow	INORG	Arsenic	7440-38-2	T	A	10	4	4.90E-03	6.33E-02	2.10E-03	3.90E-03			4.3E+00	1.5E-02	5.0E-02	**1.3E+00**
Shallow	INORG	Barium	7440-39-3	D	D	5	5	1.05E-02	1.09E-01					1.4E+04	7.8E-06	2.0E+00	5.5E-02
Shallow	INORG	Barium	7440-39-3	T	D	10	10	1.16E-02	2.19E-01					1.4E+04	1.6E-05	2.0E+00	1.1E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	5				5.40E-04	5.40E-04			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	10				5.40E-04	6.00E-04			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	5				2.80E-04	2.80E-04			1.9E+02		5.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	10				2.80E-04	2.80E-04			1.9E+02		5.0E-03	
Shallow	INORG	Chromium (total)	7440-47-3	D		5	2	5.20E-03	6.50E-03	1.40E-03	1.40E-03			4.6E+02	1.4E-05	1.0E-01	6.5E-02
Shallow	INORG	Chromium (total)	7440-47-3	T		10	3	5.60E-03	1.82E-02	1.40E-03	1.50E-03			4.6E+02	4.0E-05	1.0E-01	1.8E-01
Shallow	INORG	Cobalt	7440-48-4	D	B1	5	2	2.50E-03	1.11E-02	1.30E-03	1.30E-03			2.4E+03	4.6E-06	4.0E-02	2.8E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	10	3	1.30E-03	1.14E-02	7.40E-03	1.30E-03			2.4E+03	4.8E-06	4.0E-02	2.9E-01
Shallow	INORG	Copper	7440-50-8	D	D	5	1	4.60E-03	4.90E-03	4.20E-03	4.20E-03			7.4E+03	6.2E-07	1.4E+00	3.3E-03
Shallow	INORG	Copper	7440-50-8	T	D	10	1	4.30E-03	4.30E-03	1.70E-03	4.20E-03			7.4E+03	5.8E-07	1.4E+00	3.1E-03
Shallow	INORG	Lead	7439-92-1	D	B2	5				2.50E-03	2.50E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	10				1.60E-03	2.50E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	5	5	1.09E-02	6.83E-01					9.1E+03	5.3E-05	8.6E-01	5.6E-01
Shallow	INORG	Manganese	7439-96-5	T	D	10	10	9.90E-03	5.21E-01					9.1E+03	5.6E-05	8.6E-01	5.9E-01
Shallow	INORG	Mercury	7439-97-6	D	D	5				6.90E-05	6.90E-05	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	10	2	7.50E-05	9.10E-05	6.90E-05	8.70E-05	5.6E-02	1.6E-03	5.6E-02	1.6E-03	2.0E-03	4.6E-02
Shallow	INORG	Nickel	7440-02-0	D	A	5	3	3.10E-03	2.42E-02	2.20E-03	2.20E-03			7.4E+04	3.3E-07	1.0E-01	2.4E-01
Shallow	INORG	Nickel	7440-02-0	T	A	10	5	3.50E-03	2.47E-02	2.20E-03	2.90E-03			7.4E+04	3.3E-07	1.0E-01	2.5E-01
Shallow	INORG	Selenium	7782-49-2	D	D	5				4.50E-03	4.50E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	10	1	4.90E-03	4.90E-03	4.50E-03	4.70E-03			9.7E+02	5.1E-06	5.0E-02	9.8E-02
Shallow	INORG	Silver	7440-22-4	D	D	5				1.50E-03	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	10				9.80E-04	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		5	2	2.80E-05	5.50E-03	1.80E-05	1.80E-05			1.3E+01	4.2E-04	2.0E-03	**2.8E+00**
Shallow	INORG	Thallium	7440-28-0	T		10	1	6.80E-03	6.80E-03	1.80E-05	3.30E-05			1.3E+01	5.2E-04	2.0E-03	**3.4E+00**
Shallow	INORG	Vanadium	7440-62-2	D		5	2	1.70E-03	2.40E-03	8.20E-04	8.20E-04			9.7E+02	2.5E-06	4.5E-03	5.3E-01
Shallow	INORG	Vanadium	7440-62-2	T		10	3	1.20E-03	3.00E-03	6.70E-04	8.20E-04			9.7E+02	3.1E-06	4.5E-03	6.7E-01
Shallow	INORG	Zinc	7440-66-6	D	D	5				1.20E-02	1.20E-02			1.1E+05		2.4E+00	
Shallow	INORG	Zinc	7440-66-6	T	D	10	1	1.46E-02	1.46E-02	1.20E-02	1.40E-02			1.1E+05	1.3E-07	2.4E+00	6.1E-03
Shallow	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	9	3	1.74E-09	4.88E-09	2.71E-09	3.99E-08			1.0E-08	4.9E-01	3.0E-08	1.6E-01

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Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The concentrations for the Target Dioxin congeners were used to calculate a 2,3,7,8-TCDD Equivalent, using EPA 1998 TEFs, before comparing to the Screening Levels for 2,3,7,8-TCDD.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SAMPLING LOCATIONS WITHIN PROPOSED AREA OF INDUSTRIAL REDEVELOPMENT

SAMPLING LOCATIONS		
BW1-08	RWW8-02	BW9-11
BW8-02	SBDW21	SW8-09
BW8-04	BW1-03	SW8-10
BW8-05	BW1-04	SW9-01
BW8-10	BW1-07	SW9-02
BW8-11	BW1-09	SW9-03
BW9-03	BW1-11	SW9-04
BW9-04	SW8-03	SW9-05
BW9-05	SW8-04	SW9-10
BW9-06	SW8-05	SW9-11
BW9-07	SW8-06	SW9-12
BW9-08	SW8-07	BP-6
BW9-09	SW8-08	SBSB2
BW9-12	KMV-05	SBSB5
BW9-14	ND01-06	SBTT3
BW9-15	ND01-07	SSTT3
BW9-16	ND01-08	ND01-01
BW9-17	ND01-09	ND01-02
BW9-18	SBTT2	ND01-03
TWW9-01	SSTT2	ND01-04
SW9-06	SBTT4	ND01-05
SW9-07	SSTT4	ND01-11
SW9-08	SBTT5	ND01-12
SW9-09	SBTT5	MW-3
SW9-13	SBWD1	MW-4
SBTT1	SBWD2	MW-5
SSTT1	MWW8-01	MW-11
MWW8-03	MWW8-02	MW-12
MWW8-06	MWW8-05	MW-13
MWW8-07	MW-22	MW-18
MWW8-08	MW-24-99	DW-18-99
BMWW8-09	MW-25-99	MW-19
MWW8-09	MW-36-99	MW-20
BMWW8-10	MW-37-99	MW-26-99
MWW8-10	MW-38-99	MW-27-99
BMWW8-11	MW-43-99	MW-28-99
MWW8-11	MW-44-99	MW-33-99
BMWW8-12	BW1-01	MW-34-99
MWW8-12	BW1-02	MW-39-99
MWW8-13	BW1-05	MW-40-99
MWW8-14	BW1-06	MW-42-99
MWW8-15	BW1-10	MWW1-05
MWW8-16	BW8-01	BMWW5-01
SBMWW8-17	BW8-03	MWW5-01
MWW9-02	BW8-06	MWW8-04
MWW9-03	BW8-07	MWW9-01
MWW9-05	BW8-08	BMWW10-02
MWW9-06	BW8-09	MWW10-02
MWW9-07	BW9-01	BW10-02
MWD3	BW9-02	GWD9
RWW8-01	BW9-10	DWD10

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AREA OF INDUSTRIAL REDEVELOPMENT (SOIL)

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	138	61	2.70E-03	2.20E+00	1.80E-03	5.70E+01		1.1E+05	2.0E-05	1.6E+05	1.4E-05	1.7E+08	1.3E-08	7.3E+04	3.0E-05	1.1E+05	2.0E-05	1.3E+05	1.7E-05	5.6E-09	3.9E+08	9.6E-05	2.3E+04
VOC	Acetonitrile	75-05-8	D	6				5.30E-02	1.40E+01		8.8E+03		1.9E+03		1.8E+06		1.4E+04		4.8E+03		1.6E+03			4.0E+06		4.3E+03
VOC	Acrolein	107-02-8	ID	6				5.30E-02	1.40E+01		7.6E-01		3.7E-01		5.9E+02		1.2E+04		4.1E-01		3.1E-01			1.3E+03		3.6E+03
VOC	Acrylonitrile	107-13-1	B1	6				5.30E-02	1.40E+01		3.5E+01		1.7E+01		5.8E+04		7.4E+01		6.6E+00		5.0E+00			4.6E+04		1.6E+01
VOC	Benzene	71-43-2	A	137	19	3.70E-04	7.20E-01	3.00E-04	5.70E+00		8.4E+00	8.6E-02	4.5E+01	1.6E-02	4.7E+05	1.5E-06	4.0E+02	1.8E-03	1.6E+00	4.5E-01	1.3E+01	5.5E-02	1.9E-06	3.8E+05	4.0E-03	1.8E+02
VOC	Bromodichloromethane	75-27-4	B2	137				3.50E-04	5.70E+00		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00			8.4E+04		1.1E+02
VOC	Bromoform	75-25-2	B2	137				4.60E-04	5.70E+00		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02			2.8E+06		8.2E+02
VOC	Bromomethane	74-83-9	D	138	1	2.23E-02	2.23E-02	9.50E-04	5.70E+00		1.6E+00	1.4E-02	1.3E+01	1.7E-03	1.5E+05	1.5E-07	1.0E+03	2.2E-05	8.6E-01	2.6E-02	1.1E+01	2.0E-03	6.8E-08	3.3E+05	7.0E-05	3.2E+02
VOC	2-Butanone	78-93-3	ID	138	41	2.20E-03	1.60E+00	1.30E-03	5.70E+01		2.7E+04	5.9E-05	3.5E+04	4.6E-05	2.9E+07	5.5E-08	2.7E+04	5.9E-05	2.7E+04	5.9E-05	2.9E+04	5.5E-05	2.4E-08	6.7E+07	5.9E-05	2.7E+04
VOC	Carbon Disulfide	75-15-0		138	9	3.10E-04	3.90E-03	2.40E-04	5.70E+01		1.4E+02	2.8E-05	1.6E+03	2.4E-06	2.1E+07	1.9E-10	2.8E+02	1.4E-05	7.6E+01	5.1E-05	1.3E+03	3.0E-06	8.3E-11	4.7E+07	1.4E-05	2.8E+02
VOC	Carbon Tetrachloride	56-23-5	B2	137				4.20E-04	5.70E+00		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00			1.3E+05		9.6E+01
VOC	2-Chloro-1,3-butadiene	126-99-8		6				5.30E-03	1.40E+00																	
VOC	3-Chloro-1-propene	107-05-1		6				1.10E-02	2.90E+00																	
VOC	Chlorobenzene	108-90-7	D	138	1	1.10E-01	1.10E-01	3.40E-04	5.70E+00		2.2E+02	5.0E-04	9.2E+02	1.2E-04	2.1E+06	5.2E-08	2.6E+02	4.2E-04	1.2E+02	9.2E-04	7.7E+02	1.4E-04	2.3E-08	4.7E+06	4.2E-04	2.6E+02
VOC	Chloroethane	75-00-3		138	3	2.20E-03	5.20E-03	8.20E-04	5.70E+00		9.5E+02	5.5E-06	3.6E+04	1.4E-07	2.9E+08	1.8E-11	9.5E+02	5.5E-06	9.5E+02	5.5E-06	3.0E+04	1.7E-07	7.8E-12	6.7E+08	5.5E-06	9.5E+02
VOC	Chloroform	67-66-3	B2	138				3.70E-04	5.70E+00		3.8E+01		1.5E+02		1.6E+06		7.5E+03		7.2E+00		4.5E+01			1.3E+06		1.2E+03
VOC	Chloromethane	74-87-3	D	138				4.10E-04	5.70E+00		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01			4.9E+06		1.1E+03
VOC	Cumene	98-82-8	D	104	19	5.30E-04	1.10E+00	3.70E-04	2.50E-01		3.9E+02	2.8E-03	2.0E+03	5.5E-04	2.6E+06	4.2E-07	3.9E+02	2.8E-03	3.9E+02	2.8E-03	1.7E+03	6.5E-04	1.9E-07	5.8E+06	2.8E-03	3.9E+02
VOC	Cyclohexane	110-82-7	ID	104	16	8.30E-04	3.00E-01	4.10E-04	6.40E-01																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	110				9.90E-04	2.90E+00		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01			1.3E+04		1.2E+00
VOC	Dibromochloromethane	124-48-1	C	137				4.60E-04	5.70E+00		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01			1.3E+05		1.1E+02
VOC	1,2-Dibromoethane	106-93-4	B2	109				3.20E-04	1.40E+00		3.6E+00		5.8E+00		1.8E+04		4.3E-01		6.7E-01		1.7E+00			1.4E+04		2.5E-01
VOC	Dibromomethane	74-95-3		6				5.30E-03	1.40E+00								2.0E+03									2.0E+03
VOC	trans-1,4-Dichloro-2-butene	110-57-6		6				5.30E-03	1.40E+00																	
VOC	1,2-Dichlorobenzene	95-50-1	D	131	3	3.40E-03	3.20E-02	3.90E-04	5.70E+00		2.1E+02	1.5E-04	4.6E+04	7.0E-06	4.4E+07	7.3E-10	2.1E+02	1.5E-04	2.1E+02	1.5E-04	3.9E+04	8.2E-07	3.2E-10	1.0E+08	1.5E-04	2.1E+02
VOC	1,3-Dichlorobenzene	541-73-1	D	131	1	1.10E-01	1.10E-01	3.90E-04	5.70E+00								1.7E+02	6.5E-04							6.5E-04	1.7E+02
VOC	1,4-Dichlorobenzene	106-46-7	C	131	4	7.60E-04	1.95E-02	3.50E-04	5.70E+00		1.0E+02	2.0E-04	2.6E+02	7.5E-05	6.2E+05	3.4E-06	1.9E+03	1.0E-05	1.9E+01	1.0E-03	7.7E+01	2.5E-04	4.3E-08	4.5E+05	4.9E-05	4.0E+02
VOC	Dichlorodifluoromethane	75-71-8		110	1	1.40E-03	1.40E-03	5.00E-04	1.40E+00		1.7E+03	8.2E-07	6.3E+04	2.2E-08	1.5E+09	9.3E-13	1.0E+03	1.4E-06	9.0E+02	1.6E-06	5.3E+04	2.6E-08	4.2E-13	3.3E+09	1.4E-06	1.0E+03
VOC	1,1-Dichloroethane	75-34-3	C	138	9	4.18E-04	2.80E-01	2.70E-04	5.70E+00		4.3E+02	6.5E-04	2.5E+03	1.1E-04	1.5E+07	1.9E-08	8.9E+02	3.1E-04	2.3E+02	1.2E-03	2.1E+03	1.3E-04	8.5E-09	3.3E+07	3.1E-04	8.9E+02
VOC	1,2-Dichloroethane	107-06-2	B2	138				3.80E-04	5.70E+00		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00			1.2E+05		9.1E+01
VOC	1,1-Dichloroethene	75-35-4	C	138	4	5.55E-04	2.90E-02	4.70E-04	5.70E+00		3.3E-01	8.8E-02	3.7E+00	7.8E-03	7.8E+03	3.7E-07	5.7E+02	5.1E-05	6.2E-02	4.7E-01	1.1E+00	2.6E-02	4.7E-07	6.2E+04	1.5E-04	2.0E+02
VOC	cis-1,2-Dichloroethene	156-59-2	D	138	2	1.50E-01	1.90E-01	2.80E-04	5.70E+00		4.1E+01	4.6E-03	2.1E+02	9.0E-04	1.0E+06	1.9E-07	6.4E+02	3.0E-04	2.2E+01	8.6E-03	1.8E+02	1.1E-03	8.3E-08	2.3E+06	3.0E-04	6.4E+02
VOC	trans-1,2-Dichloroethene	156-60-5		138				3.40E-04	5.70E+00		4.3E+01		3.3E+02		2.1E+06		1.4E+03		2.3E+01		2.8E+02			4.7E+06		1.4E+03
VOC	1,2-Dichloropropane	78-87-5	B2	138				3.00E-04	5.70E+00		7.4E+00		3.0E+01		1.2E+05		5.5E+02		4.0E+00		2.5E+01			2.7E+05		1.4E+02
VOC	1,3-Dichloropropene (total)	542-75-6	B2	137				3.90E-04	5.70E+00		5.4E+00		6.0E+01		5.9E+05		2.4E+02		1.0E+00		1.8E+01			7.8E+05		1.0E+01
VOC	1,4-Dioxane	123-91-1	B2	6				5.30E-01	1.40E+02						7.1E+05		2.4E+03							5.7E+05		5.3E+02
VOC	Ethyl Benzene	100-41-4	D	138	31	6.80E-04	2.50E+01	3.70E-04	3.20E-01		1.4E+02	1.8E-01	2.4E+03	1.0E-02	1.3E+07	1.9E-06	1.4E+02	1.8E-01	8.7E+01	2.9E-01	7.2E+02	3.5E-02	2.5E-06	1.0E+07	1.8E-01	1.4E+02
VOC	Ethyl Methacrylate	97-63-2		3				5.65E-03	1.30E-02																	
VOC	2-Hexanone	591-78-6		138	3	2.50E-03	1.58E-02	1.00E-03	5.70E+01		1.8E+03	8.8E-06	1.3E+03	1.2E-05	1.2E+06	1.3E-08	2.5E+03	6.3E-06	9.9E+02	1.6E-05	1.1E+03	1.4E-05	5.8E-09	2.7E+06	6.3E-06	2.5E+03
VOC	Iodomethane	74-88-4		6				5.30E-03	1.40E+00																	
VOC	Isobutyl Alcohol	78-83-1		6				2.30E+00	6.30E+02		8.9E+03		9.5E+04		4.4E+07		8.9E+03		8.9E+03		7.9E+04			1.0E+08		8.9E+03
VOC	Methacrylonitrile	126-98-7		6				2.10E-02	5.70E+00																	
VOC	Methyl Acetate	79-20-9		104	16	1.40E-03	3.40E+01	9.20E-04	4.50E-01																	
VOC	Methyl tert-butyl ether	1634-04-4		104				2.70E-04	1.30E+00		5.9E+03		3.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04			2.0E+08		1.5E+03
VOC	4-Methyl-2-pentanone	108-10-1	ID	138	15	9.50E-04	6.80E-01	8.00E-04	5.70E+01		2.7E+03	2.5E-04	5.3E+04	1.3E-05	6.0E+07	1.1E-08	2.7E+03	2.5E-04	2.7E+03	2.5E-04	4.5E+04	1.5E-05	4.9E-09	1.4E+08	2.5E-04	2.7E+03
VOC	Methylcyclohexane	108-87-2		104	25	5.50E-04	1.40E+00	3.90E-04	6.40E-01																	
VOC	Methylene Chloride	75-09-2	B2	138	22	1.70E-03	2.50E+01	1.10E-03	1.40E+00		2.4E+02	1.0E-01	7.0E+02	3.6E-02	8.3E+06	3.0E-06	2.3E+03	1.1E-02	4.5E+01	5.6E-01	2.1E+02	1.2E-01	3.8E-06	6.6E+06	1.9E-02	1.3E+03
VOC	Methylmethacrylate	80-62-6	E	6				5.30E-03	1.40E+00																	
VOC	Pentachloroethane	76-01-7		6	1	9.90E-02	9.90E-02	1.70E-01	3.00E+01																	
VOC	Propionitrile	107-12-0		6				2.10E-02	5.70E+00																	
VOC	Styrene	100-42-5		137				2.80E-04	5.70E+00		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02			5.5E+06		4.0E+02
VOC	1,1,1,2-Tetrachloroethane	630-20-6		6				5.30E-03	1.40E+00		3.3E+01		1.2E+02		5.3E+05		4.4E+02		6.2E+00		3.6E+01			4.2E+05		4.4E+02
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	138				3.70E-04	5.70E+00		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01			5.4E+04		5.3E+01
VOC	Tetrachloroethene	127-18-4	C-B2	138	8	1.10E-03	1.20E-01	4.60E-04	5.70E+00		6.0E+01	2.0E-03	6.0E+02	2.0E-04	6.8E+06	1.8E-08	8.8E+01	1.4E-03	1.1E+01	1.1E-02	1.8E+02	6.7E-04	2.2E-08	5.4E+06	1.4E-03	8.8E+01
VOC	Toluene	108-88-3	D	138	60	4.50E-04	4.20E+01	3.20E-04	2.50E-01		2.5E+02	1.7E-01	3.3E+03	1.3E-02	1.2E+07	3.5E-06	2.5E+02	1.7E-01	2.5E+02	1.7E-01	2.8E+03	1.5E-02	1.6E-06	2.7E+07	1.7E-01	2.5E+02
VOC	1,2,4-Trichlorobenzene	120-82-1	D	119				3.60E-04	1.10E+02		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04			2.5E+07		9.9E+02
VOC	1,1,1-Trichloroethane	71-55-6	D	137	4	6.20E-04	3.90E-03	3.70E-04	5.70E+00		4.6E+02	8.5E-06	4.5E+03	8.7E-07	2.9E+07	1.3E-10	4.6E+02	8.5E-06	2.5E+02	1.6E-05	3.8E+03	1.0E-06	5.8E-11	6.7E+07	8.5E-06	4.6E+02
VOC	1,1,2-Trichloroethane	79-00-5	C	137				3.20E-04	5.70E+00		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01			1.9E+05		1.8E+02
VOC	Trichloroethene	79-01-6	C-B2	138	5	4.08E-03	2.50E-01	4.70E-04	5.70E+00		3.7E+01	6.8E-03	2.6E+02	9.6E-04	2.3E+06	1.1E-07	5.0E+02	5.0E-04	7.1E+00	3.5E-02	7.8E+01	3.2E-03	1.4E-07	1.8E+06	5.0E-04	5.0E+02
VOC	Trichlorofluoromethane	75-69-4		110	1	8.40E-04	8.40E-04	3.40E-04	1.40E+00		5.6E+02	1.5E-06	1.1E+05	7.6E-09	1.7E+09	4.9E-13	5.6E+02	1.5E-06	5.6E+02	1.5E-06	9.2E+04	9.1E-09	2.2E-13	3.8E+09	1.5E-06	5.6E+02
VOC	1,2,3-Trichloropropane	96-18-4	B2	6				5.30E-03	1.40E+00								8.3E+02									8.3E+02
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		104	5	5.50E-03	8.90E-03	6.80E-04	3.20E-01		5.5E+02	1.6E-05	2.1E+05	4.2E-08	2.3E+09	3.9E-12	5.5E+02	1.6E-05	5.5E+02	1.6E-05	1.8E+05	4.9E-08	1.7E-12	5.1E+09	1.6E-05	5.5E+02
VOC	Vinyl Acetate	108-05-4		6				5.30E-02	1.40E+01		1.5E+03		2.0E+03		5.9E+06		2.4E+03		7.9E+02		1.7E+03			1.3E+07		2.4E+03
VOC	Vinyl Chloride	75-01-4	A	138				4.10E-04	5.70E+00		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00			3.5E+05		3.8E+00
VOC	Xylenes (total)	1330-20-7	ID	138	35	1.20E-03	1.50E+02	1.10E-03	5.00E-01		1.5E+02	1.0E+00	5.4E+04	2.8E-03	1.3E+08	1.2E-06	1.5E+02	1.0E+00	1.5E+02	1.0E+00	4.6E+04	3.3E-03	5.2E-07	2.9E+08	1.0E+00	1.5E+02
SVOC	Acenaphthene	83-32-9		119	27	2.40E-02	3.60E+01	1.90E-02	3.00E+01		3.5E+05	1.0E-04	9.7E+04	3.7E-04	6.2E+06	5.8E-06	1.3E+05	2.8E-04	1.9E+05	1.9E-04	8.1E+04	4.4E-04	2.6E-06	1.4E+07	8.8E-04	4.1E+04
SVOC	Acenaphthylene	208-96-8	D	118	1	2.00E+00	2.00E+00	1.90E-02	1.10E+02		3.0E+03	6.7E-04	2.7E+03	7.4E-04	1.0E+06	2.0E-06	5.2E+03	3.8E-04	1.6E+03	1.3E-03	2.2E+03	9.1E-04	8.7E-07	2.3E+06	1.3E-03	1.6E+03
SVOC	Acetophenone	98-86-2	D	110				1.80E-02	3.00E+01		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04			3.3E+07		1.1E+03
SVOC	2-Acetylaminofluorene	53-96-3		6				1.70E+00	3.00E+02																	
SVOC	4-Aminobiphenyl	92-67-1		6				9.00E-01	1.60E+02																	
SVOC	Aniline	62-53-3	B2	6				9.00E-01	6.10E+01						2.9E+04		1.5E+03							6.7E+04		3.3E+02
SVOC	Anthracene	120-12-7	D	119	45	2.10E-02	2.10E+01	1.80E-02	3.00E+01		1.0E+06	2.1E-05	1.6E+06	1.3E-05	2.9E+07	7.2E-07	7.3E+05	2.9E-05	1.0E+06	2.1E-05	1.4E+06	1.5E-05	3.1E-07	6.7E+07	9.1E-05	2.3E+05
SVOC	Atrazine	1912-24-9		104				1.80E-02	1.60E+01								3.3E+02									7.1E+01
SVOC	Benzaldehyde	100-52-7		104				2.20E-02	1.80E+01																	
SVOC	Benzo(a)anthracene	56-55-3	B2	119	52	1.80E-02	1.50E+01	1.70E-02	1.10E+02								8.0E+01	1.9E-01							7.5E-01	2.0E+01
SVOC	Benzo(a)pyrene	50-32-8	B2	119	41	2.70E-02	8.80E+00	1.80E-02	1.10E+02						1.9E+03	4.6E-03	8.0E+00	**1.1E+00**							5.9E-03	1.5E+03	**4.4E+00**	2.0E+00
SVOC	Benzo(b)fluoranthene	205-99-2	B2	119	51	3.10E-02	1.10E+01	2.10E-02	1.10E+02								8.0E+01	1.4E-01								5.5E-01	2.0E+01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	119	40	2.40E-02	4.80E+00	2.30E-02	1.10E+02						3.5E+05	1.4E-05	7.0E+03	6.9E-04					6.0E-06	8.0E+05	1.9E-03	2.5E+03
SVOC	Benzo(k)fluoranthene	207-08-9	B2	119	33	2.00E-02	5.30E+00	1.80E-02	1.10E+02								8.0E+02	6.6E-03							2.7E-02	2.0E+02
SVOC	Benzyl Alcohol	100-51-6		6				6.90E-01	6.10E+01						1.5E+08		5.8E+03							3.3E+08		5.8E+03
SVOC	Biphenyl	92-52-4	D	104	9	3.40E-02	3.40E+00	2.20E-02	1.50E+01																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	119				1.70E-02	1.10E+02																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	119				1.80E-02	1.10E+02		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00			9.4E+03		1.3E+01
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	119	33	2.50E-02	7.60E+01	2.30E-02	3.00E+01						8.9E+05	8.5E-05	1.0E+04	7.6E-03					1.1E-04	7.0E+05	2.7E-02	2.8E+03

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TABLE 4-14
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AREA OF INDUSTRIAL REDEVELOPMENT (SOIL)

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	119				1.90E-02	1.10E+02																	
SVOC	2,sec-Butyl-4,6-dinitrophenol	88-85-7		6				1.10E-02	5.70E-02								1.4E+02									6.6E+01
SVOC	Butylbenzylphthalate	85-68-7	C	119	24	3.60E-02	1.10E+03	1.70E-02	3.00E+01						2.1E+07	5.2E-05	3.1E+02	**3.5E+00**					2.3E-05	4.7E+07	**3.5E+00**	3.1E+02
SVOC	Caprolactam	105-60-2		104				2.20E-02	1.90E+01						2.9E+05		3.1E+05							6.7E+05		5.3E+04
SVOC	Carbazole	86-74-8	B2	119	15	2.10E-02	1.10E+01	2.30E-02	1.10E+02								2.4E+03	4.6E-03							2.1E-02	5.3E+02
SVOC	4-Chloro-3-methylphenol	59-50-7		119				1.80E-02	1.10E+02								1.5E+04									4.5E+03
SVOC	4-Chloroaniline	106-47-8		119				6.30E-03	1.10E+02																	
SVOC	p-Chlorobenzilate	510-15-6		6				1.70E-01	3.00E+01																	
SVOC	2-Chloronaphthalene	91-58-7		119				1.90E-02	1.10E+02								1.8E+05									5.6E+04
SVOC	2-Chlorophenol	95-57-8		119				1.80E-02	1.10E+02								4.5E+03									1.4E+03
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		118				1.90E-02	1.10E+02																	
SVOC	Chrysene	218-01-9	B2	119	58	3.10E-02	1.60E+01	1.70E-02	1.10E+02								8.0E+03	2.0E-03							8.0E-03	2.0E+03
SVOC	Diallate (total)	2303-16-4		6				3.50E-01	6.10E+01																	
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	119	13	1.80E-02	1.40E+00	2.20E-02	1.10E+02								8.0E+00	1.8E-01							7.0E-01	2.0E+00
SVOC	Dibenzofuran	132-64-9	D	119	28	2.00E-02	2.70E+01	1.90E-02	3.00E+01																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	119				9.50E-03	6.50E+02						8.2E+03		3.0E+01							6.5E+03		6.6E+00
SVOC	2,4-Dichlorophenol	120-83-2		119				1.60E-02	1.10E+02						2.3E+06		7.8E+03							5.1E+06		6.6E+02
SVOC	2,6-Dichlorophenol	87-65-0		6				1.70E-01	3.00E+01																	
SVOC	Diethylphthalate	84-66-2	D	119				2.10E-02	1.10E+02						1.5E+06		7.4E+02							3.3E+06		7.4E+02
SVOC	Dimethoate	60-51-5		6				7.10E-01	2.30E+01																	
SVOC	p-(Dimethylamino)azobenzene	60-11-7		6				3.50E-01	6.10E+01																	
SVOC	7,12-Dimethylbenz(a)anthracene	57-97-6		6				3.50E-01	6.10E+01																	
SVOC	3,3'-Dimethylbenzidine	119-93-7		6				1.70E-01	3.00E+01																	
SVOC	a,a-Dimethylphenethylamine	122-09-8		6				9.00E-01	1.60E+02																	
SVOC	2,4-Dimethylphenol	105-67-9		119	7	2.40E-02	7.20E+01	3.30E-02	3.00E+01						2.1E+06	3.4E-05	3.6E+04	2.0E-03					1.5E-05	4.7E+06	6.5E-03	1.1E+04
SVOC	Dimethylphthalate	131-11-3	D	119				1.90E-02	1.10E+02						1.5E+06		7.9E+02							3.3E+06		7.9E+02
SVOC	Di-n-butylphthalate	84-74-2	D	119	4	3.60E+00	4.80E+02	2.40E-02	1.10E+02						1.5E+06	3.2E-04	7.8E+02	6.3E-01					1.5E-04	3.3E+06	6.3E-01	7.6E+02
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		118				7.50E-02	5.60E+02								2.6E+02									7.9E+01
SVOC	1,3-Dinitrobenzene	99-65-0		6				1.70E-01	3.00E+01																	
SVOC	2,4-Dinitrophenol	51-28-5		118				1.00E-01	5.60E+02																	
SVOC	2,4-Dinitrotoluene	121-14-2	B2	119				1.80E-02	1.10E+02						2.0E+04		2.2E+02							1.6E+04		4.8E+01
SVOC	2,6-Dinitrotoluene	606-20-2	B2	118				1.80E-02	1.10E+02																	
SVOC	Di-n-octylphthalate	117-84-0		119	2	2.90E+00	3.70E+01	1.80E-02	3.00E+01								2.0E+04	1.9E-03							5.4E-03	6.9E+03
SVOC	Diphenylamine	122-39-4		6				1.70E-01	3.00E+01																	
SVOC	Disulfoton	298-04-4		6				7.10E-01	2.30E+01																	
SVOC	Ethylmethanesulfonate	62-50-0		6				1.70E-01	3.00E+01																	
SVOC	Famphur	52-85-7		6				7.10E-01	2.30E+01																	
SVOC	Fluoranthene	206-44-0	D	119	64	2.80E-02	8.20E+01	2.40E-02	3.00E+01		1.0E+06	8.2E-05	8.9E+05	9.2E-05	4.1E+06	2.0E-05	1.3E+05	6.3E-04	1.0E+06	8.2E-05	7.4E+05	1.1E-04	8.8E-06	9.3E+06	1.8E-03	4.6E+04
SVOC	Fluorene	86-73-7	D	118	37	4.00E-02	3.60E+01	2.10E-02	3.00E+01		1.0E+06	3.6E-05	1.5E+05	2.5E-04	4.1E+06	8.8E-06	8.7E+04	4.1E-04	5.8E+05	6.2E-05	1.3E+05	2.8E-04	3.9E-06	9.3E+06	1.3E-03	2.7E+04
SVOC	Hexachlorobenzene	118-74-1	B2	119				1.80E-02	1.10E+02		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01			6.8E+03		8.9E+00
SVOC	Hexachlorobutadiene	87-68-3	C	119				1.70E-02	1.10E+02		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02			1.4E+05		1.0E+02
SVOC	Hexachlorocyclopentadiene	77-47-4	E	117				1.50E-02	1.10E+02		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01			1.3E+04		7.2E+02
SVOC	Hexachloroethane	67-72-1	C	119				1.80E-02	1.10E+02		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02			2.3E+05		2.3E+02
SVOC	Hexachloropropene	1888-71-7		6				1.70E+00	3.00E+02																	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	119	32	2.40E-02	4.50E+00	2.30E-02	1.10E+02								8.0E+01	5.6E-02							2.3E-01	2.0E+01
SVOC	Isodrin	465-73-6		6				3.50E-03	1.90E-01																	
SVOC	Isophorone	78-59-1	C	119				1.90E-02	1.10E+02						8.2E+06		2.4E+03							1.2E+07		2.4E+03
SVOC	Isosafrole (total)	120-58-1		6				3.50E-01	6.10E+01																	
SVOC	Kepone	143-50-0	B2	6				3.50E-02	3.10E+00																	
SVOC	Methapyrilene	91-80-5		6				9.00E-01	1.60E+02																	
SVOC	Methyl parathion	298-00-0		6				7.10E-01	2.30E+01								1.8E+02									5.6E+01
SVOC	3-Methylcholanthrene	56-49-5		6				3.50E-01	6.10E+01																	
SVOC	Methylmethanesulfonate	66-27-3		6				1.70E-01	3.00E+01																	
SVOC	2-Methylnaphthalene	91-57-6	ID	118	54	2.50E-02	1.50E+02	1.80E-02	2.10E+01								2.6E+04	5.8E-03							1.9E-02	8.1E+03
SVOC	Methylphenol (total)	1319-77-3		119	9	8.60E-02	1.25E+02	1.50E-02	3.00E+01						2.9E+06	4.3E-05	3.6E+04	3.5E-03					1.9E-05	6.7E+06	1.1E-02	1.1E+04
SVOC	Naphthalene	91-20-3	C	118	44	2.40E-02	9.70E+01	1.90E-02	2.10E+01		4.7E+02	2.1E-01	3.5E+02	2.8E-01	8.8E+04	1.1E-03	5.2E+04	1.9E-03	2.5E+02	3.9E-01	3.0E+02	3.2E-01	4.9E-04	2.0E+05	6.1E-03	1.6E+04
SVOC	1,4-Naphthoquinone	130-15-4		6				9.00E-01	1.60E+02																	
SVOC	1-Naphthylamine	134-32-7		6				1.70E-01	3.00E+01																	
SVOC	2-Naphthylamine	91-59-8		6				1.70E-01	3.00E+01																	
SVOC	5-Nitro-o-toluidine	99-55-8		6				3.50E-01	6.10E+01																	
SVOC	2-Nitroaniline	88-74-4		119				1.90E-02	5.60E+02																	
SVOC	3-Nitroaniline	99-09-2	C	119				1.20E-02	5.60E+02																	
SVOC	4-Nitroaniline	100-01-6	C	119				1.80E-02	5.60E+02																	
SVOC	Nitrobenzene	98-95-3	D	119				1.80E-02	1.10E+02		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01			4.7E+04		1.0E+02
SVOC	2-Nitrophenol	88-75-5		119				1.60E-02	1.10E+02								2.0E+03									6.3E+02
SVOC	4-Nitrophenol	100-02-7		119				1.10E-01	5.60E+02																	
SVOC	4-Nitroquinoline-1-oxide	56-57-5		6				1.70E+00	3.00E+02																	
SVOC	N-Nitrosodi-n-butylamine	924-16-3		6				1.70E-01	3.00E+01																	
SVOC	N-Nitrosodiethylamine	55-18-5		6				1.70E-01	3.00E+01																	
SVOC	N-Nitrosodimethylamine	62-75-9		6				1.70E-01	3.00E+01																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	119				2.10E-02	1.10E+02								7.8E+03									1.7E+03
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	119				1.90E-02	1.10E+02						2.0E+03		5.4E+00							1.6E+03		1.2E+00
SVOC	N-Nitrosomethylethylamine	10595-95-6		6				1.70E-01	3.00E+01																	
SVOC	N-Nitrosopiperidine	100-75-4		6				1.70E-01	3.00E+01																	
SVOC	N-Nitrosopyrrolidine	930-55-2		6				1.70E-01	3.00E+01																	
SVOC	N-Nitrosomorpholine	59-89-2		6				1.70E-01	3.00E+01																	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	119				1.90E-02	1.10E+02																	
SVOC	Parathion	56-38-2		6				7.10E-01	2.30E+01																	
SVOC	Pentachlorobenzene	608-93-5		6				1.70E-01	3.00E+01								1.9E+02									1.9E+02
SVOC	Pentachloronitrobenzene	82-68-8		6				9.00E-01	1.60E+02		2.2E+02		2.8E+02		1.5E+05		5.5E+03		1.2E+02		2.3E+02			3.3E+05		1.7E+03
SVOC	Pentachlorophenol	87-86-5	B2	106				8.90E-02	1.00E+03						1.3E+05		3.2E+02							1.0E+05		9.0E+01
SVOC	Phenacetin	62-44-2		6				3.50E-01	6.10E+01																	
SVOC	Phenanthrene	85-01-8	D	119	77	1.95E-02	1.10E+02	2.10E-02	7.10E+00		5.1E+03	2.2E-02	1.9E+02	5.8E-01	2.9E+03	3.8E-02	5.2E+03	2.1E-02	2.8E+03	3.9E-02	1.6E+02	6.9E-01	1.6E-02	6.7E+03	6.9E-02	1.6E+03
SVOC	Phenol	108-95-2	ID	119	12	5.90E-02	1.40E+02	1.80E-02	3.00E+01						1.8E+07	7.8E-06	1.2E+04	1.2E-02					3.5E-06	4.0E+07	1.2E-02	1.2E+04
SVOC	p-Phenylene diamine	106-50-3		6				1.70E+00	3.00E+02																	

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TABLE 4-14
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AREA OF INDUSTRIAL REDEVELOPMENT (SOIL)

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Phorate	298-02-2		6				7.10E-01	2.30E+01																	
SVOC	2-Picoline	109-06-8		6				3.50E-01	6.10E+01																	
SVOC	Pronamide	23950-58-5		6				3.50E-01	6.10E+01																	
SVOC	Pyrene	129-00-0	D	119	68	2.00E-02	5.00E+01	1.70E-02	3.00E+01		1.0E+06	5.0E-05	7.8E+05	6.4E-05	2.9E+06	1.7E-05	8.4E+04	6.0E-04	1.0E+06	5.0E-05	6.5E+05	7.7E-05	7.5E-06	6.7E+06	1.7E-03	2.9E+04
SVOC	Pyridine	110-86-1		6				3.50E-01	6.10E+01		2.0E+00		9.8E+00		1.0E+05		3.7E+01		1.1E+00		8.2E+00			2.3E+05		3.7E+01
SVOC	Safrole (total)	94-59-7		6				3.50E-01	6.10E+01																	
SVOC	Sulfotepp	3689-24-5		6				7.10E-01	2.30E+01																	
SVOC	1,2,4,5-Tetrachlorobenzene	95-94-3		6				1.70E-01	3.00E+01								2.5E+05									7.7E+04
SVOC	2,3,4,6-Tetrachlorophenol	58-90-2		6				9.00E-01	1.60E+02																	
SVOC	Thionazin	297-97-2		6				7.10E-01	2.30E+01																	
SVOC	o-Toluidine	95-53-4		6				3.50E-01	6.10E+01																	
SVOC	2,4,5-Trichlorophenol	95-95-4		119				2.20E-02	2.20E+02						1.0E+07		7.3E+04							2.3E+07		2.3E+04
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	119				1.70E-02	1.10E+02						1.3E+06		3.3E+03							1.0E+06		7.1E+02
SVOC	O,O,O-Triethyl phosphorothioate	126-68-1		6				7.10E-01	2.30E+01																	
SVOC	1,3,5-Trinitrobenzene	99-35-4		6				9.00E-01	1.60E+02																	
P/PCB	PCBs (total)	1336-36-3	B2	466	303	1.08E-02	3.95E+02	3.00E-03	3.80E+00		1.6E+04	2.5E-02	8.1E+02	4.9E-01	6.5E+03	6.1E-02	1.6E+01	**2.5E+01**	3.0E+03	1.3E-01	2.4E+02	**1.6E+00**	7.6E-02	5.2E+03	**9.9E+01**	4.0E+00
P/PCB	Aldrin	309-00-2	B2	15				1.10E-02	2.30E-01		7.1E+03		2.0E+02		8.0E+02		3.5E+00		1.3E+03		5.8E+01			6.4E+02		1.0E+00
P/PCB	alpha-BHC	319-84-6	B2	15				1.10E-02	2.30E-01		1.6E+02		4.1E+01		2.1E+03		1.2E+01		3.0E+01		1.2E+01			1.7E+03		2.6E+00
P/PCB	beta-BHC	319-85-7	C	15				1.10E-02	2.30E-01						7.4E+03		2.5E+01							5.9E+03		5.4E+00
P/PCB	delta-BHC	319-86-8	D	15				1.10E-02	2.30E-01																	
P/PCB	gamma-BHC	58-89-9	B2-C	15				1.10E-02	2.30E-01								4.2E+01									8.3E+00
P/PCB	Chlordane (total)	57-74-9	B2	15				5.30E-03	2.30E-01		5.9E+04		4.2E+03		2.1E+04		1.5E+02		1.1E+04		1.2E+03			3.1E+04		3.1E+01
P/PCB	4,4'-DDD	72-54-8	B2	15				1.10E-02	4.60E-01						5.6E+03		4.0E+02							4.4E+04		9.5E+01
P/PCB	4,4'-DDE	72-55-9	B2	15				1.10E-02	4.60E-01						4.0E+04		1.9E+02							3.2E+04		4.5E+01
P/PCB	4,4'-DDT	50-29-3	B2	15				1.10E-02	4.60E-01						4.0E+04		2.8E+02							3.2E+04		5.7E+01
P/PCB	Dieldrin	60-57-1	B2	15				1.10E-02	4.60E-01		7.2E+02		6.4E+01		8.5E+02		4.7E+00		1.4E+02		1.9E+01			6.8E+02		1.1E+00
P/PCB	Endosulfan	115-29-7		15				1.10E-02	4.60E-01								2.8E+03									1.4E+03
P/PCB	Endosulfan sulfate	1031-07-8		15				1.10E-02	4.60E-01								4.4E+03									1.4E+03
P/PCB	Endrin	72-20-8	D	15				1.10E-02	4.60E-01								1.9E+02									6.5E+01
P/PCB	Endrin aldehyde	7421-93-4		15				1.10E-02	4.60E-01								1.9E+02									6.5E+01
P/PCB	Endrin ketone	53494-70-5		14				1.10E-02	4.60E-01								1.9E+02									6.5E+01
P/PCB	Heptachlor	76-44-8	B2	15				1.10E-02	2.30E-01		1.9E+03		2.1E+02		3.0E+03		2.3E+01		3.5E+02		6.2E+01			2.4E+03		5.6E+00
P/PCB	Heptachlor epoxide	1024-57-3	B2	15				1.10E-02	2.30E-01						1.5E+03		9.5E+00							1.2E+03		3.1E+00
P/PCB	Methoxychlor	72-43-5	D	15				2.70E-02	2.30E+00								5.6E+03									1.9E+03
P/PCB	Toxaphene	8001-35-2	B2	15				9.00E-02	1.10E+01						1.2E+04		8.5E+01							9.7E+03		2.0E+01
INORG	Aluminum	7429-90-5	D	15	15	4.38E+02	1.08E+04										3.7E+05	2.9E-02							2.2E-01	5.0E+04
INORG	Antimony	7440-36-0		119	70	1.27E-01	1.74E+03	2.56E-01	2.08E+01						5.9E+03	2.9E-01	6.7E+02	**2.6E+00**						1.3E-01	1.3E+04	**9.7E+00**	1.8E+02
INORG	Arsenic	7440-38-2	A	120	120	7.97E-01	5.40E+01			1.3E+01					9.1E+02	4.5E-02	3.7E+01	**1.1E+00**						5.7E-02	7.2E+02	**5.4E+00**	7.6E+00
INORG	Barium	7440-39-3	D	119	119	6.33E+00	4.04E+03			1.1E+02					1.5E+05	2.6E-02	1.3E+05	3.0E-02						1.2E-02	3.3E+05	1.1E-01	3.7E+04
INORG	Beryllium	7440-41-7	B1	119	64	2.50E-02	1.07E+00	2.41E-02	1.72E+00	1.5E+00					5.9E+02		1.6E+03								1.3E+03		4.1E+02
INORG	Cadmium	7440-43-9	B1	119	99	2.44E-02	3.85E+01	8.40E-03	5.53E-01	1.2E+00					2.2E+03	1.7E-02	2.1E+03	1.8E-02						2.2E-02	1.7E+03	6.8E-02	5.5E+02
INORG	Calcium	7440-70-2		15	15	2.42E+03	8.86E+04																				
INORG	Chromium (total)	7440-47-3		122	122	4.12E+00	1.66E+03			4.9E+01					2.4E+02	**6.7E+00**	9.2E+03	1.8E-01						**6.2E+00**	2.6E+02	6.4E-01	2.5E+03
INORG	Chromium III	16065-83-1	D	15	15	1.35E+01	3.77E+02								1.5E+05	2.5E-03	1.0E+06	3.8E-04						1.1E-03	3.3E+05	4.8E-04	7.9E+05
INORG	Chromium VI	18540-29-9	A	15	3	6.00E-01	1.38E+00	3.80E-01	4.46E-01						2.4E+02	5.7E-03	9.2E+03	1.5E-04						5.3E-03	2.6E+02	5.5E-04	2.5E+03
INORG	Cobalt	7440-48-4	B1	119	115	7.76E-01	6.44E+01	2.65E+00	2.99E+00	1.7E+01					5.9E+03	8.0E-03	9.0E+03	5.2E-03						3.6E-03	1.3E+04	1.8E-02	2.6E+03
INORG	Copper	7440-50-8	D	119	119	2.31E+00	2.58E+04			3.2E+01					5.9E+04	4.4E-01	7.3E+04	3.5E-01						2.0E-01	1.3E+05	**1.3E+00**	2.0E+04
INORG	Cyanide (total)	57-12-5	D	39	21	2.32E-01	4.10E+00	1.78E-01	5.73E-01						2.5E+02	1.6E-02	2.5E+02	1.6E-02						1.6E-02	2.5E+02	3.4E-01	1.2E+01
INORG	Iron	7439-89-6	D	15	15	6.09E+03	3.76E+05										5.8E+05	6.5E-01								**2.4E+00**	1.6E+05
INORG	Lead	7439-92-1	B2	119	119	2.03E+00	8.44E+03			4.9E+01					4.4E+04	1.9E-01	9.0E+02	**9.3E+00**						8.4E-02	1.0E+05	**2.1E+01**	4.0E+02
INORG	Magnesium	7439-95-4		15	15	6.22E+02	1.65E+04								2.9E+06	5.7E-03	1.0E+06	1.7E-02						2.5E-03	6.7E+06	1.7E-02	1.0E+06
INORG	Manganese	7439-96-5	D	142	142	1.07E+02	7.04E+03			5.1E+02					1.5E+03	**4.4E+00**	9.0E+04	7.3E-02						**2.0E+00**	3.3E+03	2.6E-01	2.5E+04
INORG	Mercury	7439-97-6	D	119	75	1.07E-02	6.55E+00	8.80E-03	5.98E-02	1.3E-01	8.9E+01	7.2E-02	6.2E+01	1.0E-01	8.8E+03	7.3E-04	5.8E+02	1.1E-02	4.8E+01	1.3E-01	5.2E+01	1.2E-01	3.2E-04	2.0E+04	4.0E-02	1.6E+02
INORG	Nickel	7440-02-0	A	119	119	2.08E+00	1.89E+03			3.0E+01					1.6E+04	1.2E-01	1.5E+05	1.2E-02						1.4E-01	1.3E+04	4.6E-02	4.0E+04
INORG	Potassium	7440-09-7		15	5	5.79E+02	2.69E+03	5.23E+02	5.98E+02																		
INORG	Selenium	7782-49-2	D	119	28	1.56E-01	8.62E+00	1.62E-01	1.14E+01	4.1E-01					5.9E+04	1.4E-04	9.6E+03	8.6E-04						6.3E-05	1.3E+05	3.2E-03	2.6E+03
INORG	Silver	7440-22-4	D	119	24	5.96E-02	6.96E+01	4.24E-02	5.20E+00						2.9E+03	2.4E-02	9.0E+03	7.7E-03						1.0E-02	6.7E+03	2.8E-02	2.5E+03
INORG	Sodium	7440-23-5		15	15	1.09E+02	6.75E+02										1.0E+06	6.8E-04								6.8E-04	1.0E+06
INORG	Thallium	7440-28-0		119	45	2.72E-01	7.72E+00	2.31E-01	2.28E+01								1.3E+02	5.9E-02								2.2E-01	3.5E+01
INORG	Tin	7440-31-5		4	3	2.70E+01	8.40E+01	1.14E+01	1.14E+01																		
INORG	Vanadium	7440-62-2		119	119	4.48E+00	6.14E+01			3.3E+01							5.5E+03	5.2E-03								3.8E-02	7.5E+02
INORG	Zinc	7440-66-6	D	119	119	5.19E+00	7.40E+03			1.9E+02							6.3E+05	1.1E-02								4.2E-02	1.7E+05
HERB	2,4-D	94-75-7		6				1.10E-01	1.70E-01						2.9E+06		8.6E+03								6.7E+06		2.5E+03
HERB	2,4,5-T	93-76-5		6				2.70E-02	2.70E-01																		
HERB	2,4,5-TP	93-72-1		6				2.70E-02	3.00E-02								5.5E+03										1.7E+03
CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	B2	21	21	2.57E-07	1.89E-03								8.9E-02	2.1E-02	9.9E-04	**1.9E+00**						2.7E-02	7.1E-02	**2.1E+01**	9.0E-05

Notes:
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to Polychlorinated biphenyls (PCBs) for cancer effects and Aroclor 1254 for noncancer effects.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the Chlordane isomers (alpha and beta) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-15
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-01 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	6				5.10E-04	1.00E-02	1.0E+06		3.1E+04		7.3E-01	
Shallow	VOC	Benzene	71-43-2	T	A	6				1.60E-04	1.00E-03	3.5E+01		1.1E+01		5.0E-03	
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	6	1	1.90E-04	1.90E-04	1.70E-04	1.00E-03	3.7E+01	5.1E-06	1.4E+01	1.4E-05	1.0E-01	1.9E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	6				1.80E-04	1.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	6				2.00E-04	1.00E-03	9.0E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	6				4.10E-04	1.00E-02	2.4E+05		2.4E+05		1.3E+01	
Shallow	VOC	Carbon Disulfide	75-15-0	T		6				2.00E-04	1.00E-03	5.5E+02		1.2E+03		8.0E-01	
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.20E-04	1.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	6				1.40E-04	1.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		6				2.60E-04	1.00E-03	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	6	3	4.20E-04	6.70E-04	1.40E-04	1.40E-04	1.8E+02	3.7E-06	1.5E+02	4.5E-06	1.0E-01	6.7E-03
Shallow	VOC	Chloromethane	74-87-3	T	D	6				4.30E-04	1.00E-03	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	6				1.20E-04	1.00E-03	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	6				1.50E-04	1.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				6.20E-04	2.00E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	6				2.60E-04	1.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	1.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.10E-04	1.00E-03	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				1.50E-04	1.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.70E-04	1.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		6	2	6.70E-04	2.40E-02	2.60E-04	2.60E-04	3.0E+02	8.0E-05	3.0E+02	8.0E-05	1.7E+00	1.4E-02
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	6				1.60E-04	1.00E-03	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.10E-04	1.00E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.40E-04	1.00E-03	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	6				2.20E-04	5.00E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		6				1.50E-04	5.00E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.70E-04	1.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				2.70E-04	1.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	6				1.20E-04	1.00E-03	1.7E+02		1.7E+02		7.0E-01	
Shallow	VOC	2-Hexanone	591-78-6	T		6				4.60E-04	1.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		6				4.10E-04	1.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		6				1.30E-04	5.00E-03	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	6				2.30E-04	1.00E-02	2.0E+04		1.3E+04		1.8E+00	
Shallow	VOC	Methylcyclohexane	108-87-2	T		6				1.50E-04	1.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	6				3.40E-04	1.00E-03	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		6				1.50E-04	1.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.50E-04	1.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	6	2	3.80E-04	4.10E-04	2.30E-04	1.00E-03	1.7E+02	2.4E-06	1.2E+01	3.4E-05	5.0E-03	8.2E-02
Shallow	VOC	Toluene	108-88-3	T	D	6	1	4.40E-04	4.40E-04	1.80E-04	1.00E-03	5.3E+02	8.3E-07	5.3E+02	8.3E-07	1.0E+00	4.4E-04
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				1.70E-04	1.00E-03	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6	3	5.30E-04	1.00E-03	1.50E-04	1.00E-03	1.3E+03	7.7E-07	1.3E+03	7.7E-07	2.0E-01	5.0E-03
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				3.00E-04	1.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	6				1.40E-04	1.00E-03	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		6				2.80E-04	1.00E-03	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		6				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	6				1.50E-04	1.00E-03	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	6	1	3.70E-04	3.70E-04	3.30E-04	1.00E-03	1.9E+02	1.9E-06	1.9E+02	1.9E-06	1.0E+01	3.7E-05
Shallow	SVOC	Acenaphthene	83-32-9	T		6				8.00E-04	5.00E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	6				7.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	6				2.60E-03	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	6				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		6				2.50E-03	5.00E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		6				2.80E-03	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				9.40E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				7.30E-04	5.00E-03			2.0E-03		5.0E-03	
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				9.40E-04	5.00E-03			2.0E-03		2.0E-03	

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TABLE 4-15
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-01 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				8.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				8.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	6				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	6				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6				2.70E-03	5.00E-03			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				8.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				8.80E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		6				2.50E-03	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	6				8.20E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				9.90E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		3				6.10E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		6				8.50E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		6				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				7.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	6				7.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				7.90E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	6				1.10E-03	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	6				9.30E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		6				8.50E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	6				6.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		6				8.50E-04	5.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	6				7.60E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				6.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				7.90E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		6				1.10E-03	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	6				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	6				1.00E-03	5.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	6				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	6				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	6				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	6				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	6				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		6				1.30E-03	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	6				7.50E-04	5.00E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		6				7.00E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	3				7.10E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	6				1.30E-03	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	6				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		6				2.10E-03	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		6				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				1.40E-03	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	6				2.40E-03	5.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	6				8.20E-04	5.00E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	6				2.60E-03	5.00E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	6				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				1.00E-03	5.00E-03			1.7E+02		7.3E-01	
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				1.70E-03	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	3				8.20E-05	4.00E-04	4.5E-02		3.3E-03		5.0E-04	

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TABLE 4-15
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-01 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	6				8.20E-05	4.00E-04	4.5E-02		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		6	2	4.20E-03	6.00E-03	2.20E-03	2.50E-02			6.8E+01	8.8E-05	6.0E-03	1.0E+00
Shallow	INORG	Antimony	7440-36-0	T		6	2	5.00E-03	7.70E-03	2.20E-03	2.50E-02			6.8E+01	1.1E-04	6.0E-03	**1.3E+00**
Shallow	INORG	Arsenic	7440-38-2	D	A	6	3	4.20E-03	6.40E-03	3.90E-03	1.00E-02			4.3E+00	1.5E-03	5.0E-02	1.3E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	6	5	4.70E-03	7.00E-03	1.00E-02	1.00E-02			4.3E+00	1.6E-03	5.0E-02	1.4E-01
Shallow	INORG	Barium	7440-39-3	D	D	6	6	1.41E-02	1.77E-01					1.4E+04	1.3E-05	2.0E+00	8.9E-02
Shallow	INORG	Barium	7440-39-3	T	D	6	6	1.36E-02	1.72E-01					1.4E+04	1.2E-05	2.0E+00	8.6E-02
Shallow	INORG	Beryllium	7440-41-7	D	B1	6				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	6				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	6				2.80E-04	5.00E-03			1.9E+02		5.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	6	1	3.80E-04	3.80E-04	2.80E-04	5.00E-03			1.9E+02	2.0E-06	5.0E-03	7.6E-02
Shallow	INORG	Chromium (total)	7440-47-3	D		4	1	3.64E-02	3.64E-02	1.40E-03	1.00E-02			4.6E+02	7.9E-05	1.0E-01	3.6E-01
Shallow	INORG	Chromium III	16065-83-1	D	D	2	1	3.87E-02	3.87E-02	1.40E-03	1.40E-03			2.9E+05	1.3E-07	3.8E+01	1.0E-03
Shallow	INORG	Chromium III	16065-83-1	T	D	6	2		4.95E-02	1.40E-03	1.00E-02			2.9E+05	1.7E-07	3.8E+01	1.3E-03
Shallow	INORG	Chromium VI	18540-29-9	D	A	2				6.90E-03	6.90E-03			4.6E+02		1.0E-01	
Shallow	INORG	Chromium VI	18540-29-9	T	A	6	1	3.39E-02	3.39E-02	6.90E-03	2.00E-02			4.6E+02	7.3E-05	1.0E-01	3.4E-01
Shallow	INORG	Cobalt	7440-48-4	D	B1	6	2	2.20E-03	2.90E-03	1.30E-03	1.30E-03			2.4E+03	1.2E-06	4.0E-02	7.3E-02
Shallow	INORG	Cobalt	7440-48-4	T	B1	6	2	2.20E-03	2.80E-03	1.30E-03	1.30E-03			2.4E+03	1.2E-06	4.0E-02	7.0E-02
Shallow	INORG	Copper	7440-50-8	D	D	6				4.20E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Copper	7440-50-8	T	D	6				4.20E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Cyanide (total)	57-12-5	T	D	11	7	5.50E-03	1.50E-00	1.70E-03	1.80E-03			5.7E+01	2.3E-02	2.0E-01	**6.5E+00**
Shallow	INORG	Lead	7439-92-1	D	B2	6				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	6				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	6	5	9.40E-04	5.56E-01	9.00E-04	9.00E-04			9.1E+03	6.0E-05	8.6E-01	6.3E-01
Shallow	INORG	Manganese	7439-96-5	T	D	6	5	2.63E-02	5.48E-01	9.00E-04	9.00E-04			9.1E+03	6.0E-05	8.6E-01	6.4E-01
Shallow	INORG	Mercury	7439-97-6	D	D	6				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	6				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Nickel	7440-02-0	D	A	6	2	2.40E-03	3.00E-03	2.20E-03	2.20E-03			7.4E+04	4.1E-08	1.0E-01	3.0E-02
Shallow	INORG	Nickel	7440-02-0	T	A	6	1	3.70E-03	3.70E-03	2.20E-03	2.00E-02			7.4E+04	5.0E-08	1.0E-01	3.7E-02
Shallow	INORG	Selenium	7782-49-2	D	D	6	2	5.00E-03	5.60E-03	4.50E-03	5.00E-03			9.7E+02	5.8E-06	5.0E-02	1.1E-01
Shallow	INORG	Selenium	7782-49-2	T	D	6	2	4.50E-03	6.50E-03	4.50E-03	5.00E-03			9.7E+02	6.7E-06	5.0E-02	1.3E-01
Shallow	INORG	Silver	7440-22-4	D	D	6				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	6				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		6	3	2.60E-05	5.40E-05	5.00E-03	1.00E-02			1.3E+01	4.2E-06	2.0E-03	2.7E-02
Shallow	INORG	Thallium	7440-28-0	T		6	1	4.50E-05	4.50E-05	1.80E-05	1.00E-02			1.3E+01	3.5E-06	2.0E-03	2.3E-02
Shallow	INORG	Vanadium	7440-62-2	D		6	2	1.00E-03	1.70E-03	8.20E-04	1.00E-02			9.7E+02	1.8E-06	4.5E-03	3.8E-01
Shallow	INORG	Vanadium	7440-62-2	T		6	1	2.80E-03	2.80E-03	8.20E-04	1.00E-02			9.7E+02	2.9E-06	4.5E-03	6.2E-01
Shallow	INORG	Zinc	7440-66-6	D	D	6	1	1.89E-02	1.89E-02	1.20E-02	2.00E-02			1.1E+05	1.7E-07	2.4E+00	7.9E-03
Shallow	INORG	Zinc	7440-66-6	T	D	6				1.20E-02	2.00E-02			1.1E+05		2.4E+00	

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The MDEQ Drinking Water Criteria for Chromium III was calculated by ENVIRON to account for valence specific toxicity.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 3.2.4.Q
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-2 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	88	17	2.18E-03	4.50E-01	1.70E-03	1.00E+00		1.1E+05	4.1E-06	1.6E+05	2.8E-06	1.7E+08	2.6E-09	7.3E+04	6.2E-06	1.1E+05	4.1E-06	1.3E+05	3.5E-06	3.9E+08	1.2E-09	2.3E+04	2.0E-05
VOC	Benzene	71-43-2	A	88	4	1.10E-03	2.50E-02	3.10E-04	2.60E-01		8.4E+00	3.0E-03	4.5E+01	5.6E-04	4.7E+05	5.3E-08	4.0E+02	6.3E-05	1.6E+00	1.6E-02	1.3E+01	1.9E-03	3.8E+05	6.6E-08	1.8E+02	1.4E-04
VOC	Bromodichloromethane	75-27-4	B2	88				4.90E-04	2.60E-01		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	88				6.50E-04	2.60E-01		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	88				1.30E-03	5.10E-01		1.6E+00		1.3E+01		1.5E+05		1.0E+03		8.6E-01		1.1E+01		3.3E+05		3.2E+02	
VOC	2-Butanone	78-93-3	ID	88	8	2.80E-03	1.50E-01	1.30E-03	1.00E+00		2.7E+04	5.6E-06	3.5E+04	4.3E-06	2.9E+07	5.2E-09	2.7E+04	5.6E-06	2.7E+04	5.6E-06	2.9E+04	5.2E-06	6.7E+07	2.2E-09	2.7E+04	5.6E-06
VOC	Carbon Disulfide	75-15-0		88	9	6.70E-04	7.20E-02	2.50E-04	2.60E-01		1.4E+02	5.1E-04	1.6E+03	4.5E-05	2.1E+07	3.4E-09	2.8E+02	2.6E-04	7.6E+01	9.5E-04	1.3E+03	5.5E-05	4.7E+07	1.5E-09	2.8E+02	2.6E-04
VOC	Carbon Tetrachloride	56-23-5	B2	88				4.40E-04	2.60E-01		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		1.3E+05		1.3E+05		9.6E+01	
VOC	Chlorobenzene	108-90-7	D	88				3.60E-04	2.60E-01		2.2E+02		9.2E+02		2.1E+06		2.6E+02		1.2E+02		7.7E+02		4.7E+06		2.6E+02	
VOC	Chloroethane	75-00-3		88	2	2.40E-03	8.00E-03	8.60E-04	5.10E-01		9.5E+02	8.4E-06	3.6E+04	2.2E-07	2.9E+08	2.8E-11	9.5E+02	8.4E-06	9.5E+02	8.4E-06	3.0E+04	2.7E-07	6.7E+08	1.2E-11	9.5E+02	8.4E-06
VOC	Chloroform	67-66-3	B2	88	7	9.90E-04	4.40E-03	4.80E-04	2.60E-01		3.8E+01	1.2E-04	1.5E+02	2.9E-05	1.6E+06	2.8E-09	1.5E+03	2.9E-06	7.2E+00	6.1E-04	4.5E+01	9.8E-05	1.3E+06	3.4E-09	1.2E+03	3.7E-06
VOC	Chloromethane	74-87-3	D	88				4.30E-04	5.10E-01		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	88	3	8.00E-04	2.30E-03	5.00E-04	2.60E-01		3.9E+02	5.9E-06	2.0E+03	1.2E-06	2.6E+06	3.8E-10	3.9E+02	5.9E-06	3.9E+02	5.9E-06	1.7E+03	1.4E-06	5.8E+06	4.0E-10	3.9E+02	5.9E-06
VOC	Cyclohexane	110-82-7	ID	88	2	6.00E-04	1.80E-02	4.20E-04	5.10E-01																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	88				1.00E-03	5.80E-01		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	88				5.70E-04	2.60E-01		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	88				3.30E-04	2.60E-01		3.6E+00		5.8E+00		8.8E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	1,2-Dichlorobenzene	95-50-1	D	88	2	9.20E-04	1.60E-02	4.00E-04	2.60E-01		2.1E+02	7.6E-05	4.6E+04	3.5E-07	1.2E+07	3.6E-10	2.1E+02	7.6E-05	2.1E+02	7.6E-05	3.9E+04	4.1E-07	1.0E+08	1.6E-10	2.1E+02	7.6E-05
VOC	1,3-Dichlorobenzene	541-73-1	D	88	1	8.70E-04	8.70E-04	5.90E-04	2.60E-01								1.7E+02	5.1E-06							1.7E+02	5.1E-06
VOC	1,4-Dichlorobenzene	106-46-7	C	88	1	1.30E-03	1.30E-03	4.30E-04	2.60E-01		1.0E+02	1.3E-05	2.6E+02	5.0E-06	5.7E+06	2.3E-09	1.9E+03	6.8E-07	1.9E+01	6.8E-05	7.7E+01	1.7E-05	4.5E+05	2.9E-09	4.0E+02	3.3E-06
VOC	Dichlorodifluoromethane	75-71-8		88				8.00E-04	5.10E-01		1.7E+03		6.3E+04		1.5E+09		1.0E+03		9.0E+02		5.3E+04		3.3E+09		1.0E+03	
VOC	1,1-Dichloroethane	75-34-3	C	88	42	1.20E-03	4.40E+01	2.80E-04	2.60E-01		4.3E+02	1.0E-01	2.5E+03	1.7E-03	1.5E+07	2.9E-06	8.9E+02	4.9E-02	2.3E+02	1.9E-01	2.1E+03	2.1E-02	3.3E+07	1.3E-06	8.9E+02	4.9E-02
VOC	1,2-Dichloroethane	107-06-2	B2	88	3	1.60E-03	3.30E-01	4.00E-04	2.60E-01		1.1E+01	3.0E-02	2.1E+01	1.6E-02	1.5E+05	2.2E-06	4.2E+02	7.9E-04	2.1E+00	1.6E-01	6.2E+00	5.3E-02	1.2E+05	2.8E-06	9.1E+01	3.6E-03
VOC	1,1-Dichloroethene	75-35-4	C	88	15	7.90E-04	1.80E+00	4.90E-04	2.60E-01		3.3E-01	**5.5E+00**	3.7E+00	1.9E-01	7.8E+04	2.5E-05	5.7E+02	3.2E-03	6.2E-02	**2.9E+01**	1.1E+00	**1.6E+00**	6.2E+04	2.9E-05	2.0E+02	9.0E-03
VOC	cis-1,2-Dichloroethene	156-59-2	D	88	1	5.70E-03	5.70E-03	3.10E-04	2.60E-01		4.1E+01	1.4E-04	2.5E+02	2.2E-05	1.0E+06	5.7E-09	6.4E+02	8.9E-06	2.2E+01	2.6E-04	1.8E+02	3.2E-05	2.3E+06	2.5E-09	6.4E+02	8.9E-06
VOC	trans-1,2-Dichloroethene	156-60-5		88				3.60E-04	2.60E-01		4.3E+01		3.5E+02		2.1E+06		1.4E+03		2.3E+01		2.8E+02		4.7E+06		1.4E+03	
VOC	1,2-Dichloropropane	78-87-5	B2	88				3.10E-04	2.60E-01		7.4E+00		3.0E+01		2.2E+05		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	88				4.60E-04	2.60E-01		5.4E+00		6.0E+01		1.9E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	Ethyl Benzene	100-41-4	D	87	6	5.10E-04	2.40E-02	4.40E-04	2.60E-01		1.4E+02	1.7E-04	2.3E+03	1.0E-05	1.3E+07	1.8E-09	1.4E+02	1.7E-04	8.7E+01	2.8E-04	7.2E+02	3.3E-05	1.0E+07	2.4E-09	1.4E+02	1.7E-04
VOC	2-Hexanone	591-78-6		88	1	5.60E-03	5.60E-03	1.20E-03	1.00E+00		1.8E+03	3.1E-06	3.3E+03	4.3E-06	1.2E+06	4.7E-09	2.5E+03	2.2E-06	9.9E+02	5.7E-06	1.1E+03	5.1E-06	2.7E+06	2.1E-09	2.5E+03	2.2E-06
VOC	Methyl Acetate	79-20-9		88	10	1.18E-03	5.70E-01	8.20E-04	5.10E-01																	
VOC	Methyl tert-butyl ether	1634-04-4		88				2.80E-04	1.00E+00		5.9E+03		8.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	88	12	1.20E-03	1.80E+00	8.40E-04	1.00E+00		2.7E+03	6.7E-04	5.3E+04	3.4E-05	6.0E+07	3.0E-08	2.7E+03	6.7E-04	2.7E+03	6.7E-04	4.5E+04	4.0E-05	1.4E+08	1.3E-08	2.7E+03	6.7E-04
VOC	Methylcyclohexane	108-87-2		88	4	6.60E-04	2.10E-02	4.20E-04	5.10E-01																	
VOC	Methylene Chloride	75-09-2	B2	88	6	1.70E-03	4.70E-01	9.70E-04	2.90E-01		2.4E+02	2.0E-03	7.0E+02	6.7E-04	8.3E+06	5.7E-08	2.3E+03	2.0E-04	4.5E+01	1.0E-02	2.1E+02	2.2E-03	6.6E+06	7.1E-08	1.3E+03	3.6E-04
VOC	Styrene	100-42-5		88				3.00E-04	2.60E-01		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	88				3.90E-04	2.60E-01		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	88	39	9.20E-04	1.90E+00	4.80E-04	2.60E-01		6.0E+01	3.2E-02	6.0E+02	3.2E-03	6.8E+06	2.8E-07	8.8E+01	2.2E-02	1.1E+01	1.7E-01	1.8E+02	1.1E-02	5.4E+06	3.5E-07	8.8E+01	2.2E-02
VOC	Toluene	108-88-3	D	88	33	4.00E-04	2.90E+00	3.30E-04	2.60E-01		2.5E+02	1.2E-02	3.3E+03	8.8E-04	1.2E+07	2.4E-07	2.5E+02	1.2E-02	2.5E+02	1.2E-02	2.8E+03	1.0E-03	2.7E+07	1.1E-07	2.5E+02	1.2E-02
VOC	1,2,4-Trichlorobenzene	120-82-1	D	88				5.60E-04	2.60E-01		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	88	49	4.40E-04	4.60E+00	3.90E-04	2.30E-01		4.6E+02	1.0E-02	4.5E+03	1.0E-03	2.9E+07	1.6E-07	4.6E+02	1.0E-02	2.5E+02	1.8E-02	3.8E+03	1.2E-03	6.7E+07	6.9E-08	4.6E+02	1.0E-02
VOC	1,1,2-Trichloroethane	79-00-5	C	82	1	4.10E-03	4.10E-03	3.30E-04	2.60E-01		2.4E+01	1.7E-04	5.7E+01	7.2E-05	2.5E+05	1.6E-08	8.4E+02	4.9E-06	4.6E+00	8.9E-04	1.7E+01	2.4E-04	1.9E+05	2.2E-08	1.8E+02	2.3E-05
VOC	Trichloroethene	79-01-6	C-B2	88	14	5.53E-04	4.40E-01	5.70E-04	2.60E-01		3.7E+01	1.2E-02	2.6E+02	1.7E-03	2.3E+06	1.9E-07	5.0E+02	8.8E-04	7.1E+00	6.2E-02	7.8E+01	5.6E-03	1.8E+06	2.4E-07	5.0E+02	8.8E-04
VOC	Trichlorofluoromethane	75-69-4		88				3.60E-04	5.10E-01		5.6E+02		1.1E+05		1.7E+09		5.6E+02		5.6E+02		9.2E+04		3.8E+09		5.6E+02	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		88	2	7.80E-04	2.20E-03	6.90E-04	2.60E-01		5.5E+02	4.0E-06	2.1E+05	1.0E-08	2.3E+09	9.6E-13	5.5E+02	4.0E-06	5.5E+02	4.0E-06	1.8E+05	1.2E-08	5.1E+09	4.3E-13	5.5E+02	4.0E-06
VOC	Vinyl Chloride	75-01-4	A	88				4.20E-04	5.10E-01		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00		3.5E+05		3.8E+00	
VOC	Xylenes (total)	1330-20-7	ID	88	7	3.20E-03	1.70E-01	1.10E-03	5.10E-01		1.5E+02	1.1E-03	5.4E+04	3.1E-06	1.3E+08	1.3E-09	1.5E+02	1.1E-03	1.5E+02	1.1E-03	4.6E+04	3.7E-06	2.9E+08	5.9E-10	1.5E+02	1.1E-03
SVOC	Acenaphthene	83-32-9		84	5	1.30E-01	1.40E+00	1.40E-02	7.80E+00		3.5E+05	4.0E-06	9.7E+04	1.4E-05	6.2E+06	2.3E-07	1.3E+05	1.1E-05	1.9E+05	7.4E-06	8.1E+04	1.7E-05	1.4E+07	1.0E-07	4.1E+04	3.4E-05
SVOC	Acenaphthylene	208-96-8	D	84				1.95E-02	7.80E+00		3.0E+03		2.7E+03		1.0E+06		5.2E+03		1.6E+03		2.2E+03		2.3E+06		1.6E+03	
SVOC	Acetophenone	98-86-2	D	84				1.80E-02	7.80E+00		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	Anthracene	120-12-7	D	84	9	5.50E-01	8.50E+00	1.80E-02	7.30E+00		1.0E+06	8.5E-06	1.6E+06	5.3E-06	2.9E+07	2.9E-07	7.3E+05	1.2E-05	1.0E+06	8.5E-06	1.4E+06	6.1E-06	6.7E+07	1.3E-07	2.3E+05	3.7E-05
SVOC	Atrazine	1912-24-9		84				1.80E-02	8.50E+00								3.3E+02								7.1E+01	
SVOC	Benzaldehyde	100-52-7		84				1.40E-02	9.60E+00																	
SVOC	Benzo(a)anthracene	56-55-3	B2	84	3	3.60E-02	1.40E+00	1.75E-02	7.80E+00								8.0E+01	1.8E-02							2.0E+01	7.0E-02
SVOC	Benzo(a)pyrene	50-32-8	B2	84	2	3.10E-02	9.10E-01	1.50E-02	7.80E+00						1.9E+03	4.8E-04	8.0E+00	1.1E-01					1.5E+03	6.1E-04	2.0E+00	4.6E-01
SVOC	Benzo(b)fluoranthene	205-99-2	B2	84	2	4.50E-02	1.20E+00	2.05E-02	7.80E+00								8.0E+01	1.5E-02							2.0E+01	6.0E-02
SVOC	Benzo(g,h,i)perylene	191-24-2	D	84	3	1.10E-01	4.60E-01	1.70E-02	7.80E+00						3.5E+05	1.3E-06	7.0E+03	6.6E-05					8.0E+05	5.8E-07	2.5E+03	1.8E-04
SVOC	Benzo(k)fluoranthene	207-08-9	B2	84	2	2.10E-02	5.60E-01	1.70E-02	7.80E+00								8.0E+02	7.0E-04							2.0E+02	2.8E-03
SVOC	Biphenyl	92-52-4	D	84	1	2.80E-02	2.80E-02	1.90E-02	7.90E+00																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	84				1.70E-02	7.80E+00																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	84				1.80E-02	7.80E+00		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	84	22	1.90E-02	5.80E+01	1.30E-02	7.80E+00						8.9E+05	6.5E-05	1.0E+04	5.8E-03					7.0E+05	8.3E-05	2.8E+03	2.1E-02
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	84				1.50E-02	7.80E+00																	
SVOC	Butylbenzylphthalate	85-68-7	C	84	1	1.50E+00	1.50E+00	1.70E-02	7.80E+00						2.1E+07	7.1E-08	3.1E+02	4.8E-03					4.7E+07	3.2E-08	3.1E+02	4.8E-03
SVOC	Caprolactam	105-60-2		84				2.20E-02	1.00E+01						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	84	1	3.10E-01	3.10E-01	2.00E-02	7.80E+00								2.4E+03	1.3E-04							5.3E+02	5.8E-04
SVOC	4-Chloro-3-methylphenol	59-50-7		84				1.80E-02	7.80E+00								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		84				6.25E-03	3.10E+01																	
SVOC	2-Chloronaphthalene	91-58-7		84				1.80E-02	7.80E+00								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		84				1.80E-02	7.80E+00								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		84				1.80E-02	7.80E+00																	
SVOC	Chrysene	218-01-9	B2	84	7	1.63E-02	1.40E+00	1.80E-02	7.80E+00								8.0E+03	1.8E-04							2.0E+03	7.0E-04
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	84	1	1.70E-01	1.70E-01	1.90E-02	7.80E+00								8.0E+00	2.1E-02							2.0E+00	8.5E-02
SVOC	Dibenzofuran	132-64-9	D	84	3	3.10E-02	3.50E-01	1.80E-02	7.80E+00																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	84				9.50E-03	4.70E+01						6.2E+03		3.0E+01						6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		84				1.60E-02	7.80E+00						2.3E+06		1.8E+03						5.1E+06		6.6E+02	
SVOC	Diethylphthalate	84-66-2	D	84				2.00E-02	8.50E+00						1.5E+06		7.4E+02						3.3E+06		7.4E+02	
SVOC	2,4-Dimethylphenol	105-67-9		84				1.90E-02	7.80E+00						2.1E+06		3.6E+04						4.7E+06		1.1E+04	

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TABLE 4-16
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI M-2 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Dimethylphthalate	131-11-3	D	84				1.80E-02	9.00E+00						1.5E+06		7.9E+02						3.3E+06		7.9E+02	
SVOC	Di-n-butylphthalate	84-74-2	D	84	1	3.30E-02	3.30E-02	2.40E-02	8.50E+00						1.5E+06	2.2E-08	7.6E+02	4.3E-05					3.3E+06	1.0E-08	7.6E+02	4.3E-05
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		84				5.00E-02	4.00E+01								2.6E+02								7.9E+01	
SVOC	2,4-Dinitrophenol	51-28-5		84				4.90E-02	4.00E+01																	
SVOC	2,4-Dinitrotoluene	121-14-2	B2	84				1.80E-02	7.80E+00						2.0E+04		2.2E+02						1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	84				1.50E-02	7.80E+00																	
SVOC	Di-n-octylphthalate	117-84-0		84				1.80E-02	7.80E+00								2.0E+04								6.9E+03	
SVOC	Fluoranthene	206-44-0	D	84	15	1.80E-02	5.20E+00	1.70E-02	7.30E+00		1.0E+06	5.2E-06	8.9E+05	5.8E-06	4.1E+06	1.3E-06	1.3E+05	4.0E-05	1.0E+06	5.2E-06	7.4E+05	7.0E-06	9.3E+06	5.6E-07	4.6E+04	1.1E-04
SVOC	Fluorene	86-73-7	D	84	12	3.00E-01	5.70E+01	1.50E-02	7.30E+00		1.0E+06	5.7E-05	1.5E+05	3.8E-04	4.1E+06	1.4E-05	8.7E+04	6.6E-04	5.8E+05	9.8E-05	1.3E+05	4.4E-04	9.3E+06	6.1E-06	2.7E+04	2.1E-03
SVOC	Hexachlorobenzene	118-74-1	B2	84				1.80E-02	7.80E+00		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	84				1.70E-02	7.80E+00		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	84				1.00E-02	7.80E+00		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	84				1.80E-02	2.70E+00		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	84	1	4.60E-01	4.60E-01	2.00E-02	7.80E+00								8.0E+01	5.8E-03							2.0E+01	2.3E-02
SVOC	Isophorone	78-59-1	C	84	1	6.90E-02	6.90E-02	1.95E-02	7.80E+00						8.2E+06	8.4E-09	2.4E+03	2.9E-05					1.2E+07	5.8E-09	2.4E+03	2.9E-05
SVOC	2-Methylnaphthalene	91-57-6	ID	84	10	1.80E-02	2.10E+00	1.80E-02	7.30E+00								2.6E+04	8.1E-05							8.1E+03	2.6E-04
SVOC	Methylphenol (total)	1319-77-3		84	1	1.38E-01	1.38E-01	1.50E-02	7.80E+00						2.9E+06	4.8E-08	3.6E+04	3.8E-06					6.7E+06	2.1E-08	1.1E+04	1.3E-05
SVOC	Naphthalene	91-20-3	C	84	6	1.48E-02	2.90E-01	1.80E-02	7.80E+00		4.7E+02	6.2E-04	3.5E+02	8.3E-04	8.8E+04	3.3E-06	5.2E+04	5.6E-06	2.5E+02	1.2E-03	3.0E+02	9.7E-04	2.0E+05	1.5E-06	1.6E+04	1.8E-05
SVOC	2-Nitroaniline	88-74-4		84				1.30E-02	4.00E+01																	
SVOC	3-Nitroaniline	99-09-2	C	84				1.20E-02	4.00E+01																	
SVOC	4-Nitroaniline	100-01-6	C	84				1.80E-02	4.00E+01																	
SVOC	Nitrobenzene	98-95-3	D	84				1.80E-02	7.80E+00		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		84				1.60E-02	7.80E+00								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		84				5.50E-02	4.00E+01																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	84				2.00E-02	7.80E+00								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	84				1.50E-02	7.80E+00						2.0E+03		5.4E+00						1.6E+03		1.2E+00	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	84				1.95E-02	7.80E+00																	
SVOC	Pentachlorophenol	87-86-5	B2	84				6.20E-02	8.00E+01						3.8E+05		3.2E+02						1.0E+05		9.0E+01	
SVOC	Phenanthrene	85-01-8	D	84	24	2.75E-02	5.70E+01	2.10E-02	1.70E+00		5.1E+03	1.1E-02	1.9E+03	3.0E-01	2.9E+03	2.0E-02	5.2E+03	1.1E-02	2.8E+03	2.0E-02	1.6E+02	3.6E-01	6.7E+03	8.5E-03	1.6E+03	3.6E-02
SVOC	Phenol	108-95-2	ID	84				1.80E-02	7.80E+00						1.8E+07		1.2E+04						4.0E+07		1.2E+04	
SVOC	Pyrene	129-00-0	D	84	20	4.70E-02	7.60E+00	1.75E-02	1.70E+00		1.0E+06	7.6E-06	8.8E+05	9.7E-06	2.9E+06	2.6E-06	8.4E+04	9.0E-05	1.0E+06	7.6E-06	6.5E+05	1.2E-05	6.7E+06	1.1E-06	2.9E+04	2.6E-04
SVOC	2,4,5-Trichlorophenol	95-95-4		84				1.50E-02	7.80E+00						1.0E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	84				1.70E-02	7.80E+00						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
P/PCB	PCBs (total)	1336-36-3	B2	76	17	5.28E-02	3.98E+00	2.10E-02	4.20E-02		1.6E+04	2.5E-04	8.1E+02	4.9E-03	6.5E+03	6.1E-04	1.6E+01	2.5E-01	3.0E+03	1.3E-03	2.4E+02	1.7E-02	5.2E+03	7.6E-04	4.0E+00	9.9E-01
INORG	Antimony	7440-36-0		83	10	2.25E-01	3.17E+00	1.19E-01	2.53E+00						5.9E+03	5.4E-04	6.7E+02	4.7E-03					1.3E+04	2.4E-04	1.8E+02	1.8E-02
INORG	Arsenic	7440-38-2	A	84	84	5.96E-01	1.94E+01			1.3E+01					9.1E+02	6.8E-03	3.7E+01	1.7E-01					7.2E+02	8.6E-03	7.6E+00	8.2E-01
INORG	Barium	7440-39-3	D	84	83	2.88E+00	3.44E+02	7.12E-02	7.12E-02	1.1E+02					1.5E+05	1.6E-03	1.3E+05	1.8E-03					3.3E+05	7.1E-04	3.7E+04	6.3E-03
INORG	Beryllium	7440-41-7	B1	84	71	3.31E-02	4.53E+00	2.46E-02	3.77E-01	1.5E+00					5.9E+02	5.1E-03	1.6E+03	1.9E-03					1.3E+03	2.3E-03	4.1E+02	7.3E-03
INORG	Cadmium	7440-43-9	B1	84	67	3.81E-02	3.98E+00	9.20E-03	1.11E+00	1.2E+00					2.2E+03	1.3E-03	2.1E+03	1.3E-03					1.7E+03	1.6E-03	5.5E+02	5.1E-03
INORG	Chromium (total)	7440-47-3		17	17	3.81E+00	1.36E+02			4.9E+01					2.4E+02	3.6E-01	9.2E+03	9.4E-03					2.6E+02	3.3E-01	2.5E+03	3.5E-02
INORG	Chromium III	16065-83-1	D	67	67	1.91E+00	6.70E+02								1.5E+05	4.5E-03	1.0E+06	6.7E-04					3.3E+05	2.0E-03	7.9E+05	8.5E-04
INORG	Chromium VI	18540-29-9	A	68	14	7.07E-02	7.76E+00	3.69E-01	6.31E-01						2.4E+02	3.2E-02	9.2E+03	8.4E-04					2.6E+02	3.0E-02	2.5E+03	3.1E-03
INORG	Cobalt	7440-48-4	B1	84	84	1.20E+00	3.01E+01			1.7E+01					5.9E+03	2.2E-03	9.0E+03	1.4E-03					1.3E+04	9.8E-04	2.6E+03	4.9E-03
INORG	Copper	7440-50-8	D	84	84	2.06E+00	2.60E+03			3.2E+01					5.9E+04	4.4E-02	7.3E+04	3.5E-02					1.3E+05	2.0E-02	2.0E+04	1.3E-01
INORG	Cyanide (total)	57-12-5	D	67	31	1.92E-01	5.18E+01	1.79E-01	5.96E-01						2.5E+02	2.1E-01	2.5E+02	2.1E-01					2.5E+02	2.1E-01	1.2E+01	**4.3E+00**
INORG	Lead	7439-92-1	B2	84	84	1.57E+00	1.83E+02			4.9E+01					4.4E+04	3.0E-03	9.0E+02	1.5E-01					1.0E+05	1.3E-03	4.0E+02	3.3E-01
INORG	Manganese	7439-96-5	D	96	96	5.30E+01	2.22E+03			5.1E+02					1.5E+03	**1.1E+00**	9.0E+04	1.9E-02					3.3E+03	5.2E-01	2.5E+04	6.8E-02
INORG	Mercury	7439-97-6	D	84	53	9.60E-03	5.63E-01	8.80E-03	3.88E-02	1.3E-01	8.9E+01	4.9E-03	6.2E+01	7.0E-03	8.8E+03	4.9E-05	5.8E+02	7.5E-04	4.8E+01	9.0E-03	5.2E+01	8.3E-03	2.0E+04	2.2E-05	1.6E+02	2.7E-03
INORG	Nickel	7440-02-0	A	84	84	3.49E+00	4.14E+03			3.0E+01					1.6E+04	2.6E-01	1.5E+05	2.7E-02					1.3E+04	3.2E-01	4.0E+04	1.0E-01
INORG	Selenium	7782-49-2	D	84	5	3.82E-01	3.83E+00	1.66E-01	1.11E+00	4.1E-01					5.9E+04	5.8E-05	9.6E+03	3.6E-04					1.3E+05	2.6E-05	2.6E+03	1.3E-03
INORG	Silver	7440-22-4	D	84	3	9.31E-02	2.45E-01	5.15E-02	6.31E-01						2.9E+03	8.4E-05	9.0E+03	2.7E-05					6.7E+03	3.7E-05	2.5E+03	9.8E-05
INORG	Thallium	7440-28-0		84	24	2.80E-01	2.71E+00	2.87E-01	3.22E+00								1.3E+02	2.1E-02							3.5E+01	7.7E-02
INORG	Vanadium	7440-62-2		84	84	3.42E+00	3.32E+01			3.3E+01							5.5E+03	6.9E-05							7.5E+02	5.1E-04
INORG	Zinc	7440-66-6	D	84	84	7.23E+00	3.64E+02			1.9E+02							6.3E+05	2.8E-04							1.7E+05	1.0E-03

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-17
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-02 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	36	16	8.25E-04	3.40E+00	5.10E-04	6.90E-02	1.0E+06	3.4E-06	3.1E+04	1.1E-04	7.3E-01	**4.7E+00**
Shallow	VOC	Benzene	71-43-2	T	A	36				1.60E-04	2.50E-02	3.5E+01		1.1E+01		5.0E-03	
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	36	2	4.80E-04	7.20E-04	1.70E-04	2.50E-02	3.7E+03	1.9E-05	1.4E+01	5.1E-05	1.0E-01	7.2E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	36				1.80E-04	2.50E-02	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	36				2.00E-04	2.50E-02	9.0E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	36				4.10E-04	2.50E-01	2.4E+05		2.4E+05		1.3E+01	
Shallow	VOC	Carbon Disulfide	75-15-0	T		36				2.00E-04	2.50E-02	5.5E+02		1.2E+03		8.0E-01	
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	36				1.20E-04	2.50E-02	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	36				1.40E-04	2.50E-02	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		36	7	2.70E-03	5.80E-02	2.60E-04	1.80E-02	5.7E+03	1.0E-05	4.4E+02	1.3E-04	4.3E-01	1.3E-01
Shallow	VOC	Chloroform	67-66-3	T	B2	36	11	2.00E-04	5.80E-03	1.40E-04	2.20E-02	1.8E+02	3.2E-05	1.5E+02	3.9E-05	1.0E-01	5.8E-02
Shallow	VOC	Chloromethane	74-87-3	T	D	36	1	1.60E-04	1.60E-04	1.30E-04	2.10E-02	4.5E+01	3.6E-06	4.9E+02	3.3E-07	2.6E-01	6.2E-04
Shallow	VOC	Cumene	98-82-8	T	D	36				1.20E-04	2.50E-02	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	36				1.60E-04	2.50E-02						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	36				6.20E-04	5.10E-02	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	36				2.60E-04	2.50E-02	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	36				2.20E-04	2.50E-02	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	36				1.10E-04	2.50E-02	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	36				1.50E-04	2.50E-02			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	36				1.70E-04	2.50E-02	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		36				2.60E-04	5.00E-02	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	36	34	3.80E-04	1.90E-01	3.20E-03	1.10E-02	2.3E+03	8.3E-04	2.4E+03	7.9E-04	8.8E-01	**2.2E+00**
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	36	6	4.20E-04	1.00E-02	2.10E-04	2.50E-02	5.9E+01	1.7E-04	1.9E+01	5.3E-04	5.0E-03	**2.0E+00**
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	36	25	3.30E-04	4.50E-02	2.40E-04	1.60E-02	1.3E+00	7.0E-02	1.1E+01	8.3E-03	7.0E-03	**1.3E+01**
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	36	9	5.80E-04	7.15E-02	2.20E-04	2.20E-02	2.1E+02	3.4E-04	2.0E+02	3.6E-04	7.0E-02	1.0E+00
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		36	3	5.45E-04	3.20E-03	1.50E-04	2.10E-02	2.0E+02	1.6E-05	2.2E+02	1.5E-05	1.0E-01	3.2E-02
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	36				1.70E-04	2.60E-02	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	36				2.70E-04	2.50E-02	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	29				1.20E-04	2.50E-02	1.7E+02		1.7E+02		7.0E-01	
Shallow	VOC	2-Hexanone	591-78-6	T		36				4.60E-04	2.50E-01	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		36				4.10E-04	2.50E-01						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		36				1.30E-04	1.20E-01	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	36	3	1.00E-03	3.20E-02	2.30E-04	2.50E-01	2.0E+04	1.6E-06	1.3E+04	2.5E-06	1.8E+00	1.8E-02
Shallow	VOC	Methylcyclohexane	108-87-2	T		36				1.50E-04	2.60E-02						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	36	10	3.75E-04	2.40E-02	2.90E-04	2.50E-02	1.4E+03	1.7E-05	2.2E+02	1.1E-04	5.0E-03	**4.8E+00**
Shallow	VOC	Styrene	100-42-5	T		36				1.50E-04	2.50E-02	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	36				2.50E-04	2.50E-02	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	36	6	7.20E-04	7.50E-03	2.30E-04	2.60E-02	1.7E+02	4.4E-05	1.2E+01	6.3E-04	5.0E-03	**1.5E+00**
Shallow	VOC	Toluene	108-88-3	T	D	36	1	2.00E-03	2.00E-03	1.80E-04	2.50E-02	5.3E+02	3.8E-06	5.3E+02	3.8E-06	1.0E+00	2.0E-03
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	36				1.70E-04	2.50E-02	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	36	27	4.50E-04	6.00E-01	1.50E-04	1.00E-02	1.3E+03	4.6E-04	1.3E+03	4.6E-04	2.0E-01	**3.0E+00**
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	36	3	1.00E-02	2.00E-02	3.00E-04	2.20E-02	1.1E+02	1.8E-04	2.1E+01	9.5E-04	5.0E-03	**4.0E+00**
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	36	10	1.40E-03	5.60E-02	1.40E-04	2.60E-02	9.7E+01	5.8E-04	2.2E+01	2.5E-03	5.0E-03	**1.1E+01**
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		36				2.80E-04	3.40E-02	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		36	1	6.30E-04	6.30E-04	3.20E-04	2.50E-02	1.7E+02	3.7E-06	1.7E+02	3.7E-06	1.7E+02	3.7E-06
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	36	8	3.80E-04	2.10E-02	1.50E-04	2.50E-02	1.3E+01	1.6E-03	1.0E+00	2.1E-02	2.0E-03	**1.1E+01**
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	36				3.30E-04	2.80E-02	1.9E+02		1.9E+02		1.0E+01	
Shallow	SVOC	Acenaphthene	83-32-9	T		32	1	8.40E-04	8.40E-04	6.90E-04	5.00E-03	4.2E+00	2.0E-04	4.2E+00	2.0E-04	1.3E+00	6.5E-04
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	32				4.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	32				6.50E-04	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	32	1	7.80E-04	7.80E-04	5.90E-04	5.00E-03	4.3E-02	1.8E-02	4.3E-02	1.8E-02	4.3E-02	1.8E-02
Shallow	SVOC	Atrazine	1912-24-9	T		32				3.50E-04	5.00E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		32				5.90E-04	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	32				1.90E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	32				5.30E-04	5.00E-03			2.0E-03		5.0E-03	
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	32				7.10E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	32				7.00E-04	5.00E-03			5.0E-03		5.0E-03	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-02 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	32				6.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	32				6.50E-04	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	32				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	32				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	32	5	1.10E-03	2.40E-02	2.00E-04	5.00E-03			3.2E-01	7.5E-02	6.0E-03	**4.0E+00**
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	32				7.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	32				2.30E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		32	1	4.90E-04	4.90E-04	4.50E-04	1.00E-02			3.9E+05	1.3E-09	5.8E+00	8.4E-05
Shallow	SVOC	Carbazole	86-74-8	T	B2	32				6.10E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		32				5.50E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		30				5.10E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		32				5.30E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		32				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		32				6.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	32				6.70E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	32				6.80E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	32				6.60E-04	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	9				4.70E-04	1.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		32				7.00E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	32	3	5.30E-04	2.40E-03	2.50E-04	5.00E-03			1.1E+03	2.2E-06	5.5E+00	4.4E-04
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		32	1	1.00E-03	1.30E-03	8.50E-04	5.00E-03			5.2E+02	2.5E-06	3.7E-01	3.5E-03
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	32				2.00E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	32	5	4.40E-04	1.10E-03	3.70E-04	5.00E-03			1.1E+01	1.0E-04	8.8E-01	1.3E-03
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		32				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		32				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	32				4.60E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	32				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		32				6.90E-04	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	32				7.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	32	6	1.20E-03	4.40E-03	7.50E-04	5.00E-03	2.0E+00	2.2E-03	2.0E+00	2.2E-03	8.8E-01	5.0E-03
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	32				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	32				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	32				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	32				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	32				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	32				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	32	4	1.10E-03	2.10E-03	6.40E-04	5.00E-03			2.5E+01	8.4E-05	2.6E-01	8.1E-03
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		32				9.00E-04	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	32	4	1.30E-03	1.60E-03	7.50E-04	5.00E-03	3.1E+01	5.2E-05	3.1E+01	5.2E-05	5.2E-01	3.1E-03
Shallow	SVOC	2-Nitroaniline	88-74-4	T		32				4.90E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	29				4.80E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	31				5.90E-04	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	32				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		32				9.50E-04	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		32				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	32				6.40E-04	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	32				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	32				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	32				2.40E-03	5.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	32	7	9.10E-04	7.50E-03	6.80E-04	5.00E-03	1.0E+00	7.5E-03	1.0E+00	7.5E-03	5.2E-02	1.4E-01
Shallow	SVOC	Phenol	108-95-2	T	ID	32				1.30E-03	5.00E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	32				6.30E-04	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		32				8.60E-04	5.00E-03			1.7E+02		7.3E-01	
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	32				6.90E-04	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	5				8.20E-05	4.00E-04	4.5E-02		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	32	1	4.12E-04	4.12E-04	8.20E-05	4.00E-04	4.5E-02	9.1E-03	3.3E-03	1.2E-01	5.0E-04	8.2E-01
Shallow	INORG	Antimony	7440-36-0	D		10	2	3.40E-03	5.90E-03	2.20E-03	2.20E-03			6.8E+01	5.7E-05	6.0E-03	6.5E-01

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-02 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	INORG	Antimony	7440-36-0	T		32	2	2.30E-03	2.50E-03	2.20E-03	3.40E-03			6.8E+01	3.7E-05	6.0E-03	4.2E-01
Shallow	INORG	Arsenic	7440-38-2	D	A	10	2	1.27E-02	3.07E-02	3.90E-03	3.90E-03			4.3E+00	7.1E-03	5.0E-02	6.1E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	32	17	1.83E-03	3.81E-02	2.10E-03	3.90E-03			4.3E+00	8.9E-03	5.0E-02	7.6E-01
Shallow	INORG	Barium	7440-39-3	D	D	10	10	2.05E-02	2.09E-01					1.4E+04	1.5E-05	2.0E+00	1.0E-01
Shallow	INORG	Barium	7440-39-3	T	D	32	32	1.62E-02	2.58E-01					1.4E+04	1.8E-05	2.0E+00	1.3E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	10				5.40E-04	5.40E-04			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	32				5.40E-04	6.00E-04			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	10	2	2.20E-04	3.30E-04	2.80E-04	8.0E-04			1.9E+02	1.7E-06	5.0E-03	6.6E-02
Shallow	INORG	Cadmium	7440-43-9	T	B1	32	8	2.80E-04	3.80E-04	2.80E-04	2.80E-04			1.9E+02	2.0E-06	5.0E-03	7.6E-02
Shallow	INORG	Chromium (total)	7440-47-3	D		6				1.40E-03	1.40E-03			4.6E+02		1.0E-01	
Shallow	INORG	Chromium (total)	7440-47-3	T		24	6	1.28E-03	3.20E-03	1.50E-03	1.50E-03			4.6E+02	7.0E-06	1.0E-01	3.2E-02
Shallow	INORG	Chromium III	16065-83-1	D	D	4	1	3.45E-03	3.45E-03	1.40E-03	1.40E-03			2.9E+05	1.2E-08	3.8E+01	9.1E-05
Shallow	INORG	Chromium III	16065-83-1	T	D	8				1.40E-03	1.40E-03			2.9E+05		3.8E+01	
Shallow	INORG	Chromium VI	18540-29-9	D	A	4	1	7.90E-03	7.90E-03	6.90E-03	6.90E-03			4.6E+02	1.7E-05	1.0E-01	7.9E-02
Shallow	INORG	Chromium VI	18540-29-9	T	A	8				6.90E-03	6.90E-03			4.6E+02		1.0E-01	
Shallow	INORG	Cobalt	7440-48-4	D	B1	10	7	1.30E-03	1.85E-02	1.30E-03	1.30E-03			2.4E+03	7.8E-06	4.0E-02	4.7E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	32	23	8.00E-04	3.05E-02	7.40E-04	1.30E-03			2.4E+03	1.3E-05	4.0E-02	7.6E-01
Shallow	INORG	Copper	7440-50-8	D	D	10	9	4.80E-03	1.68E-02	4.20E-03	4.20E-03			7.4E+03	2.3E-06	1.4E+00	1.2E-02
Shallow	INORG	Copper	7440-50-8	T	D	32	5	4.60E-03	2.51E-01	1.70E-03	4.20E-03			7.4E+03	3.4E-05	1.4E+00	1.8E-01
Shallow	INORG	Cyanide (total)	57-12-5	T	D	11	7	3.18E-03	5.00E-01	1.70E-03	1.70E-03			5.7E+01	9.6E-03	2.0E-01	**2.8E+00**
Shallow	INORG	Lead	7439-92-1	D	B2	10				2.50E-03	2.50E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	32	1	2.20E-03	2.20E-02	1.60E-03	2.50E-03					4.0E-03	**5.5E+00**
Shallow	INORG	Manganese	7439-96-5	D	D	10	10	3.70E-03	1.71E+00					9.1E+03	1.3E-04	8.6E-01	**1.4E+00**
Shallow	INORG	Manganese	7439-96-5	T	D	32	31	3.60E-03	1.22E+00	6.80E-04	6.80E-04			9.1E+03	1.3E-04	8.6E-01	**1.4E+00**
Shallow	INORG	Mercury	7439-97-6	D	D	10	1	7.70E-05	7.70E-05	6.90E-05	2.00E-04	5.6E-02	1.4E-03	5.6E-02	1.4E-03	2.0E-03	3.9E-02
Shallow	INORG	Mercury	7439-97-6	T	D	32	2	7.70E-05	1.00E-04	6.90E-05	2.00E-04	5.6E-02	1.8E-03	5.6E-02	1.8E-03	2.0E-03	5.0E-02
Shallow	INORG	Nickel	7440-02-0	D	A	10	10	2.70E-03	1.68E-01					7.4E+04	2.3E-06	1.0E-01	**1.7E+00**
Shallow	INORG	Nickel	7440-02-0	T	A	32	31	3.20E-03	1.06E+01	2.90E-03	2.90E-03			7.4E+04	1.4E-04	1.0E-01	**1.1E+02**
Shallow	INORG	Selenium	7782-49-2	D	D	10	1	5.70E-03	5.70E-03	4.50E-03	4.50E-03			9.7E+02	5.9E-06	5.0E-02	1.1E-01
Shallow	INORG	Selenium	7782-49-2	T	D	32	2	5.00E-03	5.40E-03	4.50E-03	4.70E-03			9.7E+02	5.6E-06	5.0E-02	1.1E-01
Shallow	INORG	Silver	7440-22-4	D	D	10				1.50E-03	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	32	2	7.95E-04	1.00E-03	9.80E-04	1.50E-03			1.5E+03	6.7E-07	3.4E-02	2.9E-02
Shallow	INORG	Thallium	7440-28-0	D		10	4	4.80E-05	5.60E-03	1.80E-05	5.00E-03			1.3E+01	4.3E-04	2.0E-03	**2.8E+00**
Shallow	INORG	Thallium	7440-28-0	T		32	4	2.00E-05	5.50E-03	1.80E-05	5.00E-03			1.3E+01	4.2E-04	2.0E-03	**2.8E+00**
Shallow	INORG	Vanadium	7440-62-2	D		10	4	1.90E-03	5.80E-03	8.20E-04	8.20E-04			9.7E+02	6.0E-06	4.5E-03	**1.3E+00**
Shallow	INORG	Vanadium	7440-62-2	T		32	9	1.00E-03	1.16E-02	6.70E-04	8.20E-04			9.7E+02	1.2E-05	4.5E-03	**2.6E+00**
Shallow	INORG	Zinc	7440-66-6	D	D	10	3	1.51E-02	8.48E-02	1.20E-02	1.20E-02			1.1E+05	7.7E-07	2.4E+00	3.5E-02
Shallow	INORG	Zinc	7440-66-6	T	D	32	4	1.52E-02	5.54E-01	1.20E-02	1.40E-02			1.1E+05	5.0E-06	2.4E+00	2.3E-01

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The MDEQ Drinking Water Criteria for Chromium III was calculated by ENVIRON to account for valence specific toxicity.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-18
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-2 - LNAPL AREA NO. 4

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
VOC	Acetone	67-64-1	D	1					5.30E-02	5.30E-02
VOC	Benzene	71-43-2	A	1					7.60E-03	7.60E-03
VOC	Bromodichloromethane	75-27-4	B2	1					9.00E-03	9.00E-03
VOC	Bromoform	75-25-2	B2	1					1.20E-02	1.20E-02
VOC	Bromomethane	74-83-9	D	1					4.60E-02	4.60E-02
VOC	2-Butanone	78-93-3	ID	1					5.70E-02	5.70E-02
VOC	Carbon Disulfide	75-15-0		1					5.00E-03	5.00E-03
VOC	Carbon Tetrachloride	56-23-5	B2	1					1.50E-02	1.50E-02
VOC	Chlorobenzene	108-90-7	D	1					6.40E-03	6.40E-03
VOC	Chloroethane	75-00-3		1					5.20E-02	5.20E-02
VOC	Chloroform	67-66-3	B2	1	1	4.20E-01	4.20E-01	4.20E-01		
VOC	Chloromethane	74-87-3	D	1					1.50E-02	1.50E-02
VOC	Cumene	98-82-8	D	1	1	7.90E-01	7.90E-01	7.90E-01		
VOC	Cyclohexane	110-82-7	ID	1					6.80E-03	6.80E-03
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	1					2.50E-02	2.50E-02
VOC	Dibromochloromethane	124-48-1	C	1					1.20E-02	1.20E-02
VOC	1,2-Dibromoethane	106-93-4	B2	1					8.40E-03	8.40E-03
VOC	1,2-Dichlorobenzene	95-50-1	D	1					7.60E-03	7.60E-03
VOC	1,3-Dichlorobenzene	541-73-1	D	1					9.10E-03	9.10E-03
VOC	1,4-Dichlorobenzene	106-46-7	C	1					9.50E-03	9.50E-03
VOC	Dichlorodifluoromethane	75-71-8		1					2.50E-02	2.50E-02
VOC	1,1-Dichloroethane	75-34-3	C	1	1	2.10E+01	2.10E+01	2.10E+01		
VOC	1,2-Dichloroethane	107-06-2	B2	1					1.40E-02	1.40E-02
VOC	1,1-Dichloroethene	75-35-4	C	1	1	2.40E+00	2.40E+00	2.40E+00		
VOC	cis-1,2-Dichloroethene	156-59-2	D	1					8.60E-03	8.60E-03
VOC	trans-1,2-Dichloroethene	156-60-5		1					1.10E-02	1.10E-02
VOC	1,2-Dichloropropane	78-87-5	B2	1					1.40E-02	1.40E-02
VOC	1,3-Dichloropropene (total)	542-75-6	B2	1					8.50E-03	8.50E-03

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-2 - LNAPL AREA NO. 4

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
VOC	Ethyl Benzene	100-41-4	D	1	1	2.70E+00	2.70E+00	2.70E+00		
VOC	2-Hexanone	591-78-6		1					1.80E-02	1.80E-02
VOC	Methyl Acetate	79-20-9		1					2.60E-02	2.60E-02
VOC	Methyl tert-butyl ether	1634-04-4		1					9.00E-03	9.00E-03
VOC	4-Methyl-2-pentanone	108-10-1	ID	1	1	3.40E-01	3.40E-01	3.40E-01		
VOC	Methylcyclohexane	108-87-2		1	1	2.70E-01	2.70E-01	2.70E-01		
VOC	Methylene Chloride	75-09-2	B2	1	1	1.30E+00	1.30E+00	1.30E+00		
VOC	Styrene	100-42-5		1					7.90E-03	7.90E-03
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	1					1.10E-02	1.10E-02
VOC	Tetrachloroethene	127-18-4	C-B2	1	1	1.10E+01	1.10E+01	1.10E+01		
VOC	Toluene	108-88-3	D	1	1	3.30E+00	3.30E+00	3.30E+00		
VOC	1,2,4-Trichlorobenzene	120-82-1	D	1					1.20E-02	1.20E-02
VOC	1,1,1-Trichloroethane	71-55-6	D	1	1	4.40E+00	4.40E+00	4.40E+00		
VOC	1,1,2-Trichloroethane	79-00-5	C	1					8.70E-03	8.70E-03
VOC	Trichloroethene	79-01-6	C-B2	1	1	1.40E+00	1.40E+00	1.40E+00		
VOC	Trichlorofluoromethane	75-69-4		1					9.70E-03	9.70E-03
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		1					3.20E-02	3.20E-02
VOC	Vinyl Chloride	75-01-4	A	1					2.00E-02	2.00E-02
VOC	Xylenes (total)	1330-20-7	ID	1	1	1.00E+01	1.00E+01	1.00E+01		
SVOC	Acenaphthene	83-32-9		1					3.50E-01	3.50E-01
SVOC	Acenaphthylene	208-96-8	D	1					4.80E-01	4.80E-01
SVOC	Acetophenone	98-86-2	D	1					5.00E-01	5.00E-01
SVOC	Anthracene	120-12-7	D	1	1	1.20E+02	1.20E+02	1.20E+02		
SVOC	Atrazine	1912-24-9		1					5.50E-01	5.50E-01
SVOC	Benzaldehyde	100-52-7		1					3.50E-01	3.50E-01
SVOC	Benzo(a)anthracene	56-55-3	B2	1					5.80E-01	5.80E-01
SVOC	Benzo(a)pyrene	50-32-8	B2	1					3.80E-01	3.80E-01
SVOC	Benzo(b)fluoranthene	205-99-2	B2	1					5.00E-01	5.00E-01

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-2 - LNAPL AREA NO. 4

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
SVOC	Benzo(g,h,i)perylene	191-24-2	D	1					4.00E-01	4.00E-01
SVOC	Benzo(k)fluoranthene	207-08-9	B2	1					4.00E-01	4.00E-01
SVOC	Biphenyl	92-52-4	D	1					4.50E-01	4.50E-01
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	1					6.50E-01	6.50E-01
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	1					4.50E-01	4.50E-01
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1					3.20E-01	3.20E-01
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	1					3.80E-01	3.80E-01
SVOC	Butylbenzylphthalate	85-68-7	C	1					5.20E-01	5.20E-01
SVOC	Caprolactam	105-60-2		1					7.00E-01	7.00E-01
SVOC	Carbazole	86-74-8	B2	1					4.80E-01	4.80E-01
SVOC	4-Chloro-3-methylphenol	59-50-7		1					4.80E-01	4.80E-01
SVOC	4-Chloroaniline	106-47-8		1					5.00E-01	5.00E-01
SVOC	2-Chloronaphthalene	91-58-7		1					4.20E-01	4.20E-01
SVOC	2-Chlorophenol	95-57-8		1					4.50E-01	4.50E-01
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		1					4.20E-01	4.20E-01
SVOC	Chrysene	218-01-9	B2	1					5.50E-01	5.50E-01
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1					4.50E-01	4.50E-01
SVOC	Dibenzofuran	132-64-9	D	1					4.20E-01	4.20E-01
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	1					4.50E-01	4.50E-01
SVOC	2,4-Dichlorophenol	120-83-2		1					4.00E-01	4.00E-01
SVOC	Diethylphthalate	84-66-2	D	1					4.80E-01	4.80E-01
SVOC	2,4-Dimethylphenol	105-67-9		1					4.50E-01	4.50E-01
SVOC	Dimethylphthalate	131-11-3	D	1					4.20E-01	4.20E-01
SVOC	Di-n-butylphthalate	84-74-2	D	1					5.80E-01	5.80E-01
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		1					1.20E+00	1.20E+00
SVOC	2,4-Dinitrophenol	51-28-5		1					1.20E+00	1.20E+00
SVOC	2,4-Dinitrotoluene	121-14-2	B2	1					5.50E-01	5.50E-01
SVOC	2,6-Dinitrotoluene	606-20-2	B2	1					3.80E-01	3.80E-01

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-2 - LNAPL AREA NO. 4

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
SVOC	Di-n-octylphthalate	117-84-0		1					1.60E+00	1.60E+00
SVOC	Fluoranthene	206-44-0	D	1	1	1.30E+02	1.30E+02	1.30E+02		
SVOC	Fluorene	86-73-7	D	1	1	1.70E+02	1.70E+02	1.70E+02		
SVOC	Hexachlorobenzene	118-74-1	B2	1					5.50E-01	5.50E-01
SVOC	Hexachlorobutadiene	87-68-3	C	1					4.00E-01	4.00E-01
SVOC	Hexachlorocyclopentadiene	77-47-4	E	1					2.50E-01	2.50E-01
SVOC	Hexachloroethane	67-72-1	C	1					4.20E-01	4.20E-01
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1					4.80E-01	4.80E-01
SVOC	Isophorone	78-59-1	C	1					5.50E-01	5.50E-01
SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	5.90E+01	5.90E+01	5.90E+01		
SVOC	Methylphenol (total)	1319-77-3		1					5.20E-01	5.20E-01
SVOC	Naphthalene	91-20-3	C	1					4.20E-01	4.20E-01
SVOC	2-Nitroaniline	88-74-4		1					3.20E-01	3.20E-01
SVOC	3-Nitroaniline	99-09-2	C	1					5.50E-01	5.50E-01
SVOC	4-Nitroaniline	100-01-6	C	1					4.20E-01	4.20E-01
SVOC	Nitrobenzene	98-95-3	D	1					6.00E-01	6.00E-01
SVOC	2-Nitrophenol	88-75-5		1					5.20E-01	5.20E-01
SVOC	4-Nitrophenol	100-02-7		1					1.30E+00	1.30E+00
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	1					4.80E-01	4.80E-01
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	1					3.80E-01	3.80E-01
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	1					6.80E-01	6.80E-01
SVOC	Pentachlorophenol	87-86-5	B2	1					1.50E+00	1.50E+00
SVOC	Phenanthrene	85-01-8	D	1	1	6.60E+02	6.60E+02	6.60E+02		
SVOC	Phenol	108-95-2	ID	1					4.50E-01	4.50E-01
SVOC	Pyrene	129-00-0	D	1	1	1.70E+02	1.70E+02	1.70E+02		
SVOC	2,4,5-Trichlorophenol	95-95-4		1					3.80E-01	3.80E-01
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	1					4.80E-01	4.80E-01
P/PCB	PCBs (total)	1336-36-3	B2	1	1	1.70E+02	1.70E+02	1.70E+02		

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-2 - LNAPL AREA NO. 4

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
INORG	Antimony	7440-36-0		1	1	4.80E-01	4.80E-01	4.80E-01		
INORG	Arsenic	7440-38-2	A	1	1	6.50E+00	6.50E+00	6.50E+00		
INORG	Barium	7440-39-3	D	1					6.60E-02	6.60E-02
INORG	Beryllium	7440-41-7	B1	1					6.80E-02	6.80E-02
INORG	Cadmium	7440-43-9	B1	1					1.60E-02	1.60E-02
INORG	Chromium (total)	7440-47-3		1	1	2.70E+00	2.70E+00	2.70E+00		
INORG	Cobalt	7440-48-4	B1	1	1	8.40E-02	8.40E-02	8.40E-02		
INORG	Copper	7440-50-8	D	1	1	3.20E+00	3.20E+00	3.20E+00		
INORG	Cyanide (total)	57-12-5	D	1	1	1.20E-01	1.20E-01	1.20E-01		
INORG	Lead	7439-92-1	B2	1	1	8.30E-01	8.30E-01	8.30E-01		
INORG	Manganese	7439-96-5	D	1					7.10E-02	7.10E-02
INORG	Mercury	7439-97-6	D	1					1.60E-02	1.60E-02
INORG	Nickel	7440-02-0	A	1	1	9.17E+01	9.20E+01	9.17E+01		
INORG	Selenium	7782-49-2	D	1					4.30E-01	4.30E-01
INORG	Silver	7440-22-4	D	1	1	1.10E-01	1.10E-01	1.10E-01		
INORG	Thallium	7440-28-0		1					5.80E-01	5.80E-01
INORG	Vanadium	7440-62-2		1					6.90E-02	6.90E-02
INORG	Zinc	7440-66-6	D	1	1	1.90E+00	1.90E+00	1.90E+00		

Notes:
Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-19
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI M-04 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	13	3	2.10E-03	1.70E-01	5.10E-04	3.70E-02	1.0E+06	1.7E-07	3.1E+04	5.5E-06	7.3E-01	2.3E-01
Shallow	VOC	Benzene	71-43-2	T	A	19	6	3.30E-04	9.80E-01	1.60E-04	4.00E-04	3.5E+01	2.8E-02	1.1E+01	8.9E-02	5.0E-03	**2.0E+02**
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	13	1	3.00E-04	3.00E-04	1.70E-04	1.10E-02	3.7E+01	8.1E-06	1.4E+01	2.1E-05	1.0E-01	3.0E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	13				1.80E-04	1.20E-02	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	13				2.00E-04	1.00E-02	8.5E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	13				4.10E-04	2.00E-02	2.4E+05		2.4E+05		1.3E+01	
Shallow	VOC	Carbon Disulfide	75-15-0	T		13	1	2.10E-03	2.10E-03	2.00E-04	8.00E-03	5.5E+02	3.8E-06	1.2E+03	1.8E-06	8.0E-01	2.6E-03
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	13				1.20E-04	1.20E-02	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	13				1.40E-04	1.30E-02	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		13				2.60E-04	9.70E-03	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	13	3	8.90E-04	1.30E-03	1.40E-04	1.20E-04	1.8E+02	7.2E-06	1.5E+02	8.7E-06	1.0E-01	1.3E-02
Shallow	VOC	Chloromethane	74-87-3	T	D	13				1.30E-04	1.60E-02	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	13	4	2.70E-04	1.90E-03	1.20E-04	1.90E-02	5.6E+01	3.4E-04	5.6E+01	3.4E-04	8.0E-01	2.4E-02
Shallow	VOC	Cyclohexane	110-82-7	T	ID	13	3	1.30E-01	3.00E-01	1.30E-03	3.30E-04						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	13				2.20E-04	2.70E-02	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	13				2.60E-04	1.20E-02	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	13				2.20E-04	1.10E-02	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	13	1	2.10E-04	2.10E-04	1.10E-04	1.30E-02	1.6E+02	1.3E-06	1.6E+02	1.3E-06	6.0E-01	3.5E-04
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	13				1.50E-04	1.30E-02			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	13	1	1.90E-04	1.90E-04	1.70E-04	1.30E-02	7.4E+01	2.6E-06	6.4E+00	3.0E-05	7.5E-02	2.5E-03
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		13				2.60E-04	1.60E-02	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	13				1.60E-04	1.00E-02	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	13				2.10E-04	9.30E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	13				2.40E-04	1.00E-02	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	13				2.20E-04	1.20E-02	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		13				1.50E-04	1.10E-02	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	13				1.70E-04	1.40E-02	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	13				2.70E-04	1.20E-02	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	19	7	2.70E-04	1.50E+00	1.20E-04	4.10E-04	1.7E+02	8.8E-03	1.7E+02	8.8E-03	7.0E-01	**2.1E+00**
Shallow	VOC	2-Hexanone	591-78-6	T		13				4.60E-04	1.90E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		13				4.10E-04	1.80E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		13	1	1.20E-03	1.20E-03	1.30E-04	9.00E-03	4.7E+04	2.6E-08	6.1E+02	2.0E-06	2.4E-01	5.0E-03
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	13				2.30E-04	8.70E-03	2.0E+04		1.3E+04		1.8E+00	
Shallow	VOC	Methylcyclohexane	108-87-2	T		13	3	1.80E-02	6.30E-02	1.50E-04	4.20E-04						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	8	2	3.50E-04	1.40E-03	3.40E-04	1.10E-02	1.4E+03	1.0E-06	2.2E+02	6.4E-06	5.0E-03	2.8E-01
Shallow	VOC	Styrene	100-42-5	T		13				1.50E-04	1.20E-02	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	13				2.50E-04	1.20E-02	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	13				2.30E-04	1.40E-02	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	19	6	3.10E-04	5.70E-02	1.70E-04	4.50E-04	5.3E+02	1.1E-04	5.3E+02	1.1E-04	1.0E+00	5.7E-02
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	13	1	2.40E-04	2.40E-04	1.70E-04	1.30E-02	3.0E+02	8.0E-07	1.9E+01	1.3E-05	7.0E-02	3.4E-03
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	13				1.50E-04	1.30E-02	1.3E+03		1.3E+03		2.0E-01	
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	13				3.00E-04	1.20E-02	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	13				1.40E-04	1.40E-02	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		13				2.80E-04	1.80E-02	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		13				3.20E-04	1.10E-02	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	13				1.50E-04	1.20E-02	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	19	4	3.00E-01	1.40E+00	3.30E-04	8.20E-04	1.9E+02	7.4E-03	1.9E+02	7.4E-03	1.0E+01	1.4E-01
Shallow	INORG	Lead	7439-92-1	D	B2	8				2.50E-03	2.50E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	10				1.60E-03	2.50E-03					4.0E-03	

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Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 3-2
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-05 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	2				8.20E-05	8.20E-05	4.5E-02		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	9	4	4.19E-04	1.64E-03	8.20E-05	8.20E-05	4.5E-02	3.6E-02	3.3E-03	5.0E-01	5.0E-04	**3.3E+00**
Shallow	INORG	Antimony	7440-36-0	D		4	1	4.30E-03	4.30E-03	2.20E-03	2.20E-03			6.8E+01	6.3E-05	6.0E-03	7.2E-01
Shallow	INORG	Antimony	7440-36-0	T		4	1	3.50E-03	3.50E-03	2.20E-03	2.20E-03			6.8E+01	5.1E-05	6.0E-03	5.8E-01
Shallow	INORG	Arsenic	7440-38-2	D	A	4	2	2.49E-02	2.67E-02	3.90E-03	3.90E-03			4.3E+00	6.2E-03	5.0E-02	5.3E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	4	3	4.10E-03	2.73E-02	3.90E-03	3.90E-03			4.3E+00	6.3E-03	5.0E-02	5.5E-01
Shallow	INORG	Barium	7440-39-3	D	D	4	4	1.28E+00	4.72E+00					1.4E+04	3.4E-04	2.0E+00	**2.4E+00**
Shallow	INORG	Barium	7440-39-3	T	D	9	9	2.05E-01	4.80E+00					1.4E+04	3.4E-04	2.0E+00	**2.4E+00**
Shallow	INORG	Beryllium	7440-41-7	D	B1	4				5.40E-04	5.40E-04			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	5.40E-04			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	4	3	3.00E-04	6.60E-04	2.80E-04	2.80E-04			1.9E+02	3.5E-06	5.0E-03	1.3E-01
Shallow	INORG	Cadmium	7440-43-9	T	B1	4	3	3.60E-04	7.40E-04	2.80E-04	2.80E-04			1.9E+02	3.7E-06	5.0E-03	1.4E-01
Shallow	INORG	Chromium (total)	7440-47-3	D		4	3	1.80E-03	2.30E-03	1.40E-03	1.40E-03			4.6E+02	4.8E-06	1.0E-01	2.2E-02
Shallow	INORG	Chromium (total)	7440-47-3	T		4	3	2.50E-03	2.05E-02	1.40E-03	1.40E-03			4.6E+02	4.5E-05	1.0E-01	2.1E-01
Shallow	INORG	Cobalt	7440-48-4	D	B1	4	1	8.00E-03	8.00E-03	1.30E-03	1.30E-03			2.4E+03	3.3E-06	4.0E-02	2.0E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	4	1	7.90E-03	7.90E-03	1.30E-03	1.30E-03			2.4E+03	3.3E-06	4.0E-02	2.0E-01
Shallow	INORG	Copper	7440-50-8	D	D	4				4.20E-03	4.20E-03			7.4E+03		1.4E+00	
Shallow	INORG	Copper	7440-50-8	T	D	4	1	5.20E-03	5.20E-03	4.20E-03	4.20E-03			7.4E+03	7.0E-07	1.4E+00	3.7E-03
Shallow	INORG	Lead	7439-92-1	D	B2	4				2.50E-03	2.50E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	4				2.50E-03	2.50E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	4	4	9.53E-01	3.57E+00					9.1E+03	3.9E-04	8.6E-01	**4.2E+00**
Shallow	INORG	Manganese	7439-96-5	T	D	9	9	1.25E-01	3.63E+00					9.1E+03	4.0E-04	8.6E-01	**4.2E+00**
Shallow	INORG	Mercury	7439-97-6	D	D	4				6.90E-05	6.90E-05	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	4				6.90E-05	6.90E-05	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Nickel	7440-02-0	D	A	4	2	1.06E-02	1.60E-02	2.20E-03	2.20E-03			7.4E+04	2.2E-07	1.0E-01	1.6E-01
Shallow	INORG	Nickel	7440-02-0	T	A	4	2	1.69E-02	1.75E-02	2.20E-03	2.20E-03			7.4E+04	2.4E-07	1.0E-01	1.8E-01
Shallow	INORG	Selenium	7782-49-2	D	D	4				4.50E-03	4.50E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	4.50E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	4				1.50E-03	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	4				1.50E-03	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		4	2	5.00E-03	5.90E-03	1.80E-05	1.80E-05			1.3E+01	4.5E-04	2.0E-03	**3.0E+00**
Shallow	INORG	Thallium	7440-28-0	T		4	1	3.00E-05	3.00E-05	1.80E-05	5.00E-03			1.3E+01	2.3E-06	2.0E-03	1.5E-02
Shallow	INORG	Vanadium	7440-62-2	D		4	2	8.00E-03	1.00E-02	8.20E-04	8.20E-04			9.7E+02	1.0E-05	4.5E-03	**2.2E+00**
Shallow	INORG	Vanadium	7440-62-2	T		4	2	7.80E-03	1.04E-02	8.20E-04	8.20E-04			9.7E+02	1.1E-05	4.5E-03	**2.3E+00**
Shallow	INORG	Zinc	7440-66-6	D	D	4	1	1.33E-02	1.33E-02	1.20E-02	1.20E-02			1.1E+05	1.2E-07	2.4E+00	5.5E-03
Shallow	INORG	Zinc	7440-66-6	T	D	4				1.20E-02	1.20E-02			1.1E+05		2.4E+00	
Shallow	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	D	B2	2				5.02E-09	6.62E-09			1.0E-08		3.0E-08	
Shallow	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	2				5.85E-09	9.14E-09			1.0E-08		3.0E-08	

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Target Dioxin congeners were used to calculate a 2,3,7,8-TCDD Equivalent, using EPA 1998 TEFs, before comparing to the Screening Levels for 2,3,7,8-TCDD.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-7 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	23	7	2.10E-03	1.30E-02	1.70E-03	7.10E+00		1.1E+05	1.2E-07	1.6E+05	8.1E-08	1.7E+08	7.6E-11	7.3E+04	1.8E-07	1.1E+05	1.2E-07	1.3E+05	1.0E-07	3.9E+08	3.3E-11	2.3E+04	5.7E-07
VOC	Benzene	71-43-2	A	23	2	3.30E-03	1.70E-02	5.20E-04	1.80E+00		8.4E+00	2.0E-03	4.5E+01	3.8E-04	4.7E+05	3.6E-08	4.0E+02	4.3E-05	1.6E+00	1.1E-02	1.3E+01	1.3E-03	3.8E+05	4.5E-08	1.8E+02	9.4E-05
VOC	Bromodichloromethane	75-27-4	B2	23				9.50E-04	1.80E+00		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	23				1.30E-03	1.80E+00		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	23				1.40E-03	3.50E+00		1.6E+00		1.3E+01		1.5E+05		1.0E+03		8.6E-01		1.1E+01		3.3E+05		3.2E+02	
VOC	2-Butanone	78-93-3	ID	23	1	3.20E-03	3.20E-03	2.10E-03	7.10E+00		2.7E+04	1.2E-07	3.5E+04	9.1E-08	2.9E+07	1.1E-10	2.7E+04	1.2E-07	2.7E+04	1.2E-07	2.9E+04	1.1E-07	6.7E+07	4.8E-11	2.7E+04	1.2E-07
VOC	Carbon Disulfide	75-15-0		23	1	2.50E-03	2.50E-03	6.20E-04	1.80E+00		1.4E+02	1.8E-05	1.6E+03	1.6E-06	2.1E+07	1.2E-10	2.8E+02	8.9E-06	7.6E+01	3.3E-05	1.3E+03	1.9E-06	4.7E+07	5.3E-11	2.8E+02	8.9E-06
VOC	Carbon Tetrachloride	56-23-5	B2	23				7.90E-04	1.80E+00		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00		1.3E+05		9.6E+01	
VOC	Chlorobenzene	108-90-7	D	23				4.10E-04	1.80E+00		2.2E+02		9.2E+02		2.1E+06		2.6E+02		1.2E+02		7.7E+02		4.7E+06		2.6E+02	
VOC	Chloroethane	75-00-3		23				1.70E-03	3.50E+00		9.5E+02		3.6E+04		2.9E+08		9.5E+02		9.5E+02		3.0E+04		6.7E+08		9.5E+02	
VOC	Chloroform	67-66-3	B2	23				6.50E-04	1.80E+00		3.8E+01		1.5E+02		1.6E+06		1.5E+03		7.2E+00		4.5E+01		1.3E+06		1.2E+03	
VOC	Chloromethane	74-87-3	D	23				1.00E-03	3.50E+00		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	23	2	8.20E-03	4.60E-02	5.60E-04	1.80E+00		3.9E+02	1.2E-04	2.0E+03	2.3E-05	2.6E+06	1.8E-08	3.9E+02	1.2E-04	3.9E+02	1.2E-04	1.7E+03	2.7E-05	5.8E+06	7.9E-09	3.9E+02	1.2E-04
VOC	Cyclohexane	110-82-7	ID	23	3	4.60E-03	1.20E+00	7.90E-04	3.50E+00																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	23				1.30E-03	3.50E+00		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	23				8.70E-04	1.80E+00		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	23				9.50E-04	1.80E+00		3.6E+00		5.8E+00		1.8E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	1,2-Dichlorobenzene	95-50-1	D	23				5.60E-04	1.80E+00		2.1E+02		4.6E+04		4.4E+07		2.1E+02		2.1E+02		3.9E+04		1.0E+08		2.1E+02	
VOC	1,3-Dichlorobenzene	541-73-1	D	23				6.30E-04	1.80E+00								1.7E+02								1.7E+02	
VOC	1,4-Dichlorobenzene	106-46-7	C	23	1	2.90E-03	2.90E-03	5.30E-04	1.80E+00		1.0E+02	2.9E-05	2.6E+02	1.1E-05	5.7E+05	5.1E-09	1.9E+03	1.5E-06	1.9E+01	1.5E-04	7.7E+01	3.8E-05	4.5E+05	6.4E-09	4.0E+02	7.3E-06
VOC	Dichlorodifluoromethane	75-71-8		23				8.70E-04	3.50E+00		1.7E+03		6.3E+04		5.6E+09		1.0E+03		9.0E+02		5.3E+04		3.3E+09		1.0E+03	
VOC	1,1-Dichloroethane	75-34-3	C	23				4.60E-04	1.80E+00		4.3E+02		2.5E+03		1.5E+07		8.9E+02		2.3E+02		2.1E+03		3.3E+07		8.9E+02	
VOC	1,2-Dichloroethane	107-06-2	B2	23				5.80E-04	1.80E+00		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00		1.2E+05		9.1E+01	
VOC	1,1-Dichloroethene	75-35-4	C	23				9.50E-04	1.80E+00		3.3E-01		3.7E+00		7.8E+04		5.7E+02		6.2E-02		1.1E+00		6.2E+04		2.0E+02	
VOC	cis-1,2-Dichloroethene	156-59-2	D	23	2	9.30E-03	5.10E-02	6.70E-04	1.80E+00		4.1E+01	1.2E-03	2.1E+02	2.4E-04	1.0E+06	5.1E-08	6.4E+02	8.0E-05	2.2E+01	2.3E-03	1.8E+02	2.8E-04	2.3E+06	2.2E-08	6.4E+02	8.0E-05
VOC	trans-1,2-Dichloroethene	156-60-5		23	2	2.20E-03	5.70E-03	5.80E-04	1.80E+00		4.3E+01	1.3E-04	2.3E+02	2.5E-05	2.1E+06	2.7E-09	1.4E+03	4.1E-06	2.3E+01	2.5E-04	2.8E+02	2.0E-05	4.7E+06	1.2E-09	1.4E+03	4.1E-06
VOC	1,2-Dichloropropane	78-87-5	B2	23				6.00E-04	1.80E+00		7.4E+00		3.0E+01		1.2E+05		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	23				6.80E-04	1.80E+00		5.4E+00		6.0E+01		9.9E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	Ethyl Benzene	100-41-4	D	23	3	8.80E-04	7.30E-02	4.70E-04	1.80E+00		1.4E+02	5.2E-04	2.4E+03	3.0E-05	1.3E+07	5.6E-09	1.4E+02	5.2E-04	8.7E+01	8.4E-04	7.2E+02	1.0E-04	1.0E+07	7.3E-09	1.4E+02	5.2E-04
VOC	2-Hexanone	591-78-6		23				1.30E-03	7.10E+00		1.8E+03		1.0E+04		1.2E+06		2.5E+03		9.9E+02		1.1E+03		2.7E+06		2.5E+03	
VOC	Methyl Acetate	79-20-9		23	1	6.50E-02	6.50E-02	8.70E-04	3.50E+00																	
VOC	Methyl tert-butyl ether	1634-04-4		23				6.70E-04	7.10E+00		5.9E+03		3.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	23				1.50E-03	7.10E+00		2.7E+03		1.5E+04		6.0E+07		2.7E+03		2.7E+03		4.5E+04		1.4E+08		2.7E+03	
VOC	Methylcyclohexane	108-87-2		23	6	8.80E-04	3.90E+00	4.70E-04	9.00E-03																	
VOC	Methylene Chloride	75-09-2	B2	23	2	9.00E-02	1.00E-01	1.00E-03	1.80E+00		2.4E+02	4.2E-04	7.0E+03	1.4E-04	8.3E+06	1.2E-08	2.3E+03	4.3E-05	4.5E+01	2.2E-03	2.1E+02	4.8E-04	6.6E+06	1.5E-08	1.3E+03	7.7E-05
VOC	Styrene	100-42-5		22				4.00E-04	1.80E+00		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	23				1.40E-03	1.80E+00		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	23	4	3.40E-03	5.00E+01	9.50E-04	1.50E-02		6.0E+01	8.3E-01	6.0E+02	8.3E-02	6.8E+06	7.4E-06	8.8E+01	5.7E-01	1.1E+01	**4.5E+00**	1.8E+02	2.8E-01	5.4E+06	9.3E-06	8.8E+01	5.7E-01
VOC	Toluene	108-88-3	D	23	3	3.90E-03	2.10E-02	4.20E-04	1.80E+00		2.5E+02	8.4E-05	3.3E+03	6.4E-06	1.2E+07	1.8E-09	2.5E+02	8.4E-05	2.5E+02	8.4E-05	2.8E+03	7.5E-06	2.7E+07	7.8E-10	2.5E+02	8.4E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	D	23				7.10E-04	1.80E+00		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	23	1	5.30E-01	5.30E-01	7.30E-04	9.60E-03		4.6E+02	1.2E-03	4.5E+03	1.2E-04	2.9E+07	1.8E-08	4.6E+02	1.2E-03	2.5E+02	2.1E-03	3.8E+03	1.4E-04	6.7E+07	7.9E-09	4.6E+02	1.2E-03
VOC	1,1,2-Trichloroethane	79-00-5	C	22				9.50E-04	1.80E+00		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01		1.9E+05		1.8E+02	
VOC	Trichloroethene	79-01-6	C-B2	23	3	1.30E-02	1.30E+00	6.00E-04	1.70E-02		3.7E+01	3.5E-02	2.6E+02	5.0E-03	2.3E+06	5.7E-07	5.0E+02	2.6E-03	7.1E+00	1.8E-01	7.8E+01	1.7E-02	1.8E+06	7.2E-07	5.0E+02	2.6E-03
VOC	Trichlorofluoromethane	75-69-4		23				8.70E-04	3.50E+00		5.6E+02		1.1E+05		1.7E+09		5.6E+02		5.6E+02		9.2E+04		3.8E+09		5.6E+02	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		23	1	6.40E-01	6.40E-01	7.40E-04	3.60E-02		5.5E+02	1.2E-03	2.1E+05	3.0E-06	2.3E+09	2.8E-10	5.5E+02	1.2E-03	5.5E+02	1.2E-03	1.8E+05	3.6E-06	5.1E+09	1.3E-10	5.5E+02	1.2E-03
VOC	Vinyl Chloride	75-01-4	A	23				1.10E-03	3.50E+00		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00		3.5E+05		3.8E+00	
VOC	Xylenes (total)	1330-20-7	ID	23	2	2.00E-02	2.40E-01	1.50E-03	3.50E+00		1.5E+02	1.6E-03	5.4E+04	4.4E-06	1.3E+08	1.8E-09	1.5E+02	1.6E-03	1.5E+02	1.6E-03	4.6E+04	5.2E-06	2.9E+08	8.3E-10	1.5E+02	1.6E-03
SVOC	Acenaphthene	83-32-9		23				1.60E-02	3.80E-01		3.5E+05		9.7E+04		6.2E+06		1.3E+05		1.9E+05		8.1E+04		1.4E+07		4.1E+04	
SVOC	Acenaphthylene	208-96-8	D	23				2.20E-02	3.80E-01		3.0E+03		2.7E+03		1.0E+06		5.2E+03		1.6E+03		2.2E+03		2.3E+06		1.6E+03	
SVOC	Acetophenone	98-86-2	D	23				2.30E-02	3.80E-01		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	Anthracene	120-12-7	D	23				1.90E-02	3.80E-01		1.0E+06		1.6E+06		2.9E+07		7.3E+05		1.0E+06		1.4E+06		6.7E+07		2.3E+05	
SVOC	Atrazine	1912-24-9		23				2.50E-02	6.80E-01								3.3E+02								7.1E+01	
SVOC	Benzaldehyde	100-52-7		23				1.60E-02	7.70E-01																	
SVOC	Benzo(a)anthracene	56-55-3	B2	23	1	3.40E-01	3.40E-01	2.60E-02	3.80E-01								8.0E+01	4.3E-03							2.0E+01	1.7E-02
SVOC	Benzo(a)pyrene	50-32-8	B2	23	1	5.10E-01	5.10E-01	1.70E-02	3.80E-01						1.9E+03	2.7E-04	8.0E+00	6.4E-02							2.0E+00	2.6E-01
SVOC	Benzo(b)fluoranthene	205-99-2	B2	23	2	3.10E-01	7.50E-01	2.30E-02	3.80E-01								8.0E+01	9.4E-03							2.0E+01	3.8E-02
SVOC	Benzo(g,h,i)perylene	191-24-2	D	23	1	3.70E-01	3.70E-01	1.80E-02	3.80E-01						3.5E+05	1.1E-06	7.0E+03	5.3E-05							2.5E+03	1.5E-04
SVOC	Benzo(k)fluoranthene	207-08-9	B2	23	1	3.40E-01	3.40E-01	1.80E-02	3.80E-01								8.0E+02	4.3E-04							2.0E+02	1.7E-03
SVOC	Biphenyl	92-52-4	D	23				2.00E-02	6.30E-01																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	23				3.00E-02	3.80E-01																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	23				2.00E-02	3.80E-01		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	23	3	7.00E-02	1.20E+00	5.60E-02	3.80E-01						8.9E+05	1.3E-06	1.0E+04	1.2E-04					7.0E+05	1.7E-06	2.8E+03	4.3E-04
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	23				1.70E-02	3.80E-01																	
SVOC	Butylbenzylphthalate	85-68-7	C	23	1	8.10E-01	8.10E-01	2.40E-02	3.80E-01						2.1E+07	3.9E-08	3.1E+02	2.6E-03					4.7E+07	1.7E-08	3.1E+02	2.6E-03
SVOC	Caprolactam	105-60-2		23				3.20E-02	8.10E-01						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	23				2.20E-02	3.80E-01								2.4E+03								5.3E+02	
SVOC	4-Chloro-3-methylphenol	59-50-7		23				2.20E-02	3.80E-01								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		23				2.30E-02	1.50E+00																	
SVOC	2-Chloronaphthalene	91-58-7		23				1.90E-02	3.80E-01								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		23				2.00E-02	3.80E-01								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		23				1.90E-02	3.80E-01																	
SVOC	Chrysene	218-01-9	B2	23	1	4.60E-01	4.60E-01	2.50E-02	3.80E-01								8.0E+03	5.8E-05							2.0E+03	2.3E-04
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	23	1	1.30E-01	1.30E-01	2.00E-02	3.80E-01								8.0E+00	1.6E-02							2.0E+00	6.5E-02
SVOC	Dibenzofuran	132-64-9	D	23				1.90E-02	3.80E-01																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	23				2.00E-02	2.30E+00						8.2E+03		3.0E+01						6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		23				1.80E-02	3.80E-01						2.3E+06		1.8E+03						5.1E+06		6.6E+02	
SVOC	Diethylphthalate	84-66-2	D	23				2.20E-02	6.80E-01						1.5E+06		7.4E+02						3.3E+06		7.4E+02	
SVOC	2,4-Dimethylphenol	105-67-9		23				2.00E-02	3.80E-01						2.1E+06		3.6E+04						4.7E+06		1.1E+04	
SVOC	Dimethylphthalate	131-11-3	D	23				1.90E-02	7.20E-01						1.5E+06		7.9E+02						3.3E+06		7.9E+02	

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TABLE 4-21
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI M-7 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Di-n-butylphthalate	84-74-2	D	23				2.60E-02	6.80E-01						1.5E+06		7.6E+02						3.3E+06		7.6E+02	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		23				5.50E-02	2.00E+00								2.6E+02								7.9E+01	
SVOC	2,4-Dinitrophenol	51-28-5		23				5.30E-02	2.00E+00																	
SVOC	2,4-Dinitrotoluene	121-14-2	B2	23				2.50E-02	3.80E-01						2.0E+04		2.2E+02						1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	23				1.70E-02	3.80E-01																	
SVOC	Di-n-octylphthalate	117-84-0		23				5.60E-02	3.80E-01								2.0E+04								6.9E+03	
SVOC	Fluoranthene	206-44-0	D	23	2	2.60E-01	5.40E-01	1.80E-02	3.80E-01		1.0E+06	5.4E-07	8.9E+05	6.1E-07	4.1E+06	1.3E-07	1.3E+05	4.2E-06	1.0E+06	5.4E-07	7.4E+05	7.3E-07	9.3E+06	5.8E-08	4.6E+04	1.2E-05
SVOC	Fluorene	86-73-7	D	23				1.70E-02	3.80E-01		1.0E+06		1.5E+05		4.1E+06		8.7E+04		5.8E+05		1.3E+05		9.3E+06		2.7E+04	
SVOC	Hexachlorobenzene	118-74-1	B2	23				2.50E-02	3.80E-01		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	23				1.80E-02	3.80E-01		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	23				1.10E-02	3.80E-01		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	23				1.90E-02	2.20E-01		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	23	1	3.40E-01	3.40E-01	2.20E-02	3.80E-01								8.0E+01	4.3E-03							2.0E+01	1.7E-02
SVOC	Isophorone	78-59-1	C	23				2.50E-02	3.80E-01						8.2E+06		2.4E+03						1.2E+07		2.4E+03	
SVOC	2-Methylnaphthalene	91-57-6	ID	23	1	1.90E-01	1.90E-01	1.90E-02	3.80E-01								2.6E+04	7.3E-06							8.1E+03	2.3E-05
SVOC	Methylphenol (total)	1319-77-3		23				2.40E-02	3.80E-01						2.9E+06		3.6E+04						6.7E+06		1.1E+04	
SVOC	Naphthalene	91-20-3	C	23	1	1.70E-01	1.70E-01	1.90E-02	3.80E-01		4.7E+02	3.6E-04	3.5E+02	4.9E-04	8.8E+04	1.9E-06	5.2E+04	3.3E-06	2.5E+02	6.8E-04	3.0E+02	5.7E-04	2.0E+05	8.5E-07	1.6E+04	1.1E-05
SVOC	2-Nitroaniline	88-74-4		23				1.50E-02	2.00E+00																	
SVOC	3-Nitroaniline	99-09-2	C	23				2.50E-02	2.00E+00																	
SVOC	4-Nitroaniline	100-01-6	C	23				1.90E-02	2.00E+00																	
SVOC	Nitrobenzene	98-95-3	D	23				2.70E-02	3.80E-01		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		23				2.40E-02	3.80E-01								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		23				6.00E-02	2.00E+00																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	23				2.20E-02	3.80E-01								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	23				1.70E-02	3.80E-01						2.0E+03		5.4E+00						1.6E+03		1.2E+00	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	23				3.10E-02	3.80E-01																	
SVOC	Pentachlorophenol	87-86-5	B2	23				6.80E-02	3.90E+00						1.3E+05		3.2E+02						1.0E+05		9.0E+01	
SVOC	Phenanthrene	85-01-8	D	23	3	5.30E-02	3.70E-01	5.40E-02	3.80E-01		5.1E+03	7.3E-05	1.9E+02	1.9E-03	2.2E+06	1.3E-04	5.2E+03	7.1E-05	2.8E+03	1.3E-04	1.6E+02	2.3E-03	6.7E+03	5.5E-05	1.6E+03	2.3E-04
SVOC	Phenol	108-95-2	ID	23				2.00E-02	3.80E-01						1.8E+07		1.2E+04						4.0E+07		1.2E+04	
SVOC	Pyrene	129-00-0	D	23	2	2.40E-01	2.90E-01	2.40E-02	3.80E-01		1.0E+06	2.9E-07	7.8E+05	3.7E-07	2.9E+06	1.0E-07	8.4E+04	3.5E-06	1.0E+06	2.9E-07	6.5E+05	4.5E-07	6.7E+06	4.3E-08	2.9E+04	1.0E-05
SVOC	2,4,5-Trichlorophenol	95-95-4		23				1.70E-02	3.80E-01						1.0E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	23				2.20E-02	3.80E-01						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
P/PCB	PCBs (total)	1336-36-3	B2	23	1	2.39E-01	2.39E-01	2.10E-02	3.80E-02		1.6E+04	1.5E-05	8.1E+02	3.0E-04	6.5E+03	3.7E-05	1.6E+01	1.5E-02	3.0E+03	8.0E-05	2.4E+02	1.0E-03	5.2E+03	4.6E-05	4.0E+00	6.0E-02
INORG	Antimony	7440-36-0		23	4	3.58E-01	6.64E-01	5.05E-01	2.29E+00						5.9E+03	1.1E-04	6.7E+02	9.9E-04					1.3E+04	5.1E-05	1.8E+02	3.7E-03
INORG	Arsenic	7440-38-2	A	23	23	2.57E+00	1.30E+01			1.3E+01					9.1E+02		3.7E+01						7.2E+02		7.6E+00	
INORG	Barium	7440-39-3	D	23	23	1.02E+01	6.33E+01			1.1E+02					1.5E+05		1.3E+05						3.3E+05		3.7E+04	
INORG	Beryllium	7440-41-7	B1	23	21	6.33E-02	4.75E-01	4.74E-02	5.04E-02	1.5E+00					5.9E+02		1.6E+03						1.3E+03		4.1E+02	
INORG	Cadmium	7440-43-9	B1	23	18	7.41E-02	6.25E-01	4.67E-02	4.87E-02	1.2E+00					2.2E+03		2.1E+03						1.7E+03		5.5E+02	
INORG	Chromium (total)	7440-47-3		23	23	4.83E+00	3.00E+01			4.9E+01					2.4E+02		9.2E+03						2.6E+02		2.5E+03	
INORG	Cobalt	7440-48-4	B1	23	23	2.36E+00	8.74E+00			1.7E+01					5.9E+03		9.0E+03						1.3E+04		2.6E+03	
INORG	Copper	7440-50-8	D	23	23	7.48E+00	2.73E+01			3.2E+01					5.9E+04		7.3E+04						1.3E+05		2.0E+04	
INORG	Lead	7439-92-1	B2	23	23	3.02E+00	3.56E+02			4.9E+01					4.4E+04	7.0E-03	9.0E+02	3.4E-01					1.0E+05	3.1E-03	4.0E+02	7.7E-01
INORG	Manganese	7439-96-5	D	23	23	1.77E+02	1.03E+03			5.1E+02					1.5E+03	3.5E-01	9.0E+04	5.8E-03					3.3E+03	1.6E-01	2.5E+04	2.1E-02
INORG	Mercury	7439-97-6	D	23	14	8.15E-03	6.62E-02	8.70E-03	3.76E-02	1.3E-01	8.9E+01		6.2E+01		8.8E+03		5.8E+02		4.8E+01		5.2E+01		2.0E+04		1.6E+02	
INORG	Nickel	7440-02-0	A	23	23	6.71E+00	2.42E+01			3.0E+01					1.6E+04		1.5E+05						1.3E+04		4.0E+04	
INORG	Selenium	7782-49-2	D	23	2	3.24E-01	5.87E-01	1.75E-01	5.77E-01	4.1E-01					5.9E+04	3.0E-06	9.6E+03	1.8E-05					1.3E+05	1.4E-06	2.6E+03	6.8E-05
INORG	Silver	7440-22-4	D	23				5.68E-02	5.77E-01						2.9E+03		9.0E+03						6.7E+03		2.5E+03	
INORG	Thallium	7440-28-0		23	14	4.86E-01	1.08E+00	5.56E-01	1.15E+00								1.3E+02	8.3E-03							3.5E+01	3.1E-02
INORG	Vanadium	7440-62-2		23	23	7.07E+00	1.88E+01			3.3E+01							5.5E+03								7.5E+02	
INORG	Zinc	7440-66-6	D	23	23	1.73E+01	9.34E+01			1.9E+02							6.3E+05								1.7E+05	

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Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-09 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	8	6	2.00E-03	2.30E-01	1.90E-03	3.50E-02		1.1E+05	2.1E-06	1.6E+05	1.4E-06	1.7E+08	1.4E-09	7.3E+04	3.2E-06	1.1E+05	2.1E-06	1.3E+05	1.8E-06	3.9E+08	5.9E-10	2.3E+04	1.0E-05
VOC	Benzene	71-43-2	A	8	1	9.70E-03	9.70E-03	5.30E-04	4.60E-01		8.4E+00	1.2E-03	4.5E+01	2.2E-04	4.7E+05	2.1E-08	4.0E+02	2.4E-05	1.6E+00	6.1E-03	1.3E+01	7.5E-04	3.8E+05	2.6E-08	1.8E+02	5.4E-05
VOC	Bromodichloromethane	75-27-4	B2	8				9.70E-04	4.60E-01		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	8				1.30E-03	4.60E-01		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	8				1.50E-03	9.30E-01		1.6E+00		1.3E+01		1.5E+05		1.0E+03		8.6E-01		1.1E+01		3.3E+05		3.2E+02	
VOC	2-Butanone	78-93-3	ID	8	1	5.80E-03	5.80E-03	2.20E-03	1.90E+00		2.7E+04	2.1E-07	3.5E+04	1.7E-07	2.9E+07	2.0E-10	2.7E+04	2.1E-07	2.7E+04	2.1E-07	2.9E+04	2.0E-07	6.7E+07	8.7E-11	2.7E+04	2.1E-07
VOC	Carbon Disulfide	75-15-0		8	1	1.40E-03	1.40E-03	6.30E-04	4.60E-01		1.4E+02	1.0E-05	1.6E+03	8.8E-07	2.1E+07	6.7E-11	2.8E+02	5.0E-06	7.6E+01	1.8E-05	1.3E+03	1.1E-06	4.7E+07	3.0E-11	2.8E+02	5.0E-06
VOC	Carbon Tetrachloride	56-23-5	B2	8				8.10E-04	4.60E-01		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00		1.3E+05		9.6E+01	
VOC	Chlorobenzene	108-90-7	D	8				4.20E-04	4.60E-01		2.2E+02		9.2E+02		2.1E+06		2.6E+02		1.2E+02		7.7E+02		4.7E+06		2.6E+02	
VOC	Chloroethane	75-00-3		8				1.80E-03	9.30E-01		9.5E+02		3.6E+04		2.9E+08		9.5E+02		9.5E+02		3.0E+04		6.7E+08		9.5E+02	
VOC	Chloroform	67-66-3	B2	8				6.60E-04	4.60E-01		3.8E+01		1.5E+02		1.6E+06		1.5E+03		7.2E+00		4.5E+01		1.3E+06		1.2E+03	
VOC	Chloromethane	74-87-3	D	8				1.10E-03	9.30E-01		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	8	1	4.60E-02	4.60E-02	5.70E-04	4.60E-01		3.9E+02	1.2E-04	2.0E+03	2.3E-05	2.6E+06	1.8E-08	3.9E+02	1.2E-04	3.9E+02	1.2E-04	1.7E+03	2.7E-05	5.8E+06	7.9E-09	3.9E+02	1.2E-04
VOC	Cyclohexane	110-82-7	ID	8	2	1.40E-03	2.20E-03	8.10E-04	9.30E-01																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	8				1.30E-03	9.30E-01		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	8				8.90E-04	4.60E-01		2.1E+01		8.0E+01		1.6E+05		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	8				9.70E-04	4.60E-01		3.6E+00		5.8E+00		8.2E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	1,2-Dichlorobenzene	95-50-1	D	8				5.70E-04	4.60E-01		2.1E+02		4.6E+04		4.3E+07		2.1E+02		2.1E+02		3.9E+04		1.0E+08		2.1E+02	
VOC	1,3-Dichlorobenzene	541-73-1	D	8				6.50E-04	4.60E-01								1.7E+02								1.7E+02	
VOC	1,4-Dichlorobenzene	106-46-7	C	8				5.40E-04	4.60E-01		1.0E+02		2.6E+02		5.7E+05		1.9E+03		1.9E+01		7.7E+01		4.5E+05		4.0E+02	
VOC	Dichlorodifluoromethane	75-71-8		8				8.90E-04	9.30E-01		1.7E+03		6.3E+04		1.5E+09		1.0E+03		9.0E+02		5.3E+04		3.3E+09		1.0E+03	
VOC	1,1-Dichloroethane	75-34-3	C	8	1	9.00E-03	9.00E-03	4.70E-04	4.60E-01		4.3E+02	2.1E-05	2.5E+03	1.6E-06	1.5E+07	6.0E-10	8.9E+02	1.0E-05	2.3E+02	3.9E-05	2.1E+03	4.3E-06	3.3E+07	2.7E-10	8.9E+02	1.0E-05
VOC	1,2-Dichloroethane	107-06-2	B2	8				5.90E-04	4.60E-01		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00		1.2E+05		9.1E+01	
VOC	1,1-Dichloroethene	75-35-4	C	8				9.70E-04	4.60E-01		3.3E-01		3.7E+00		7.8E+04		5.7E+02		6.2E-02		1.1E+00		6.2E+04		2.0E+02	
VOC	cis-1,2-Dichloroethene	156-59-2	D	8				6.80E-04	4.60E-01		4.1E+01		2.1E+02		1.0E+06		6.4E+02		2.2E+01		1.8E+02		2.3E+06		6.4E+02	
VOC	trans-1,2-Dichloroethene	156-60-5		8				5.90E-04	4.60E-01		4.3E+01		3.3E+02		2.1E+06		1.4E+03		2.3E+01		2.8E+02		4.7E+06		1.4E+03	
VOC	1,2-Dichloropropane	78-87-5	B2	8				6.10E-04	4.60E-01		7.4E+00		3.0E+01		1.2E+07		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	8				7.00E-04	4.60E-01		5.4E+00		6.0E+01		3.9E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	Ethyl Benzene	100-41-4	D	7	2	8.00E-04	5.60E-02	4.80E-04	4.60E-01		1.4E+02	4.0E-04	3.3E+03	2.3E-05	1.3E+07	4.3E-09	1.4E+02	4.0E-04	8.7E+01	6.4E-04	7.2E+02	7.8E-05	1.0E+07	5.6E-09	1.4E+02	4.0E-04
VOC	2-Hexanone	591-78-6		8				1.40E-03	1.90E+00		1.8E+03		7.3E+03		1.2E+06		2.5E+03		9.9E+02		1.1E+03		2.7E+06		2.5E+03	
VOC	Methyl Acetate	79-20-9		8				8.90E-04	9.30E-01																	
VOC	Methyl tert-butyl ether	1634-04-4		8				6.80E-04	1.90E+00		5.9E+03		2.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	8				1.50E-03	1.90E+00		2.7E+03		9.3E+04		6.0E+07		2.7E+03		2.7E+03		4.5E+04		1.4E+08		2.7E+03	
VOC	Methylcyclohexane	108-87-2		8	4	1.10E-03	4.90E-03	4.80E-04	9.30E-01																	
VOC	Methylene Chloride	75-09-2	B2	8				1.10E-03	4.60E-01		2.4E+02		7.0E+02		8.3E+06		2.3E+03		4.5E+01		2.1E+02		6.6E+06		1.3E+03	
VOC	Styrene	100-42-5		8				4.00E-04	4.60E-01		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	8				1.50E-03	4.60E-01		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	8	2	3.70E-03	3.80E-02	9.70E-04	4.60E-01		6.0E+01	6.3E-04	6.0E+02	6.3E-05	6.8E+06	5.6E-09	8.8E+01	4.3E-04	1.1E+01	3.5E-03	1.8E+02	2.1E-04	5.4E+06	7.0E-09	8.8E+01	4.3E-04
VOC	Toluene	108-88-3	D	8	4	6.40E-04	2.90E-02	4.30E-04	4.60E-01		2.5E+02	1.2E-04	3.3E+03	8.8E-06	1.2E+07	2.4E-09	2.5E+02	1.2E-04	2.5E+02	1.2E-04	2.8E+03	1.0E-05	2.7E+07	1.1E-09	2.5E+02	1.2E-04
VOC	1,2,4-Trichlorobenzene	120-82-1	D	8				7.20E-04	4.60E-01		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	8				7.40E-04	4.60E-01		4.6E+02		4.5E+03		2.9E+07		4.6E+02		2.5E+02		3.8E+03		6.7E+07		4.6E+02	
VOC	1,1,2-Trichloroethane	79-00-5	C	7				9.70E-04	4.60E-01		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01		1.9E+05		1.8E+02	
VOC	Trichloroethene	79-01-6	C-B2	8	1	2.70E-02	2.70E-02	6.10E-04	4.60E-01		3.7E+01	7.3E-04	2.6E+02	1.0E-04	2.3E+06	1.2E-08	5.0E+02	5.4E-05	7.1E+00	3.8E-03	7.8E+01	3.5E-04	1.8E+06	1.5E-08	5.0E+02	5.4E-05
VOC	Trichlorofluoromethane	75-69-4		8				8.90E-04	9.30E-01		5.6E+02		1.1E+05		1.7E+09		5.6E+02		5.6E+02		9.2E+04		3.8E+09		5.6E+02	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		8				7.50E-04	4.60E-01		5.5E+02		2.1E+05		2.3E+09		5.5E+02		5.5E+02		1.8E+05		5.1E+09		5.5E+02	
VOC	Vinyl Chloride	75-01-4	A	8				1.10E-03	9.30E-01		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00		3.5E+05		3.8E+00	
VOC	Xylenes (total)	1330-20-7	ID	8	2	2.30E-03	2.00E-01	1.50E-03	9.30E-01		1.5E+02	1.3E-03	5.4E+04	3.7E-06	1.3E+08	1.5E-09	1.5E+02	1.3E-03	1.5E+02	1.3E-03	4.6E+04	4.3E-06	2.9E+08	6.9E-10	1.5E+02	1.3E-03
SVOC	Acenaphthene	83-32-9		8				5.70E-02	8.30E-01		3.5E+05		9.7E+04		6.2E+06		1.3E+05		1.9E+05		8.1E+04		1.4E+07		4.1E+04	
SVOC	Acenaphthylene	208-96-8	D	8				5.20E-02	1.10E+00		3.0E+03		2.7E+03		1.0E+06		5.2E+03		1.6E+03		2.2E+03		2.3E+06		1.6E+03	
SVOC	Acetophenone	98-86-2	D	8				5.50E-02	1.20E+00		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	Anthracene	120-12-7	D	8				5.40E-02	1.00E+00		1.0E+06		1.6E+06		2.9E+07		7.3E+05		1.0E+06		1.4E+06		6.7E+07		2.3E+05	
SVOC	Atrazine	1912-24-9		8				1.70E-01	1.30E+00								3.3E+02								7.1E+01	
SVOC	Benzaldehyde	100-52-7		8				1.90E-01	8.30E-01																	
SVOC	Benzo(a)anthracene	56-55-3	B2	8				6.10E-02	1.40E+00								8.0E+01								2.0E+01	
SVOC	Benzo(a)pyrene	50-32-8	B2	8				6.60E-02	8.90E-01						1.9E+03		8.0E+00						1.5E+03		2.0E+00	
SVOC	Benzo(b)fluoranthene	205-99-2	B2	8				6.40E-02	1.20E+00								8.0E+01								2.0E+01	
SVOC	Benzo(g,h,i)perylene	191-24-2	D	8				6.10E-02	9.50E-01						3.5E+05		7.0E+03						8.0E+05		2.5E+03	
SVOC	Benzo(k)fluoranthene	207-08-9	B2	8				5.90E-02	9.50E-01								8.0E+02								2.0E+02	
SVOC	Biphenyl	92-52-4	D	8				1.60E-01	1.10E+00																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	8				5.20E-02	1.50E+00																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	8				5.70E-02	1.10E+00		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	8	2	1.70E-01	2.40E+00	6.00E-02	5.40E-01						8.9E+05	2.7E-06	1.0E+04	2.4E-04					7.0E+05	3.4E-06	2.8E+03	8.6E-04
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	8				6.80E-02	8.90E-01																	
SVOC	Butylbenzylphthalate	85-68-7	C	8				5.70E-02	1.20E+00						2.1E+07		3.1E+02						4.7E+07		3.1E+02	
SVOC	Caprolactam	105-60-2		8				2.00E-01	1.70E+00						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	8				5.80E-02	1.10E+00								2.4E+03								5.3E+02	
SVOC	4-Chloro-3-methylphenol	59-50-7		8				5.70E-02	1.10E+00								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		8				5.70E-02	2.10E+00																	
SVOC	2-Chloronaphthalene	91-58-7		8				5.30E-02	1.00E+00								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		8				5.80E-02	1.10E+00								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		8				5.80E-02	1.00E+00																	
SVOC	Chrysene	218-01-9	B2	8				5.10E-02	1.30E+00								8.0E+03								2.0E+03	
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	8				5.70E-02	1.10E+00								8.0E+00								2.0E+00	
SVOC	Dibenzofuran	132-64-9	D	8				5.50E-02	1.00E+00																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	8				4.30E-02	3.30E+00						1.2E+03		3.0E+01						6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		8				5.50E-02	9.50E-01						2.3E+06		1.8E+03						5.1E+06		6.6E+02	
SVOC	Diethylphthalate	84-66-2	D	8				1.70E-01	1.10E+00						1.5E+06		7.4E+02						3.3E+06		7.4E+02	
SVOC	2,4-Dimethylphenol	105-67-9		8				8.90E-02	1.10E+00						2.1E+06		3.6E+04						4.7E+06		1.1E+04	
SVOC	Dimethylphthalate	131-11-3	D	8				1.80E-01	1.00E+00						1.5E+06		7.9E+02						3.3E+06		7.9E+02	

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TABLE 4-22
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI M-09 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Di-n-butylphthalate	84-74-2	D	8				1.70E-01	1.40E+00						1.5E+06		7.6E+02						3.3E+06		7.6E+02	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		8				1.80E-01	2.80E+00								2.6E+02								7.9E+01	
SVOC	2,4-Dinitrophenol	51-28-5		8				1.20E-01	2.80E+00																	
SVOC	2,4-Dinitrotoluene	121-14-2	B2	8				5.10E-02	1.30E+00						2.0E+04		2.2E+02						1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	8				5.30E-02	8.90E-01																	
SVOC	Di-n-octylphthalate	117-84-0		8				6.00E-02	3.80E+00								2.0E+04								6.9E+03	
SVOC	Fluoranthene	206-44-0	D	8	1	2.20E+00	2.20E+00	6.20E-02	5.40E-01		1.0E+06	2.2E-06	8.9E+05	2.5E-06	4.1E+06	5.4E-07	1.3E+05	1.7E-05	1.0E+06	2.2E-06	7.4E+05	3.0E-06	9.3E+06	2.4E-07	4.6E+04	4.8E-05
SVOC	Fluorene	86-73-7	D	8				5.30E-02	8.90E-01		1.0E+06		1.5E+05		4.1E+06		8.7E+04		5.8E+05		1.3E+05		9.3E+06		2.7E+04	
SVOC	Hexachlorobenzene	118-74-1	B2	8				6.20E-02	1.30E+00		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	8				5.00E-02	9.50E-01		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	8				6.60E-02	5.90E-01		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	8				5.30E-02	1.00E+00		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	8				7.80E-02	1.10E+00								8.0E+01								2.0E+01	
SVOC	Isophorone	78-59-1	C	8				4.90E-02	1.30E+00						8.2E+06		2.4E+03						1.2E+07		2.4E+03	
SVOC	2-Methylnaphthalene	91-57-6	ID	8				5.30E-02	1.00E+00								2.6E+04								8.1E+03	
SVOC	Methylphenol (total)	1319-77-3		8				5.20E-02	1.20E+00						2.9E+06		3.6E+04						6.7E+06		1.1E+04	
SVOC	Naphthalene	91-20-3	C	8				5.40E-02	1.00E+00		4.7E+02		3.5E+02		8.8E+03		5.2E+04		2.5E+02		3.0E+02		2.0E+05		1.6E+04	
SVOC	2-Nitroaniline	88-74-4		8				5.10E-02	2.80E+00																	
SVOC	3-Nitroaniline	99-09-2	C	8				1.60E-01	2.80E+00																	
SVOC	4-Nitroaniline	100-01-6	C	8				7.50E-02	2.80E+00																	
SVOC	Nitrobenzene	98-95-3	D	8				5.10E-02	1.40E+00		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		8				5.10E-02	1.20E+00								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		8				2.10E-01	3.10E+00																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	8				5.40E-02	1.10E+00								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	8				4.90E-02	8.90E-01						2.0E+03		5.4E+00						1.6E+03		1.2E+00	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	8				5.80E-02	1.60E+00																	
SVOC	Pentachlorophenol	87-86-5	B2	8				1.30E-01	5.50E+00						1.3E+06		3.2E+02						1.0E+05		9.0E+01	
SVOC	Phenanthrene	85-01-8	D	8	1	6.60E+00	6.60E+00	5.80E-02	5.40E-01		5.1E+03	1.3E-03	1.9E+02	3.5E-02	1.9E+07	2.3E-03	5.2E+03	1.3E-03	2.8E+03	2.4E-03	1.6E+02	4.1E-02	6.7E+03	9.9E-04	1.6E+03	4.1E-03
SVOC	Phenol	108-95-2	ID	8				5.40E-02	1.10E+00						1.8E+07		1.2E+04						4.0E+07		1.2E+04	
SVOC	Pyrene	129-00-0	D	8	1	2.80E+00	2.80E+00	5.70E-02	5.40E-01		1.0E+06	2.8E-06	2.8E+05	9.8E-06	2.9E+06	9.7E-07	8.4E+04	3.3E-05	1.0E+06	2.8E-06	6.5E+05	4.3E-06	6.7E+06	4.2E-07	2.9E+04	9.7E-05
SVOC	2,4,5-Trichlorophenol	95-95-4		8				6.10E-02	8.90E-01						1.0E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	8				7.00E-02	1.10E+00						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
P/PCB	PCBs (total)	1336-36-3	B2	8	3	4.71E-02	9.18E-02	5.40E-02	3.60E-01		1.6E+04	5.7E-06	3.1E+02	1.2E-04	6.5E+03	1.4E-05	1.6E+01	5.7E-03	3.0E+03	3.1E-05	2.4E+02	3.8E-04	5.2E+03	1.8E-05	4.0E+00	2.3E-02
INORG	Antimony	7440-36-0		8				1.36E-01	6.51E+00						5.9E+03		6.7E+02						1.3E+04		1.8E+02	
INORG	Arsenic	7440-38-2	A	8	8	3.50E+00	2.47E+01			1.3E+01					9.1E+02	1.3E-02	3.7E+01	3.1E-01					7.2E+02	1.6E-02	7.6E+00	**1.5E+00**
INORG	Barium	7440-39-3	D	8	8	1.72E+01	2.41E+02			1.1E+02					1.5E+05	8.7E-04	1.3E+05	1.0E-03					3.3E+05	4.0E-04	3.7E+04	3.5E-03
INORG	Beryllium	7440-41-7	B1	8	8	1.01E-01	4.15E+00			1.5E+00					5.9E+02	4.4E-03	1.6E+03	1.6E-03					1.3E+03	2.0E-03	4.1E+02	6.4E-03
INORG	Cadmium	7440-43-9	B1	8	8	7.49E-02	3.63E-01			1.2E+00					2.2E+03		2.1E+03						1.7E+03		5.5E+02	
INORG	Chromium (total)	7440-47-3		8	8	4.89E+00	4.82E+01			4.9E+01					2.4E+02		9.2E+03						2.6E+02		2.5E+03	
INORG	Cobalt	7440-48-4	B1	8	8	3.94E+00	1.06E+02			1.7E+01					5.9E+03	1.5E-02	9.0E+03	9.8E-03					1.3E+04	6.8E-03	2.6E+03	3.4E-02
INORG	Copper	7440-50-8	D	8	8	7.79E+00	3.04E+01			3.2E+01					5.9E+04		7.3E+04						1.3E+05		2.0E+04	
INORG	Lead	7439-92-1	B2	8	8	5.09E+00	1.48E+01			4.9E+01					4.4E+04		9.0E+02						1.0E+05		4.0E+02	
INORG	Manganese	7439-96-5	D	8	8	3.70E+01	4.25E+02			5.1E+02					1.5E+03		9.0E+04						3.3E+03		2.5E+04	
INORG	Mercury	7439-97-6	D	8	8	1.38E-02	1.53E-01			1.3E-01	8.9E+01	2.6E-04	6.2E+01	3.7E-04	8.8E+03	2.6E-06	5.8E+02	4.0E-05	4.8E+01	4.8E-04	5.2E+01	4.4E-04	2.0E+04	1.2E-06	1.6E+02	1.4E-04
INORG	Nickel	7440-02-0	A	8	8	6.03E+00	1.86E+01			3.0E+01					1.6E+04		1.5E+05						1.3E+04		4.0E+04	
INORG	Selenium	7782-49-2	D	8	2	4.49E+00	1.46E+01	1.72E-01	5.61E-01	4.1E-01					5.9E+04	2.4E-04	9.6E+03	1.5E-03					1.3E+05	1.1E-04	2.6E+03	5.5E-03
INORG	Silver	7440-22-4	D	8	1	1.45E-01	1.45E-01	8.31E-02	1.63E+00						2.9E+03	5.0E-05	9.0E+03	1.6E-05					6.7E+03	2.2E-05	2.5E+03	5.8E-05
INORG	Thallium	7440-28-0		8	4	3.99E-01	1.52E+00	1.08E+00	3.26E+00								1.3E+02	1.2E-02							3.5E+01	4.3E-02
INORG	Vanadium	7440-62-2		8	8	6.29E+00	4.69E+01			3.3E+01							5.5E+03	2.6E-03							7.5E+02	1.9E-02
INORG	Zinc	7440-66-6	D	8	8	1.72E+01	2.50E+02			1.9E+02							6.3E+05	9.7E-05							1.7E+05	3.6E-04

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-12
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-09 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	2	1	2.00E-02	2.00E-02	1.10E-03	1.10E-03	1.0E+06	2.0E-08	3.1E+04	6.5E-07	7.3E-01	2.7E-02
Shallow	VOC	Benzene	71-43-2	T	A	2				1.60E-04	3.70E-04	3.5E+03		1.1E+01		5.0E-03	
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	2	1	3.90E-04	3.90E-04	3.20E-04	3.20E-04	3.7E+01	1.1E-05	1.4E+01	2.8E-05	1.0E-01	3.9E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	2				1.80E-04	3.70E-04	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	2				2.00E-04	3.00E-04	9.0E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	2	1	1.90E-03	1.90E-03	5.90E-04	5.90E-04	2.4E+05	7.9E-09	2.4E+05	7.9E-09	1.3E+01	1.5E-04
Shallow	VOC	Carbon Disulfide	75-15-0	T		2	2	2.50E-04	4.10E-04			5.5E+02	7.5E-07	1.2E+03	3.4E-07	8.0E-01	5.1E-04
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	2				1.20E-04	2.70E-04	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	2				1.40E-04	3.80E-04	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		2				2.60E-04	2.90E-04	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	2	1	2.40E-03	2.40E-03	3.50E-04	3.50E-04	1.8E+02	1.3E-05	1.5E+02	1.6E-05	1.0E-01	2.4E-02
Shallow	VOC	Chloromethane	74-87-3	T	D	2				1.30E-04	4.90E-04	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	2				1.60E-04	3.90E-04	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	2				1.30E-04	3.30E-04						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	2				6.20E-04	8.20E-04	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	2				2.60E-04	3.70E-04	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	2				2.20E-04	3.40E-04	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	2				1.10E-04	3.80E-04	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	2				1.50E-04	3.80E-04			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	2				1.70E-04	3.80E-04	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		2				2.60E-04	4.90E-04	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	2				1.60E-04	3.00E-04	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	2				2.10E-04	2.80E-04	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	2				2.40E-04	3.10E-04	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	2				2.20E-04	3.50E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		2				1.50E-04	3.30E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	2				1.70E-04	4.10E-04	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	1				3.50E-04	3.50E-04	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	2				1.20E-04	4.10E-04	1.7E+02		1.7E+02		7.0E-01	
Shallow	VOC	2-Hexanone	591-78-6	T		2				4.60E-04	5.80E-04	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		2				4.10E-04	5.40E-04						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		2	1	8.10E-04	8.10E-04	2.70E-04	2.70E-04	4.7E+04	1.7E-08	6.1E+02	1.3E-06	2.4E-01	3.4E-03
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	1				2.60E-04	2.60E-04	2.0E+04		1.3E+04		1.8E+00	
Shallow	VOC	Methylcyclohexane	108-87-2	T		2				1.50E-04	4.20E-04						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	1				3.40E-04	3.40E-04	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		2				1.50E-04	3.50E-04	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	2				2.50E-04	3.60E-04	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	1				4.20E-04	4.20E-04	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	2				1.80E-04	3.90E-04	5.3E+02		5.3E+02		1.0E+00	
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	2				1.70E-04	4.00E-04	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	2				1.50E-04	3.90E-04	1.3E+03		1.3E+03		2.0E-01	
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	2				3.00E-04	3.60E-04	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	2				1.40E-04	4.20E-04	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		2				2.80E-04	5.40E-04	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		2				3.20E-04	3.20E-04	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	2				1.50E-04	3.60E-04	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	2				3.30E-04	4.40E-04	1.9E+02		1.9E+02		1.0E+01	
Shallow	SVOC	Acenaphthene	83-32-9	T		2				8.00E-04	8.00E-04	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	2				7.10E-04	7.10E-04	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	2				2.60E-03	2.60E-03	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	2				6.80E-04	6.80E-04	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		2				2.50E-03	2.50E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		2				2.80E-03	2.80E-03						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	2				7.00E-04	7.00E-04			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	2				7.30E-04	7.30E-04			2.0E-03		5.0E-03	

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TABLE 4-2

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-09 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	2				9.40E-04	9.40E-04			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	2				8.50E-04	8.50E-04			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	2				8.40E-04	8.40E-04			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	2				2.60E-03	2.60E-03						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	2				8.70E-04	8.70E-04						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	2				9.70E-04	9.70E-04	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	2				2.70E-03	2.70E-03			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	2				8.80E-04	8.80E-04						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	2				8.80E-04	8.80E-04			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		2				2.50E-03	2.50E-03			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	2				8.20E-04	8.20E-04			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		2				9.90E-04	9.90E-04			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		2				6.10E-04	6.10E-04						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		2				8.50E-04	8.50E-04			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		2				1.00E-03	1.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		2				7.90E-04	7.90E-04						
Shallow	SVOC	Chrysene	218-01-9	T	B2	2				7.50E-04	7.50E-04			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	2				7.90E-04	7.90E-04			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	2				1.10E-03	1.10E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	2				9.30E-04	9.30E-04			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		2				8.50E-04	8.50E-04			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	2				6.50E-04	6.50E-04			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		2				8.50E-04	8.50E-04			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	2				7.60E-04	7.60E-04			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	2				6.70E-04	6.70E-04			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		2				1.30E-03	1.30E-03			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		2				3.00E-03	3.00E-03						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	2				7.90E-04	7.90E-04			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	2				5.70E-04	5.70E-04						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		2				1.10E-03	1.10E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	2				8.10E-04	8.10E-04	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	2				1.00E-03	1.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	2				7.40E-04	7.40E-04	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	2				7.30E-04	7.30E-04	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	1				1.10E-03	1.10E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	2				7.40E-04	7.40E-04	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	2				6.30E-04	6.30E-04			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	2				6.30E-04	6.30E-04			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	2				6.40E-04	6.40E-04			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		2				1.30E-03	1.30E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	2				7.50E-04	7.50E-04	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		2				7.00E-04	7.00E-04						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	2				7.10E-04	7.10E-04						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	2				1.30E-03	1.30E-03						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	2				8.10E-04	8.10E-04	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		2				2.10E-03	2.10E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		2				1.90E-03	1.90E-03						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	2				1.40E-03	1.40E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	2				6.70E-04	6.70E-04			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	2				7.80E-04	7.80E-04						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	2				2.40E-03	2.40E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	2				8.20E-04	8.20E-04	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	2				2.60E-03	2.60E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	2				1.10E-03	1.10E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		2				1.20E-03	1.20E-03			1.7E+02		7.3E-01	

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TABLE 3.4.2
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-09 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	2				1.70E-03	1.70E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	2				8.20E-05	8.20E-05	4.5E-03		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		1				2.20E-03	2.20E-03			6.8E+01		6.0E-03	
Shallow	INORG	Antimony	7440-36-0	T		2	1	3.30E-03	3.30E-03	3.40E-03	3.40E-03			6.8E+01	4.9E-05	6.0E-03	5.5E-01
Shallow	INORG	Arsenic	7440-38-2	D	A	1	1	5.70E-03	5.70E-03					4.3E+00	1.3E-03	5.0E-02	1.1E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	2	1	4.20E-03	4.20E-03	2.10E-03	2.10E-03			4.3E+00	9.8E-04	5.0E-02	8.4E-02
Shallow	INORG	Barium	7440-39-3	D	D	1	1	5.48E-01	5.48E-01					1.4E+04	3.9E-05	2.0E+00	2.7E-01
Shallow	INORG	Barium	7440-39-3	T	D	2	2	5.04E-01	5.69E-01					1.4E+04	4.1E-05	2.0E+00	2.8E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	1				5.40E-04	5.40E-04			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	2				5.40E-04	6.00E-04			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	1				2.80E-04	2.80E-04			1.9E+02		5.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	2	1	2.90E-04	2.90E-04	2.80E-04	2.80E-04			1.9E+02	1.5E-06	5.0E-03	5.8E-02
Shallow	INORG	Chromium (total)	7440-47-3	D		1	1	2.80E-03	2.80E-03					4.6E+02	6.1E-06	1.0E-01	2.8E-02
Shallow	INORG	Chromium (total)	7440-47-3	T		2	1	3.00E-03	3.00E-03	1.50E-03	1.50E-03			4.6E+02	6.5E-06	1.0E-01	3.0E-02
Shallow	INORG	Cobalt	7440-48-4	D	B1	1	1	2.20E-03	2.20E-03					2.4E+03	9.2E-07	4.0E-02	5.5E-02
Shallow	INORG	Cobalt	7440-48-4	T	B1	2	2	2.20E-03	2.40E-03					2.4E+03	1.0E-06	4.0E-02	6.0E-02
Shallow	INORG	Copper	7440-50-8	D	D	1				4.20E-03	4.20E-03			7.4E+03		1.4E+00	
Shallow	INORG	Copper	7440-50-8	T	D	2				1.70E-03	4.20E-03			7.4E+03		1.4E+00	
Shallow	INORG	Lead	7439-92-1	D	B2	1				2.50E-03	2.50E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	2				1.60E-03	2.50E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	1				9.00E-04	9.00E-04			9.1E+03		8.6E-01	
Shallow	INORG	Manganese	7439-96-5	T	D	2	1	4.30E-03	4.30E-03	9.00E-04	9.00E-04			9.1E+03	4.7E-07	8.6E-01	5.0E-03
Shallow	INORG	Mercury	7439-97-6	D	D	1				6.90E-05	6.90E-05	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	2				6.90E-05	8.70E-05	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Nickel	7440-02-0	D	A	1	1	4.10E-03	4.10E-03					7.4E+04	5.5E-08	1.0E-01	4.1E-02
Shallow	INORG	Nickel	7440-02-0	T	A	2	2	3.50E-03	7.30E-03					7.4E+04	9.9E-08	1.0E-01	7.3E-02
Shallow	INORG	Selenium	7782-49-2	D	D	1				4.50E-03	4.50E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	2				4.50E-03	4.70E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	1				1.50E-03	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	2				9.80E-04	1.50E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		1	1	5.10E-05	5.10E-05					1.3E+01	3.9E-06	2.0E-03	2.6E-02
Shallow	INORG	Thallium	7440-28-0	T		2	1	7.20E-05	7.20E-05	3.30E-05	3.30E-05			1.3E+01	5.5E-06	2.0E-03	3.6E-02
Shallow	INORG	Vanadium	7440-62-2	D		1	1	3.70E-03	3.70E-03					9.7E+02	3.8E-06	4.5E-03	8.2E-01
Shallow	INORG	Vanadium	7440-62-2	T		2	2	1.00E-03	4.10E-03					9.7E+02	4.2E-06	4.5E-03	9.1E-01
Shallow	INORG	Zinc	7440-66-6	D	D	1	1	1.39E-02	1.39E-02					1.1E+05	1.3E-07	2.4E+00	5.8E-03
Shallow	INORG	Zinc	7440-66-6	T	D	2	1	8.23E-02	8.23E-02	1.20E-02	1.20E-02			1.1E+05	7.5E-07	2.4E+00	3.4E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
VOC	Acetone	67-64-1	ID	7	1	1.30E-02	1.30E-02	2.30E-03	2.50E-02		1.1E+05	1.2E-07	1.6E+05	8.1E-08	1.7E+08	7.6E-11	7.3E+04	1.8E-07	1.1E+05	1.2E-07	1.3E+05	1.0E-07	3.9E+08	3.3E-11	2.3E+04	5.7E-07
VOC	Benzene	71-43-2	A	7				3.00E-04	6.30E-03		8.4E+00		4.5E+01		4.7E+05		4.0E+02		1.6E+00		1.3E+01		3.8E+05		1.8E+02	
VOC	Bromodichloromethane	75-27-4	B2	7				2.90E-04	6.30E-03		6.4E+00		3.1E+01		1.1E+05		4.9E+02		1.2E+00		9.1E+00		8.4E+04		1.1E+02	
VOC	Bromoform	75-25-2	B2	7				3.80E-04	6.30E-03		7.7E+02		3.1E+03		3.6E+06		8.7E+02		1.5E+02		9.0E+02		2.8E+06		8.2E+02	
VOC	Bromomethane	74-83-9	D	7				7.90E-04	1.30E-02		1.6E+00		1.3E+01		1.5E+05		1.0E+03		8.6E-01		1.1E+01		3.3E+05		3.2E+02	
VOC	2-Butanone	78-93-3	ID	7	1	2.80E-03	2.80E-03	2.90E-03	2.50E-02		2.7E+04	1.0E-07	3.5E+04	8.0E-08	2.9E+07	9.7E-11	2.7E+04	1.0E-07	2.7E+04	1.0E-07	2.9E+04	9.7E-08	6.7E+07	4.2E-11	2.7E+04	1.0E-07
VOC	Carbon Disulfide	75-15-0		7				8.50E-04	6.30E-03		1.4E+02		1.6E+03		2.1E+07		2.8E+02		7.6E+01		1.3E+03		4.7E+07		2.8E+02	
VOC	Carbon Tetrachloride	56-23-5	B2	7				4.20E-04	6.30E-03		9.9E-01		1.2E+01		1.7E+05		3.9E+02		1.9E-01		3.5E+00		1.3E+05		9.6E+01	
VOC	Chlorobenzene	108-90-7	D	7				2.80E-04	6.30E-03		2.2E+02		9.2E+02		2.1E+06		2.6E+02		1.2E+02		7.7E+02		4.7E+06		2.6E+02	
VOC	Chloroethane	75-00-3		7				9.30E-04	1.30E-02		9.5E+02		3.6E+04		2.9E+08		9.5E+02		9.5E+02		3.0E+04		6.7E+08		9.5E+02	
VOC	Chloroform	67-66-3	B2	7				3.10E-04	6.30E-03		3.8E+01		1.5E+02		1.6E+06		1.5E+03		7.2E+00		4.5E+01		1.3E+06		1.2E+03	
VOC	Chloromethane	74-87-3	D	7				4.70E-04	1.30E-02		1.0E+01		1.2E+02		2.6E+06		1.1E+03		2.3E+00		4.0E+01		4.9E+06		1.1E+03	
VOC	Cumene	98-82-8	D	7				3.10E-04	6.30E-03		3.9E+02		2.0E+03		2.6E+06		3.9E+02		3.9E+02		1.7E+03		5.8E+06		3.9E+02	
VOC	Cyclohexane	110-82-7	ID	7				4.70E-04	1.30E-02																	
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	7				1.20E-03	1.30E-02		1.2E+00		1.5E+01		5.9E+03		1.2E+00		1.2E+00		1.3E+01		1.3E+04		1.2E+00	
VOC	Dibromochloromethane	124-48-1	C	7				3.80E-04	6.30E-03		2.1E+01		8.0E+01		1.6E+06		5.0E+02		3.9E+00		2.4E+01		1.3E+05		1.1E+02	
VOC	1,2-Dibromoethane	106-93-4	B2	7				4.00E-04	6.30E-03		3.6E+00		5.8E+00		8.2E+04		4.3E-01		6.7E-01		1.7E+00		1.4E+04		2.5E-01	
VOC	1,2-Dichlorobenzene	95-50-1	D	7				3.40E-04	6.30E-03		2.1E+02		4.6E+04		4.3E+07		2.1E+02		2.1E+02		3.9E+04		1.0E+08		2.1E+02	
VOC	1,3-Dichlorobenzene	541-73-1	D	7				3.20E-04	6.30E-03								1.7E+02								1.7E+02	
VOC	1,4-Dichlorobenzene	106-46-7	C	7				2.90E-04	6.30E-03		1.0E+02		2.6E+02		5.7E+05		1.9E+03		1.9E+01		7.7E+01		4.5E+05		4.0E+02	
VOC	Dichlorodifluoromethane	75-71-8		7				4.20E-04	1.30E-02		1.7E+03		6.3E+04		1.5E+09		1.0E+03		9.0E+02		5.3E+04		3.3E+09		1.0E+03	
VOC	1,1-Dichloroethane	75-34-3	C	7				3.70E-04	6.30E-03		4.3E+02		2.5E+03		1.5E+07		8.9E+02		2.3E+02		2.1E+03		3.3E+07		8.9E+02	
VOC	1,2-Dichloroethane	107-06-2	B2	7				4.90E-04	6.30E-03		1.1E+01		2.1E+01		1.5E+05		4.2E+02		2.1E+00		6.2E+00		1.2E+05		9.1E+01	
VOC	1,1-Dichloroethene	75-35-4	C	7				1.10E-03	6.30E-03		3.3E-01		3.7E+00		7.8E+04		5.7E+02		6.2E-02		1.1E+00		6.2E+04		2.0E+02	
VOC	cis-1,2-Dichloroethene	156-59-2	D	7				5.40E-04	6.30E-03		4.1E+01		2.1E+02		1.0E+06		6.4E+02		2.2E+01		1.8E+02		2.3E+06		6.4E+02	
VOC	trans-1,2-Dichloroethene	156-60-5		7				5.00E-04	6.30E-03		4.3E+01		3.5E+02		2.1E+06		1.4E+03		2.3E+01		2.8E+02		4.7E+06		1.4E+03	
VOC	1,2-Dichloropropane	78-87-5	B2	7				4.70E-04	6.30E-03		7.4E+00		3.0E+01		1.2E+07		5.5E+02		4.0E+00		2.5E+01		2.7E+05		1.4E+02	
VOC	1,3-Dichloropropene (total)	542-75-6	B2	7				3.20E-04	6.30E-03		5.4E+00		6.0E+01		3.9E+05		2.4E+02		1.0E+00		1.8E+01		7.8E+05		1.0E+01	
VOC	Ethyl Benzene	100-41-4	D	7				3.10E-04	6.30E-03		1.4E+02		1.3E+03		1.3E+07		1.4E+02		8.7E+01		7.2E+02		1.0E+07		1.4E+02	
VOC	2-Hexanone	591-78-6		7				8.50E-04	2.50E-02		1.8E+03		1.3E+03		1.2E+06		2.5E+03		9.9E+02		1.1E+03		2.7E+06		2.5E+03	
VOC	Methyl Acetate	79-20-9		7	1	2.50E-02	2.50E-02	9.30E-04	1.30E-02																	
VOC	Methyl tert-butyl ether	1634-04-4		7				5.10E-04	2.50E-02		5.9E+03		2.0E+04		8.8E+07		5.9E+03		5.9E+03		2.5E+04		2.0E+08		1.5E+03	
VOC	4-Methyl-2-pentanone	108-10-1	ID	7				9.30E-04	2.50E-02		2.7E+03		1.3E+04		6.0E+07		2.7E+03		2.7E+03		4.5E+04		1.4E+08		2.7E+03	
VOC	Methylcyclohexane	108-87-2		7	1	5.70E-04	5.70E-04	6.40E-04	1.30E-02																	
VOC	Methylene Chloride	75-09-2	B2	7				9.30E-04	6.30E-03		2.4E+02		7.0E+02		8.3E+06		2.3E+03		4.5E+01		2.1E+02		6.6E+06		1.3E+03	
VOC	Styrene	100-42-5		7				2.70E-04	6.30E-03		5.2E+02		3.3E+03		6.9E+06		5.2E+02		2.5E+02		9.7E+02		5.5E+06		4.0E+02	
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	7				5.90E-04	6.30E-03		2.3E+01		3.4E+01		6.8E+04		2.4E+02		4.3E+00		1.0E+01		5.4E+04		5.3E+01	
VOC	Tetrachloroethene	127-18-4	C-B2	7				3.90E-04	6.30E-03		6.0E+01		6.0E+02		6.8E+06		8.8E+01		1.1E+01		1.8E+02		5.4E+06		8.8E+01	
VOC	Toluene	108-88-3	D	7	4	5.70E-04	2.70E-03	7.40E-04	5.00E-03		2.5E+02	1.1E-05	3.3E+03	8.2E-07	1.2E+07	2.3E-10	2.5E+02	1.1E-05	2.5E+02	1.1E-05	2.8E+03	9.6E-07	2.7E+07	1.0E-10	2.5E+02	1.1E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7				3.00E-04	6.30E-03		1.1E+03		3.4E+04		1.1E+07		1.1E+03		1.1E+03		2.8E+04		2.5E+07		9.9E+02	
VOC	1,1,1-Trichloroethane	71-55-6	D	7				6.40E-04	6.30E-03		4.6E+02		4.5E+03		2.9E+07		4.6E+02		2.5E+02		3.8E+03		6.7E+07		4.6E+02	
VOC	1,1,2-Trichloroethane	79-00-5	C	4				5.50E-04	6.30E-03		2.4E+01		5.7E+01		2.5E+05		8.4E+02		4.6E+00		1.7E+01		1.9E+05		1.8E+02	
VOC	Trichloroethene	79-01-6	C-B2	7				3.90E-04	6.30E-03		3.7E+01		2.6E+02		2.3E+06		5.0E+02		7.1E+00		7.8E+01		1.8E+06		5.0E+02	
VOC	Trichlorofluoromethane	75-69-4		7				1.20E-03	1.30E-02		5.6E+02		1.1E+05		1.7E+09		5.6E+02		5.6E+02		9.2E+04		3.8E+09		5.6E+02	
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		7				5.60E-04	6.30E-03		5.5E+02		2.1E+05		2.3E+09		5.5E+02		5.5E+02		1.8E+05		5.1E+09		5.5E+02	
VOC	Vinyl Chloride	75-01-4	A	7				7.00E-04	1.30E-02		2.8E+00		2.9E+01		8.9E+05		3.4E+01		2.7E-01		4.2E+00		3.5E+05		3.8E+00	
VOC	Xylenes (total)	1330-20-7	ID	7				9.30E-04	1.30E-02		1.5E+02		5.4E+04		1.3E+08		1.5E+02		1.5E+02		4.6E+04		2.9E+08		1.5E+02	
SVOC	Acenaphthene	83-32-9		7				2.10E-02	3.70E-01		3.5E+05		9.7E+04		6.2E+06		1.3E+05		1.9E+05		8.1E+04		1.4E+07		4.1E+04	
SVOC	Acenaphthylene	208-96-8	D	7				2.10E-02	3.70E-01		3.0E+03		2.7E+03		1.0E+06		5.2E+03		1.6E+03		2.2E+03		2.3E+06		1.6E+03	
SVOC	Acetophenone	98-86-2	D	7				2.00E-02	3.70E-01		1.1E+03		5.2E+04		1.4E+07		1.1E+03		1.1E+03		4.4E+04		3.3E+07		1.1E+03	
SVOC	Anthracene	120-12-7	D	7				2.00E-02	3.70E-01		1.0E+06		1.6E+06		2.9E+07		7.3E+05		1.0E+06		1.4E+06		6.7E+07		2.3E+05	
SVOC	Atrazine	1912-24-9		7				2.00E-02	3.70E-01								3.3E+02								7.1E+01	
SVOC	Benzaldehyde	100-52-7		7				2.30E-02	3.70E-01																	
SVOC	Benzo(a)anthracene	56-55-3	B2	7	1	6.00E-02	6.00E-02	1.90E-02	3.70E-01								8.0E+01	7.5E-04							2.0E+01	3.0E-03
SVOC	Benzo(a)pyrene	50-32-8	B2	7	1	1.30E-01	1.30E-01	2.00E-02	3.70E-01						1.9E+03	6.8E-05	8.0E+00	1.6E-02					1.5E+03	8.7E-05	2.0E+00	6.5E-02
SVOC	Benzo(b)fluoranthene	205-99-2	B2	7	1	2.60E-01	2.60E-01	2.20E-02	3.70E-01								8.0E+01	3.3E-03							2.0E+01	1.3E-02
SVOC	Benzo(g,h,i)perylene	191-24-2	D	7	2	5.70E-02	2.90E-01	6.00E-02	3.70E-01						3.5E+05	8.3E-07	7.0E+03	4.1E-05					8.0E+05	3.6E-07	2.5E+03	1.2E-04
SVOC	Benzo(k)fluoranthene	207-08-9	B2	7	2	6.50E-02	7.40E-02	2.00E-02	3.70E-01								8.0E+02	9.3E-05							2.0E+02	3.7E-04
SVOC	Biphenyl	92-52-4	D	7				2.30E-02	3.70E-01																	
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	7				1.90E-02	3.70E-01																	
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	7				2.00E-02	3.70E-01		4.4E+01		1.3E+01		1.2E+04		5.8E+01		8.3E+00		3.8E+00		9.4E+03		1.3E+01	
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	7	5	7.60E-02	7.30E-01	2.40E-02	6.80E-02						8.9E+05	8.2E-07	1.0E+04	7.3E-05					7.0E+05	1.0E-06	2.8E+03	2.6E-04
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	7				2.10E-02	3.70E-01																	
SVOC	Butylbenzylphthalate	85-68-7	C	7	1	1.50E-01	1.50E-01	1.90E-02	3.70E-01						2.1E+07	7.1E-09	3.1E+02	4.8E-04					4.7E+07	3.2E-09	3.1E+02	4.8E-04
SVOC	Caprolactam	105-60-2		7				2.30E-02	3.70E-01						2.9E+05		3.1E+05						6.7E+05		5.3E+04	
SVOC	Carbazole	86-74-8	B2	7				2.40E-02	3.70E-01								2.4E+03								5.3E+02	
SVOC	4-Chloro-3-methylphenol	59-50-7		7				2.00E-02	3.70E-01								1.5E+04								4.5E+03	
SVOC	4-Chloroaniline	106-47-8		7				6.70E-03	1.50E+00																	
SVOC	2-Chloronaphthalene	91-58-7		7				2.10E-02	3.70E-01								1.8E+05								5.6E+04	
SVOC	2-Chlorophenol	95-57-8		7				2.00E-02	3.70E-01								4.5E+03								1.4E+03	
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		7				2.10E-02	3.70E-01																	
SVOC	Chrysene	218-01-9	B2	7	1	1.10E-01	1.10E-01	1.90E-02	3.70E-01								8.0E+03	1.4E-05							2.0E+03	5.5E-05
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	7				2.30E-02	3.70E-01								8.0E+00								2.0E+00	
SVOC	Dibenzofuran	132-64-9	D	7				2.10E-02	3.70E-01																	
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	7				1.00E-02	2.30E+00						1.2E+03		3.0E+01						6.5E+03		6.6E+00	
SVOC	2,4-Dichlorophenol	120-83-2		7				1.80E-02	3.70E-01						2.3E+06		1.8E+03						5.1E+06		6.6E+02	
SVOC	Diethylphthalate	84-66-2	D	7				2.20E-02	3.70E-01						1.5E+06		7.4E+02						3.3E+06		7.4E+02	
SVOC	2,4-Dimethylphenol	105-67-9		7				3.50E-02	3.70E-01						2.1E+06		3.6E+04						4.7E+06		1.1E+04	
SVOC	Dimethylphthalate	131-11-3	D	7				2.10E-02	3.70E-01						1.5E+06		7.9E+02						3.3E+06		7.9E+02	

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TABLE 4-24
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN
RCRA FACILITY INVESTIGATION
DATA SUMMARY FOR AOI M-16 (SOIL)

Chem Group	Chemical	CASRN	Carc Class	No of Analyses	No of Detects	Min Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Soil Volatilization to Indoor Air Inhalation Criteria	Industrial Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Infinite Source Volatile Soil Inhalation Criteria	Industrial Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Industrial Particulate Soil Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Industrial Direct Contact Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria (mg/kg)	Ratio of Max Detect to Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria (mg/kg)	Ratio of Max Detect to Residential Direct Contact Criteria
SVOC	Di-n-butylphthalate	84-74-2	D	7				2.50E-02	3.70E-01						1.5E+06		7.6E+02						3.3E+06		7.6E+02	
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		7				8.00E-02	1.90E+00								2.6E+02								7.9E+01	
SVOC	2,4-Dinitrophenol	51-28-5		7				1.10E-01	1.90E+00																	
SVOC	2,4-Dinitrotoluene	121-14-2	B2	7				2.00E-02	3.70E-01						2.0E+04		2.2E+02						1.6E+04		4.8E+01	
SVOC	2,6-Dinitrotoluene	606-20-2	B2	7				2.00E-02	3.70E-01																	
SVOC	Di-n-octylphthalate	117-84-0		7				2.00E-02	3.70E-01								2.0E+04								6.9E+03	
SVOC	Fluoranthene	206-44-0	D	7	2	4.30E-02	1.30E-01	6.10E-02	3.70E-01		1.0E+06	1.3E-07	8.9E+05	1.5E-07	4.1E+06	3.2E-08	1.3E+05	1.0E-06	1.0E+06	1.3E-07	7.4E+05	1.8E-07	9.3E+06	1.4E-08	4.6E+04	2.8E-06
SVOC	Fluorene	86-73-7	D	7				2.20E-02	3.70E-01		1.0E+06		1.5E+05		4.1E+06		8.7E+04		5.8E+05		1.3E+05		9.3E+06		2.7E+04	
SVOC	Hexachlorobenzene	118-74-1	B2	7				2.00E-02	3.70E-01		2.2E+02		5.6E+01		8.5E+03		3.7E+01		4.1E+01		1.7E+01		6.8E+03		8.9E+00	
SVOC	Hexachlorobutadiene	87-68-3	C	7				1.90E-02	3.70E-01		3.5E+02		4.6E+02		1.8E+05		3.5E+02		1.3E+02		1.3E+02		1.4E+05		1.0E+02	
SVOC	Hexachlorocyclopentadiene	77-47-4	E	7				1.70E-02	3.70E-01		5.6E+01		6.0E+01		5.9E+03		7.2E+02		3.0E+01		5.0E+01		1.3E+04		7.2E+02	
SVOC	Hexachloroethane	67-72-1	C	7				2.00E-02	1.10E-01		7.9E+01		6.6E+02		1.0E+05		7.3E+02		4.0E+01		5.5E+02		2.3E+05		2.3E+02	
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	7	2	3.90E-02	2.10E-01	7.60E-02	3.70E-01								8.0E+01	2.6E-03							2.0E+01	1.1E-02
SVOC	Isophorone	78-59-1	C	7				2.10E-02	3.70E-01						8.2E+06		2.4E+03						1.2E+07		2.4E+03	
SVOC	2-Methylnaphthalene	91-57-6	ID	7				2.00E-02	3.70E-01								2.6E+04								8.1E+03	
SVOC	Methylphenol (total)	1319-77-3		7				1.70E-02	3.70E-01						2.9E+06		3.6E+04						6.7E+06		1.1E+04	
SVOC	Naphthalene	91-20-3	C	7				2.10E-02	3.70E-01		4.7E+02		3.5E+02		8.8E+03		5.2E+04		2.5E+02		3.0E+02		2.0E+05		1.6E+04	
SVOC	2-Nitroaniline	88-74-4		7				2.10E-02	1.90E+00																	
SVOC	3-Nitroaniline	99-09-2	C	7				1.30E-02	1.90E+00																	
SVOC	4-Nitroaniline	100-01-6	C	7				2.00E-02	1.90E+00																	
SVOC	Nitrobenzene	98-95-3	D	7				2.00E-02	3.70E-01		1.7E+02		6.4E+01		2.1E+04		3.4E+02		9.1E+01		5.4E+01		4.7E+04		1.0E+02	
SVOC	2-Nitrophenol	88-75-5		7				1.80E-02	3.70E-01								2.0E+03								6.3E+02	
SVOC	4-Nitrophenol	100-02-7		7				1.20E-01	1.90E+00																	
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	7				2.20E-02	3.70E-01								7.8E+03								1.7E+03	
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	7				2.10E-02	3.70E-01						2.0E+03		5.4E+00						1.6E+03		1.2E+00	
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	7				2.10E-02	3.70E-01																	
SVOC	Pentachlorophenol	87-86-5	B2	7				9.60E-02	3.80E+00						1.3E+06		3.2E+02						1.0E+05		9.0E+01	
SVOC	Phenanthrene	85-01-8	D	7				2.20E-02	3.70E-01		5.1E+03		1.9E+02		1.9E+07		5.2E+03		2.8E+03		1.6E+02		6.7E+03		1.6E+03	
SVOC	Phenol	108-95-2	ID	7				2.00E-02	3.70E-01						1.2E+07		1.2E+04						4.0E+07		1.2E+04	
SVOC	Pyrene	129-00-0	D	7	2	8.10E-02	1.10E-01	5.50E-02	3.70E-01		1.0E+06	1.1E-07	8.9E+05	1.4E-07	2.9E+06	3.8E-08	8.4E+04	1.3E-06	1.0E+06	1.1E-07	6.5E+05	1.7E-07	6.7E+06	1.6E-08	2.9E+04	3.8E-06
SVOC	2,4,5-Trichlorophenol	95-95-4		7				2.30E-02	3.70E-01						1.0E+07		7.3E+04						2.3E+07		2.3E+04	
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	7				1.90E-02	3.70E-01						1.3E+06		3.3E+03						1.0E+06		7.1E+02	
P/PCB	PCBs (total)	1336-36-3	B2	7	4	5.12E-02	4.79E-01	2.20E-02	3.70E-02		1.6E+04	3.0E-05	3.1E+02	5.5E-04	6.5E+03	7.4E-05	1.6E+01	3.0E-02	3.0E+03	1.6E-04	2.4E+02	2.0E-03	5.2E+03	9.2E-05	4.0E+00	1.2E-01
INORG	Antimony	7440-36-0		7	4	2.24E-01	6.68E-01	2.61E-01	3.10E-01						5.9E+03	1.1E-04	6.7E+02	1.0E-03					1.3E+04	5.1E-05	1.8E+02	3.7E-03
INORG	Arsenic	7440-38-2	A	7	7	2.81E+00	8.99E+00			1.3E+01					9.1E+02		3.7E+01						7.2E+02		7.6E+00	
INORG	Barium	7440-39-3	D	7	7	8.60E+00	9.41E+02			1.1E+02					1.5E+05	5.5E-03	1.3E+05	6.4E-03					3.3E+05	2.5E-03	3.7E+04	2.2E-02
INORG	Beryllium	7440-41-7	B1	7	5	1.86E-01	1.62E+00	2.49E-02	1.13E-01	1.5E+00					5.9E+02	1.5E-04	1.6E+03	5.6E-05					1.3E+03	6.9E-05	4.1E+02	2.2E-04
INORG	Cadmium	7440-43-9	B1	7	7	8.94E-02	4.32E-01			1.2E+00					2.2E+03		2.1E+03						1.7E+03		5.5E+02	
INORG	Chromium (total)	7440-47-3		7	7	4.28E+00	1.76E+01			4.9E+01					2.4E+02		9.2E+03						2.6E+02		2.5E+03	
INORG	Cobalt	7440-48-4	B1	7	7	2.23E+00	1.61E+01			1.7E+01					5.9E+03		9.0E+03						1.3E+04		2.6E+03	
INORG	Copper	7440-50-8	D	7	7	8.16E+00	2.57E+01			3.2E+01					5.9E+04		7.3E+04						1.3E+05		2.0E+04	
INORG	Lead	7439-92-1	B2	7	7	3.24E+00	7.49E+01			4.9E+01					4.4E+04	5.8E-04	9.0E+02	2.9E-02					1.0E+05	2.6E-04	4.0E+02	6.4E-02
INORG	Manganese	7439-96-5	D	7	7	1.67E+02	1.13E+03			5.1E+02					1.5E+03	4.1E-01	9.0E+04	6.9E-03					3.3E+03	1.9E-01	2.5E+04	2.5E-02
INORG	Mercury	7439-97-6	D	7	3	1.30E-02	1.26E-01	9.10E-03	3.72E-02	1.3E-01	8.9E+01		6.2E+01		8.8E+03		5.8E+02		4.8E+01		5.2E+01		2.0E+04		1.6E+02	
INORG	Nickel	7440-02-0	A	7	7	5.16E+00	3.13E+01			3.0E+01					1.6E+04	7.5E-05	1.5E+05	8.0E-06					1.3E+04	9.2E-05	4.0E+04	3.0E-05
INORG	Selenium	7782-49-2	D	7	1	3.97E-01	3.97E-01	1.68E-01	5.65E-01	4.1E-01					5.9E+04		9.6E+03						1.3E+05		2.6E+03	
INORG	Silver	7440-22-4	D	7				4.24E-02	5.65E-01						2.9E+03		9.0E+03						6.7E+03		2.5E+03	
INORG	Thallium	7440-28-0		7	4	3.27E-01	5.58E-01	1.09E+00	1.13E+00								1.3E+02	4.3E-03							3.5E+01	1.6E-02
INORG	Vanadium	7440-62-2		7	7	7.57E+00	2.59E+01			3.3E+01							5.5E+03								7.5E+02	
INORG	Zinc	7440-66-6	D	7	7	2.74E+01	6.06E+01			1.9E+02							6.3E+05								1.7E+05	

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-2

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	4	1	6.95E-03	6.95E-03	5.10E-04	1.00E-02	1.0E+06	7.0E-09	3.1E+04	2.2E-07	7.3E-01	9.5E-03
Shallow	VOC	Benzene	71-43-2	T	A	4				1.60E-04	1.00E-03	3.5E+03		1.1E+01		5.0E-03	
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	4	1	2.15E-04	2.15E-04	1.70E-04	1.00E-03	3.7E+01	5.8E-06	1.4E+01	1.5E-05	1.0E-01	2.2E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	4				1.80E-04	1.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	3				2.00E-04	1.00E-03	9.8E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	4				4.10E-04	1.00E-02	2.4E+05		2.4E+05		1.3E+01	
Shallow	VOC	Carbon Disulfide	75-15-0	T		4				2.00E-04	1.00E-03	5.5E+02		1.2E+03		8.0E-01	
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	4				1.20E-04	1.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	4				1.40E-04	1.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		4				2.60E-04	1.00E-03	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	4	2	2.00E-04	6.55E-04	1.40E-04	1.50E-04	1.8E+02	3.6E-06	1.5E+02	4.4E-06	1.0E-01	6.6E-03
Shallow	VOC	Chloromethane	74-87-3	T	D	4				1.30E-04	1.00E-03	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	4				1.20E-04	1.00E-03	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	4				1.30E-04	1.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	4				6.20E-04	2.00E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	4				2.60E-04	1.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	4				2.20E-04	1.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	4				1.10E-04	1.00E-03	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	4				1.50E-04	1.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	4				1.70E-04	1.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		4				2.60E-04	2.00E-03	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	4				1.60E-04	1.00E-03	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	4				2.10E-04	1.00E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	4				2.40E-04	1.00E-03	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4				2.20E-04	5.00E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		4				1.50E-04	5.00E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	4				1.70E-04	1.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	4				2.70E-04	1.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	1.00E-03	1.7E+02		1.7E+02		7.0E-01	
Shallow	VOC	2-Hexanone	591-78-6	T		4				4.60E-04	1.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		4				4.10E-04	1.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		4	1	7.15E-03	7.15E-03	1.30E-04	5.00E-03	4.7E+04	1.5E-07	6.1E+02	1.2E-05	2.4E-01	3.0E-02
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	3				2.30E-04	1.00E-02	2.0E+04		1.3E+04		1.8E+00	
Shallow	VOC	Methylcyclohexane	108-87-2	T		4				1.50E-04	1.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	4				2.90E-04	1.00E-03	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		4				1.50E-04	1.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	4				2.50E-04	1.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	4				2.30E-04	1.00E-03	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	4	1	1.90E-04	1.90E-04	1.80E-04	1.00E-03	5.3E+02	3.6E-07	5.3E+02	3.6E-07	1.0E+00	1.9E-04
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	4				1.70E-04	1.00E-03	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	4	2	2.90E-03	3.00E-03	1.50E-04	1.00E-03	1.3E+03	2.3E-06	1.3E+03	2.3E-06	2.0E-01	1.5E-02
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	4				3.00E-04	1.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	4				1.40E-04	1.00E-03	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		4				2.80E-04	1.00E-03	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		4				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	5	3	1.40E-02	2.30E-02	1.50E-04	3.60E-04	1.3E+01	1.8E-03	1.0E+00	2.3E-02	2.0E-03	**1.2E+01**
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	4				3.30E-04	1.00E-03	1.9E+02		1.9E+02		1.0E+01	
Shallow	SVOC	Acenaphthene	83-32-9	T		4				8.00E-04	5.00E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	4				7.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	4				2.60E-03	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	4				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		4				2.50E-03	5.00E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		4				1.00E-03	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	4				7.00E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	4				7.30E-04	5.00E-03			2.0E-03		5.0E-03	

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TABLE 4-2
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	4				9.40E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	4				8.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	4				8.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	4				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	4				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	4				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	4	3	2.03E-03	5.50E-03	2.70E-03	5.00E-03			3.2E-01	1.7E-02	6.0E-03	9.2E-01
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	4				8.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	4				8.80E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		4				2.50E-03	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	4				8.20E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		4				9.90E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		4				9.60E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		4				8.50E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		4				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		4				7.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	4				7.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	4				7.90E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	4				1.10E-03	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	4				9.30E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		4				8.50E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	4				6.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		4				8.50E-04	5.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	4				7.60E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	4				6.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		4				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		4				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	4				7.90E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	4				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		4				1.10E-03	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	4				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	4				1.00E-03	5.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	4				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	4				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	4				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	4				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	4				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	4				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	4				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		4				1.30E-03	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	4				7.50E-04	5.00E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		4				7.00E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	4				7.10E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	4				1.30E-03	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	4				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		4				2.10E-03	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		4				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	4				1.40E-03	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	4				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	4				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	4				2.40E-03	5.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	4				8.20E-04	5.00E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	4				1.40E-03	5.00E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	4				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		4				1.20E-03	5.00E-03			1.7E+02		7.3E-01	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	4				1.70E-03	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	4.5E-02		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	4				8.20E-05	4.00E-04	4.5E-02		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		3				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Antimony	7440-36-0	T		4				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Arsenic	7440-38-2	D	A	3	1	8.30E-03	8.30E-03	3.90E-03	1.00E-02			4.3E+00	1.9E-03	5.0E-02	1.7E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	4	1	8.80E-03	8.80E-03	2.10E-03	1.00E-02			4.3E+00	2.0E-03	5.0E-02	1.8E-01
Shallow	INORG	Barium	7440-39-3	D	D	3	3	4.58E-02	2.12E-01					1.4E+04	1.5E-05	2.0E+00	1.1E-01
Shallow	INORG	Barium	7440-39-3	T	D	4	4	3.60E-02	2.15E-01					1.4E+04	1.5E-05	2.0E+00	1.1E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	3				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	3				2.80E-04	5.00E-03			1.9E+02		5.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	4				2.80E-04	5.00E-03			1.9E+02		5.0E-03	
Shallow	INORG	Chromium (total)	7440-47-3	D		3				1.40E-03	1.00E-02			4.6E+02		1.0E-01	
Shallow	INORG	Chromium (total)	7440-47-3	T		4	2	1.30E-03	1.60E-03	1.40E-03	1.00E-02			4.6E+02	3.5E-06	1.0E-01	1.6E-02
Shallow	INORG	Cobalt	7440-48-4	D	B1	3	1	2.60E-03	2.60E-03	1.30E-03	2.00E-02			2.4E+03	1.1E-06	4.0E-02	6.5E-02
Shallow	INORG	Cobalt	7440-48-4	T	B1	4	2	9.75E-04	2.65E-03	7.40E-04	2.00E-02			2.4E+03	1.1E-06	4.0E-02	6.6E-02
Shallow	INORG	Copper	7440-50-8	D	D	3				4.20E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Copper	7440-50-8	T	D	4				1.70E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Lead	7439-92-1	D	B2	3				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	4				1.60E-03	3.00E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	3	3	5.66E-02	1.05E+00					9.1E+03	1.2E-04	8.6E-01	**1.2E+00**
Shallow	INORG	Manganese	7439-96-5	T	D	4	3	9.65E-02	1.09E+00	6.80E-04	6.80E-04			9.1E+03	1.2E-04	8.6E-01	**1.3E+00**
Shallow	INORG	Mercury	7439-97-6	D	D	3				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	4				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Nickel	7440-02-0	D	A	3	1	3.10E-03	3.10E-03	2.20E-03	2.00E-02			7.4E+04	4.2E-08	1.0E-01	3.1E-02
Shallow	INORG	Nickel	7440-02-0	T	A	4	1	4.70E-03	4.70E-03	2.20E-03	2.00E-02			7.4E+04	6.4E-08	1.0E-01	4.7E-02
Shallow	INORG	Selenium	7782-49-2	D	D	3				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	3				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	4				9.80E-04	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		3				1.80E-05	1.00E-02			1.3E+01		2.0E-03	
Shallow	INORG	Thallium	7440-28-0	T		4				1.80E-05	1.00E-02			1.3E+01		2.0E-03	
Shallow	INORG	Vanadium	7440-62-2	D		3				8.20E-04	1.00E-02			9.7E+02		4.5E-03	
Shallow	INORG	Vanadium	7440-62-2	T		4				6.70E-04	1.00E-02			9.7E+02		4.5E-03	
Shallow	INORG	Zinc	7440-66-6	D	D	3	2	1.04E-02	1.56E-02	2.00E-02	2.00E-02			1.1E+05	1.4E-07	2.4E+00	6.5E-03
Shallow	INORG	Zinc	7440-66-6	T	D	4	1	1.35E-02	1.35E-02	1.20E-02	2.00E-02			1.1E+05	1.2E-07	2.4E+00	5.6E-03

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-26
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 - LNAPL AREA NO. 5

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
VOC	Acetone	67-64-1	ID	1					5.40E-02	5.40E-02
VOC	Benzene	71-43-2	A	1	1	1.40E-01	1.40E-01	1.40E-01		
VOC	Bromodichloromethane	75-27-4	B2	1					9.20E-03	9.20E-03
VOC	Bromoform	75-25-2	B2	1					1.20E-02	1.20E-02
VOC	Bromomethane	74-83-9	D	1					4.70E-02	4.70E-02
VOC	2-Butanone	78-93-3	ID	1					5.80E-02	5.80E-02
VOC	Carbon Disulfide	75-15-0		1					5.00E-03	5.00E-03
VOC	Carbon Tetrachloride	56-23-5	B2	1					1.60E-02	1.60E-02
VOC	Chlorobenzene	108-90-7	D	1					6.50E-03	6.50E-03
VOC	Chloroethane	75-00-3		1					5.30E-02	5.30E-02
VOC	Chloroform	67-66-3	B2	1					1.30E-02	1.30E-02
VOC	Chloromethane	74-87-3	D	1					1.60E-02	1.60E-02
VOC	Cumene	98-82-8	D	1	1	6.10E-01	6.10E-01	6.10E-01		
VOC	Cyclohexane	110-82-7	ID	1	1	7.30E-01	7.30E-01	7.30E-01		
VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	1					2.60E-02	2.60E-02
VOC	Dibromochloromethane	124-48-1	C	1					1.20E-02	1.20E-02
VOC	1,2-Dibromoethane	106-93-4	B2	1					8.50E-03	8.50E-03
VOC	1,2-Dichlorobenzene	95-50-1	D	1					7.70E-03	7.70E-03
VOC	1,3-Dichlorobenzene	541-73-1	D	1					9.30E-03	9.30E-03
VOC	1,4-Dichlorobenzene	106-46-7	C	1					9.60E-03	9.60E-03
VOC	Dichlorodifluoromethane	75-71-8		1					2.60E-02	2.60E-02
VOC	1,1-Dichloroethane	75-34-3	C	1					1.20E-02	1.20E-02
VOC	1,2-Dichloroethane	107-06-2	B2	1					1.50E-02	1.50E-02
VOC	1,1-Dichloroethene	75-35-4	C	1					8.80E-03	8.80E-03
VOC	cis-1,2-Dichloroethene	156-59-2	D	1	1	3.00E-01	3.00E-01	3.00E-01		
VOC	trans-1,2-Dichloroethene	156-60-5	D	1					1.10E-02	1.10E-02
VOC	1,2-Dichloropropane	78-87-5	B2	1					1.50E-02	1.50E-02

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 - LNAPL AREA NO. 5

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
VOC	1,3-Dichloropropene (total)	542-75-6	B2	1					8.60E-03	8.60E-03
VOC	Ethyl Benzene	100-41-4	D	1	1	7.10E+00	7.10E+00	7.10E+00		
VOC	2-Hexanone	591-78-6		1					1.80E-02	1.80E-02
VOC	Methyl Acetate	79-20-9		1	1	4.80E-01	4.80E-01	4.80E-01		
VOC	Methyl tert-butyl ether	1634-04-4		1					9.20E-03	9.20E-03
VOC	4-Methyl-2-pentanone	108-10-1	ID	1					2.70E-02	2.70E-02
VOC	Methylcyclohexane	108-87-2		1	1	1.90E+00	1.90E+00	1.90E+00		
VOC	Methylene Chloride	75-09-2	B2	1					1.80E-02	1.80E-02
VOC	Styrene	100-42-5		1					8.10E-03	8.10E-03
VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	1					1.10E-02	1.10E-02
VOC	Tetrachloroethene	127-18-4	C-B2	1	1	2.20E-01	2.20E-01	2.20E-01		
VOC	Toluene	108-88-3	D	1	1	1.20E+01	1.20E+01	1.20E+01		
VOC	1,2,4-Trichlorobenzene	120-82-1	D	1					1.20E-02	1.20E-02
VOC	1,1,1-Trichloroethane	71-55-6	D	1					1.00E-02	1.00E-02
VOC	1,1,2-Trichloroethane	79-00-5	C	1					8.80E-03	8.80E-03
VOC	Trichloroethene	79-01-6	C-B2	1	1	5.30E-01	5.30E-01	5.30E-01		
VOC	Trichlorofluoromethane	75-69-4		1					9.90E-03	9.90E-03
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		1					3.20E-02	3.20E-02
VOC	Vinyl Chloride	75-01-4	A	1					2.00E-02	2.00E-02
VOC	Xylenes (total)	1330-20-7	ID	1	1	3.90E+01	3.90E+01	3.90E+01		
SVOC	Acenaphthene	83-32-9		1					5.70E+01	5.70E+01
SVOC	Acenaphthylene	208-96-8	D	1					5.70E+01	5.70E+01
SVOC	Acetophenone	98-86-2	D	1					5.40E+01	5.40E+01
SVOC	Anthracene	120-12-7	D	1					5.40E+01	5.40E+01
SVOC	Atrazine	1912-24-9		1					5.40E+01	5.40E+01
SVOC	Benzaldehyde	100-52-7		1					6.30E+01	6.30E+01
SVOC	Benzo(a)anthracene	56-55-3	B2	1					5.10E+01	5.10E+01

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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 - LNAPL AREA NO. 5

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
SVOC	Benzo(a)pyrene	50-32-8	B2	1					5.40E+01	5.40E+01
SVOC	Benzo(b)fluoranthene	205-99-2	B2	1					6.00E+01	6.00E+01
SVOC	Benzo(g,h,i)perylene	191-24-2	D	1					6.60E+01	6.60E+01
SVOC	Benzo(k)fluoranthene	207-08-9	B2	1					5.40E+01	5.40E+01
SVOC	Biphenyl	92-52-4	D	1					6.30E+01	6.30E+01
SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	1					5.10E+01	5.10E+01
SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	1					5.40E+01	5.40E+01
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1	1	5.30E+02	5.30E+02	5.30E+02		
SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	1					5.70E+01	5.70E+01
SVOC	Butylbenzylphthalate	85-68-7	C	1	1	4.00E+02	4.00E+02	4.00E+02		
SVOC	Caprolactam	105-60-2		1					6.30E+01	6.30E+01
SVOC	Carbazole	86-74-8	B2	1					6.60E+01	6.60E+01
SVOC	4-Chloro-3-methylphenol	59-50-7		1					5.40E+01	5.40E+01
SVOC	4-Chloroaniline	106-47-8		1					1.80E+01	1.80E+01
SVOC	2-Chloronaphthalene	91-58-7		1					5.70E+01	5.70E+01
SVOC	2-Chlorophenol	95-57-8		1					5.40E+01	5.40E+01
SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		1					5.70E+01	5.70E+01
SVOC	Chrysene	218-01-9	B2	1					5.10E+01	5.10E+01
SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1					6.30E+01	6.30E+01
SVOC	Dibenzofuran	132-64-9	D	1					5.70E+01	5.70E+01
SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	1					2.80E+01	2.80E+01
SVOC	2,4-Dichlorophenol	120-83-2		1					4.80E+01	4.80E+01
SVOC	Diethylphthalate	84-66-2	D	1					6.00E+01	6.00E+01
SVOC	2,4-Dimethylphenol	105-67-9		1					9.60E+01	9.60E+01
SVOC	Dimethylphthalate	131-11-3	D	1					5.70E+01	5.70E+01
SVOC	Di-n-butylphthalate	84-74-2	D	1					6.90E+01	6.90E+01
SVOC	4,6-Dinitro-2-methylphenol	534-52-1		1					2.20E+02	2.20E+02

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 - LNAPL AREA NO. 5

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
SVOC	2,4-Dinitrophenol	51-28-5		1					3.00E+02	3.00E+02
SVOC	2,4-Dinitrotoluene	121-14-2	B2						5.40E+01	5.40E+01
SVOC	2,6-Dinitrotoluene	606-20-2	B2	1					5.40E+01	5.40E+01
SVOC	Di-n-octylphthalate	117-84-0		1					5.40E+01	5.40E+01
SVOC	Fluoranthene	206-44-0	D	1					6.90E+01	6.90E+01
SVOC	Fluorene	86-73-7	D	1	1	1.40E+02	1.40E+02	1.40E+02		
SVOC	Hexachlorobenzene	118-74-1	B2	1					5.40E+01	5.40E+01
SVOC	Hexachlorobutadiene	87-68-3	C	1					5.10E+01	5.10E+01
SVOC	Hexachlorocyclopentadiene	77-47-4	E	1					4.50E+01	4.50E+01
SVOC	Hexachloroethane	67-72-1	C	1					5.40E+01	5.40E+01
SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1					6.00E+01	6.00E+01
SVOC	Isophorone	78-59-1	C	1					5.70E+01	5.70E+01
SVOC	2-Methylnaphthalene	91-57-6	ID	1					5.40E+01	5.40E+01
SVOC	Methylphenol (total)	1319-77-3		1					4.50E+01	4.50E+01
SVOC	Naphthalene	91-20-3	C	1					5.70E+01	5.70E+01
SVOC	2-Nitroaniline	88-74-4		1					5.70E+01	5.70E+01
SVOC	3-Nitroaniline	99-09-2	C	1					3.60E+01	3.60E+01
SVOC	4-Nitroaniline	100-01-6	C	1					5.40E+01	5.40E+01
SVOC	Nitrobenzene	98-95-3	D	1					5.40E+01	5.40E+01
SVOC	2-Nitrophenol	88-75-5		1					4.80E+01	4.80E+01
SVOC	4-Nitrophenol	100-02-7		1					3.30E+02	3.30E+02
SVOC	N-Nitrosodiphenylamine	86-30-6	B2	1					6.00E+01	6.00E+01
SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	1					5.70E+01	5.70E+01
SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	1					5.70E+01	5.70E+01
SVOC	Pentachlorophenol	87-86-5	B2	1					2.60E+02	2.60E+02
SVOC	Phenanthrene	85-01-8	D	1	1	2.50E+02	2.50E+02	2.50E+02		
SVOC	Phenol	108-95-2	ID	1					5.40E+01	5.40E+01

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-16 - LNAPL AREA NO. 5

Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Min Detected (mg/kg)	Mean Detected (mg/kg)	Max Detected (mg/kg)	Min QL (mg/kg)	Max QL (mg/kg)
SVOC	Pyrene	129-00-0	D	1					5.10E+01	5.10E+01
SVOC	2,4,5-Trichlorophenol	95-95-4		1					6.30E+01	6.30E+01
SVOC	2,4,6-Trichlorophenol	88-06-2	B2	1					5.10E+01	5.10E+01
P/PCB	PCBs (total)	1336-36-3	B2	1	1	8.32E+01	8.30E+01	8.32E+01		
INORG	Antimony	7440-36-0		1	1	2.70E-01	2.70E-01	2.70E-01		
INORG	Arsenic	7440-38-2	A	1	1	1.11E+01	1.10E+01	1.11E+01		
INORG	Barium	7440-39-3	D	1					6.60E-02	6.60E-02
INORG	Beryllium	7440-41-7	B1	1					6.80E-02	6.80E-02
INORG	Cadmium	7440-43-9	B1	1	1	8.90E-02	8.90E-02	8.90E-02		
INORG	Chromium (total)	7440-47-3		1	1	2.90E+00	2.90E+00	2.90E+00		
INORG	Cobalt	7440-48-4	B1	1	1	1.90E-01	1.90E-01	1.90E-01		
INORG	Copper	7440-50-8	D	1	1	4.10E+00	4.10E+00	4.10E+00		
INORG	Lead	7439-92-1	B2	1	1	1.40E+01	1.40E+01	1.40E+01		
INORG	Manganese	7439-96-5	D	1					7.10E-02	7.10E-02
INORG	Mercury	7439-97-6	D	1					1.60E-02	1.60E-02
INORG	Nickel	7440-02-0	A	1	1	1.30E+00	1.30E+00	1.30E+00		
INORG	Selenium	7782-49-2	D	1					4.30E-01	4.30E-01
INORG	Silver	7440-22-4	D	1					1.00E-01	1.00E-01
INORG	Thallium	7440-28-0		1					5.80E-01	5.80E-01
INORG	Vanadium	7440-62-2		1	1	3.10E+00	3.10E+00	3.10E+00		
INORG	Zinc	7440-66-6	D	1	1	2.79E+01	2.80E+01	2.79E+01		

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Notes:
Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 3-7.2

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-25 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	1				6.60E-04	6.60E-04	1.0E+06		3.1E+04		7.3E-01	
Shallow	VOC	Benzene	71-43-2	T	A	1				2.00E-04	2.00E-04	3.5E+03		1.1E+01		5.0E-03	
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	1				2.00E-04	2.00E-04	3.7E+01		1.4E+01		1.0E-01	
Shallow	VOC	Bromoform	75-25-2	T	B2	1				3.20E-04	3.20E-04	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	1				1.60E-04	1.60E-04	9.8E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	1				3.60E-04	3.60E-04	2.4E+05		2.4E+05		1.3E+01	
Shallow	VOC	Carbon Disulfide	75-15-0	T		1	1	2.03E-04	2.03E-04			5.5E+02	3.7E-07	1.2E+03	1.7E-07	8.0E-01	2.5E-04
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	1				1.80E-04	1.80E-04	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	1				1.60E-04	1.60E-04	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		1				2.20E-04	2.20E-04	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	1				2.10E-04	2.10E-04	1.8E+02		1.5E+02		1.0E-01	
Shallow	VOC	Chloromethane	74-87-3	T	D	1				2.60E-04	2.60E-04	4.5E+01		4.9E+02		2.6E-01	
Shallow	VOC	Cumene	98-82-8	T	D	1				1.50E-04	1.50E-04	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	1				3.40E-04	3.40E-04						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	1				5.30E-04	5.30E-04	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	1				2.50E-04	2.50E-04	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	1				2.20E-04	2.20E-04	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	1				1.50E-04	1.50E-04	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	1				2.00E-04	2.00E-04			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	1				1.60E-04	1.60E-04	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		1				2.30E-04	2.30E-04	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	1				2.60E-04	2.60E-04	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	1				2.20E-04	2.20E-04	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	1				2.20E-04	2.20E-04	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	1				2.50E-04	2.50E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		1				2.40E-04	2.40E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	1				1.80E-04	1.80E-04	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	1				1.70E-04	1.70E-04	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Methyl Acetate	79-20-9	T		1				6.80E-04	6.80E-04						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		1				2.10E-04	2.10E-04	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	Methylcyclohexane	108-87-2	T		1				2.40E-04	2.40E-04						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	1				2.80E-04	2.80E-04	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	1				2.30E-04	2.30E-04	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	1				1.20E-04	1.20E-04	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	1				1.70E-04	1.70E-04	5.3E+02		5.3E+02		1.0E+00	
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	1				1.50E-04	1.50E-04	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	1				1.80E-04	1.80E-04	1.3E+03		1.3E+03		2.0E-01	
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	1				2.10E-04	2.10E-04	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	1				2.20E-04	2.20E-04	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		1				2.50E-04	2.50E-04	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		1				2.30E-04	2.30E-04	1.7E+02		1.7E+02		1.7E+02	
Shallow	SVOC	Acenaphthene	83-32-9	T		1				6.90E-04	6.90E-04	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	1				4.10E-04	4.10E-04	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	1				6.50E-04	6.50E-04	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	1				5.90E-04	5.90E-04	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		1				3.50E-04	3.50E-04			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		1				5.90E-04	5.90E-04						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	1				6.80E-04	6.80E-04			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	1				5.30E-04	5.30E-04			2.0E-03		5.0E-03	
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	1				7.10E-04	7.10E-04			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	1				7.00E-04	7.00E-04			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	1				6.40E-04	6.40E-04			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	1				6.50E-04	6.50E-04						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	1				1.00E-03	1.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	1				1.70E-03	1.70E-03	2.1E+02		5.7E+00		2.0E-03	

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TABLE 4-2
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-25 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	1				2.00E-04	2.00E-04			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	1				7.80E-04	7.80E-04						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	1				2.30E-04	2.30E-04			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		1	1	8.13E-04	8.13E-04					3.9E+05	2.1E-09	5.8E+00	1.4E-04
Shallow	SVOC	Carbazole	86-74-8	T	B2	1				6.10E-04	6.10E-04			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		1				5.50E-04	5.50E-04			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		1				9.00E-04	9.00E-04						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		1				7.30E-04	7.30E-04			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		1				1.30E-03	1.30E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		1				6.60E-04	6.60E-04						
Shallow	SVOC	Chrysene	218-01-9	T	B2	1				6.70E-04	6.70E-04			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	1				6.80E-04	6.80E-04			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	1				6.60E-04	6.60E-04						
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		1				7.00E-04	7.00E-04			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	1				2.50E-04	2.50E-04			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		1				1.00E-03	1.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	1				2.00E-04	2.00E-04			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	1				3.70E-04	3.70E-04			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		1				2.10E-03	2.10E-03			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		1				3.30E-03	3.30E-03						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	1				4.60E-04	4.60E-04			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	1				7.10E-04	7.10E-04						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		1				6.90E-04	6.90E-04			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	1				7.10E-04	7.10E-04	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	1				7.50E-04	7.50E-04	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	1				7.70E-04	7.70E-04	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	1				1.50E-03	1.50E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	1				1.10E-03	1.10E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	1				1.60E-03	1.60E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	1				6.90E-04	6.90E-04			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	1				8.60E-04	8.60E-04			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	1				9.30E-04	9.30E-04			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		1				9.00E-04	9.00E-04			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	1				1.30E-03	1.30E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		1				4.90E-04	4.90E-04						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	1				4.80E-04	4.80E-04						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	1				5.90E-04	5.90E-04						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	1				1.30E-03	1.30E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		1				9.50E-04	9.50E-04			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		1				3.50E-03	3.50E-03						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	1				6.40E-04	6.40E-04			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	1				1.10E-03	1.10E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	1				1.80E-03	1.80E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	1				2.60E-03	2.60E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	1				6.80E-04	6.80E-04	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	1				1.30E-03	1.30E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	1				6.30E-04	6.30E-04	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		1				8.60E-04	8.60E-04			1.7E+02		7.3E-01	
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	1				7.10E-04	7.10E-04			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	1				8.20E-05	8.20E-05	4.5E-02		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	T		1				3.10E-03	3.10E-03			6.8E+01		6.0E-03	
Shallow	INORG	Arsenic	7440-38-2	T	A	1	1	4.80E-03	4.80E-03					4.3E+00	1.1E-03	5.0E-02	9.6E-02
Shallow	INORG	Barium	7440-39-3	T	D	1	1	8.95E-02	8.95E-02					1.4E+04	6.4E-06	2.0E+00	4.5E-02
Shallow	INORG	Beryllium	7440-41-7	T	B1	1				4.70E-04	4.70E-04			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	1				3.60E-04	3.60E-04			1.9E+02		5.0E-03	

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TABLE 3.4-2
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-25 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	INORG	Chromium (total)	7440-47-3	T		1	1	1.05E-03	1.05E-03					4.6E+02	2.3E-06	1.0E-01	1.1E-02
Shallow	INORG	Cobalt	7440-48-4	T	B1	1	1	3.20E-03	3.20E-03					2.4E+03	1.3E-06	4.0E-02	8.0E-02
Shallow	INORG	Copper	7440-50-8	T	D	1				1.80E-03	1.80E-03			7.4E+03		1.4E+00	
Shallow	INORG	Lead	7439-92-1	T	B2	1				2.30E-03	2.30E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	T	D	1	1	5.54E-01	5.54E-01					9.1E+03	6.1E-05	8.6E-01	6.4E-01
Shallow	INORG	Mercury	7439-97-6	T	D	1				6.70E-05	6.70E-05	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Nickel	7440-02-0	T	A	1	1	7.50E-03	7.50E-03					7.4E+04	1.0E-07	1.0E-01	7.5E-02
Shallow	INORG	Selenium	7782-49-2	T	D	1				3.90E-03	3.90E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	T	D	1				1.10E-03	1.10E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	T		1	1	1.01E-04	1.01E-04					1.3E+01	7.8E-06	2.0E-03	5.1E-02
Shallow	INORG	Vanadium	7440-62-2	T		1				9.60E-04	9.60E-04			9.7E+02		4.5E-03	
Shallow	INORG	Zinc	7440-66-6	T	D	1				1.30E-02	1.30E-02			1.1E+05		2.4E+00	

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4.3.3-7(B)
GENERAL MOTORS CORPORATION
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RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI F-15 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	2				9.40E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	2				8.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	2				8.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	2				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	2				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	2				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	2				2.70E-03	5.00E-03			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	2				8.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	2				8.80E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		2				2.50E-03	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	2				8.20E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		2				9.90E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		2				9.60E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		2				8.50E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		2				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		2				7.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	2				7.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	2				7.90E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	2				1.10E-03	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	2				9.30E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		2				8.50E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	2				6.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		2				8.50E-04	5.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	2				7.60E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	2				6.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		2				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		2				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	2				7.90E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	2				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		2				1.10E-03	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	2				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	2				1.00E-03	5.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	2				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	2				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	2				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	2				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	2				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	2				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	2				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		2				1.30E-03	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	2				7.50E-04	5.00E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		2				7.00E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	2				7.10E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	2				1.30E-03	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	2				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		2				2.10E-03	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		2				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	2				1.40E-03	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	2				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	2				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	2				2.40E-03	5.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	2				8.20E-04	5.00E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	2				1.40E-03	5.00E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	2				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		2				1.20E-03	5.00E-03			1.7E+02		7.3E-01	

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TABLE 3.4.3.3
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI F-15 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	2				1.70E-03	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	2				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		2				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Antimony	7440-36-0	T		2				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Arsenic	7440-38-2	D	A	2				3.90E-03	1.00E-02			4.3E+00		5.0E-02	
Shallow	INORG	Arsenic	7440-38-2	T	A	2				3.90E-03	1.00E-02			4.3E+00		5.0E-02	
Shallow	INORG	Barium	7440-39-3	D	D	2	2	1.78E-02	2.14E-02					1.4E+04	1.5E-06	2.0E+00	1.1E-02
Shallow	INORG	Barium	7440-39-3	T	D	2	2	1.81E-02	2.15E-02					1.4E+04	1.5E-06	2.0E+00	1.1E-02
Shallow	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	2				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	2				2.80E-04	5.00E-03			1.9E+02		5.0E-03	
Shallow	INORG	Cadmium	7440-43-9	T	B1	2	1	4.10E-04	4.10E-04	2.80E-04	5.00E-03			1.9E+02	2.2E-06	5.0E-03	8.2E-02
Shallow	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.00E-02			4.6E+02		1.0E-01	
Shallow	INORG	Chromium (total)	7440-47-3	T		2				1.40E-03	1.00E-02			4.6E+02		1.0E-01	
Shallow	INORG	Cobalt	7440-48-4	D	B1	2				1.30E-03	2.00E-02			2.4E+03		4.0E-02	
Shallow	INORG	Cobalt	7440-48-4	T	B1	2	2	1.60E-03	1.70E-03					2.4E+03	7.1E-07	4.0E-02	4.3E-02
Shallow	INORG	Copper	7440-50-8	D	D	2				4.20E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Copper	7440-50-8	T	D	2				4.20E-03	5.00E-03			7.4E+03		1.4E+00	
Shallow	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	2				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	2	2	3.99E-01	6.33E-01					9.1E+03	7.0E-05	8.6E-01	7.4E-01
Shallow	INORG	Manganese	7439-96-5	T	D	2	2	3.93E-01	6.57E-01					9.1E+03	7.2E-05	8.6E-01	7.6E-01
Shallow	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Mercury	7439-97-6	T	D	2				6.90E-05	2.00E-04	5.6E-02		5.6E-02		2.0E-03	
Shallow	INORG	Nickel	7440-02-0	D	A	2	1	6.60E-03	6.60E-03	2.00E-02	2.00E-02			7.4E+04	8.9E-08	1.0E-01	6.6E-02
Shallow	INORG	Nickel	7440-02-0	T	A	2	2	2.80E-03	7.40E-03					7.4E+04	1.0E-07	1.0E-01	7.4E-02
Shallow	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	2				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	2				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	2				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		2	1	6.40E-05	6.40E-05	1.00E-02	1.00E-02			1.3E+01	4.9E-06	2.0E-03	3.2E-02
Shallow	INORG	Thallium	7440-28-0	T		2	1	5.40E-05	5.40E-05	1.00E-02	1.00E-02			1.3E+01	4.2E-06	2.0E-03	2.7E-02
Shallow	INORG	Vanadium	7440-62-2	D		2				8.20E-04	1.00E-02			9.7E+02		4.5E-03	
Shallow	INORG	Vanadium	7440-62-2	T		2				8.20E-04	1.00E-02			9.7E+02		4.5E-03	
Shallow	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	2.00E-02			1.1E+05		2.4E+00	
Shallow	INORG	Zinc	7440-66-6	T	D	2				1.20E-02	2.00E-02			1.1E+05		2.4E+00	

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-05

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-05 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	8				5.10E-04	2.00E-02	1.0E+06		3.1E+04		7.3E-01	
Shallow	VOC	Benzene	71-43-2	T	A	8	2	3.50E-04	4.90E-04	1.60E-04	2.00E-03	3.5E+03	1.4E-05	1.1E+01	4.5E-05	5.0E-03	9.8E-02
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	8	1	4.60E-04	4.60E-04	1.70E-04	2.00E-03	3.7E+01	1.2E-05	1.4E+01	3.3E-05	1.0E-01	4.6E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	8				1.80E-04	2.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	8				2.00E-04	2.00E-03	9.8E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	8	2	1.78E-03	4.90E-03	4.10E-04	2.00E-02	2.4E+05	2.0E-08	2.4E+05	2.0E-08	1.3E+01	3.8E-04
Shallow	VOC	Carbon Disulfide	75-15-0	T		8				2.00E-04	2.00E-03	5.5E+02		1.2E+03		8.0E-01	
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	8				1.20E-04	2.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	8				1.40E-04	2.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		8	2	3.60E-02	5.00E-02	2.60E-04	1.43E-03	5.7E+03	8.8E-06	4.4E+02	1.1E-04	4.3E-01	1.2E-01
Shallow	VOC	Chloroform	67-66-3	T	B2	8	4	5.50E-04	2.10E-03	1.40E-04	2.00E-04	1.8E+02	1.2E-05	1.5E+02	1.4E-05	1.0E-01	2.1E-02
Shallow	VOC	Chloromethane	74-87-3	T	D	8	2	3.00E-04	4.75E-04	1.30E-04	2.00E-03	4.5E+01	1.1E-05	4.9E+02	9.7E-07	2.6E-01	1.8E-03
Shallow	VOC	Cumene	98-82-8	T	D	8				1.60E-04	2.00E-03	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	8				1.30E-04	2.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				6.20E-04	4.00E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	8				2.60E-04	2.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				2.20E-04	2.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				1.10E-04	2.00E-03	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				1.50E-04	2.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				1.70E-04	2.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		8				2.60E-04	4.00E-03	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	8	2	1.00E-02	5.00E-02	1.60E-04	1.00E-03	2.3E+03	1.3E-05	2.4E+03	1.3E-05	8.8E-01	3.4E-02
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.10E-04	2.00E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	8	1	7.80E-04	7.80E-04	2.40E-04	1.32E-03	1.3E+00	6.0E-04	1.1E+01	7.1E-05	7.0E-03	1.1E-01
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8	3	3.20E-04	1.10E-03	2.20E-04	1.21E-03	2.1E+02	5.2E-06	2.0E+02	5.5E-06	7.0E-02	1.6E-02
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				1.50E-04	1.00E-03	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				1.70E-04	2.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				2.70E-04	2.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	8				1.20E-04	2.00E-03	1.7E+02		1.7E+02		7.0E-01	
Shallow	VOC	2-Hexanone	591-78-6	T		8				4.60E-04	2.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		8				4.10E-04	2.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		8				1.30E-04	1.00E-02	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8	3	5.00E-04	1.60E-03	2.30E-04	2.00E-02	2.0E+04	8.0E-08	1.3E+04	1.2E-07	1.8E+00	8.9E-04
Shallow	VOC	Methylcyclohexane	108-87-2	T		8				1.50E-04	2.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	8	1	7.70E-04	7.70E-04	3.40E-04	1.87E-03	1.4E+03	5.5E-07	2.2E+02	3.5E-06	5.0E-03	1.5E-01
Shallow	VOC	Styrene	100-42-5	T		8				1.50E-04	2.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				2.50E-04	2.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	8				2.30E-04	2.00E-03	1.7E+02		1.2E+01		5.0E-03	
Shallow	VOC	Toluene	108-88-3	T	D	8	3	2.60E-04	6.05E-04	1.80E-04	1.00E-03	5.3E+02	1.1E-06	5.3E+02	1.1E-06	1.0E+00	6.1E-04
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				1.70E-04	2.00E-03	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8	1	5.65E-04	5.65E-04	1.50E-04	2.00E-03	1.3E+03	4.3E-07	1.3E+03	4.3E-07	2.0E-01	2.8E-03
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.00E-04	2.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	8				1.40E-04	2.00E-03	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		8				2.80E-04	2.00E-03	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				3.20E-04	2.00E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	8	2	2.20E-04	2.70E-04	1.50E-04	2.00E-03	1.3E+01	2.1E-05	1.0E+00	2.7E-04	2.0E-03	1.4E-01
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	4.30E-04	4.30E-04	3.30E-04	2.00E-03	1.9E+02	2.3E-06	1.9E+02	2.3E-06	1.0E+01	4.3E-05
Shallow	SVOC	Acenaphthene	83-32-9	T		8				8.00E-04	5.00E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	8				7.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	8				2.60E-03	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	8	2	1.15E-03	1.20E-03	6.80E-04	5.00E-03	4.3E-02	2.8E-02	4.3E-02	2.8E-02	4.3E-02	2.8E-02
Shallow	SVOC	Atrazine	1912-24-9	T		8				2.50E-03	6.20E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		8				1.00E-03	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	8				7.00E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	8				7.30E-04	5.00E-03			2.0E-03		5.0E-03	

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TABLE 4-05
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-05 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	8				9.40E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	8				8.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	8				8.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	8				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	8				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	8				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	8				2.70E-03	6.00E-03			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	8				8.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	8				8.80E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		8				2.50E-03	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	8	2	1.30E-03	1.55E-03	8.20E-04	1.00E-02			7.4E+00	2.1E-04	8.5E-02	1.8E-02
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		8				9.90E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		8				9.80E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		8				8.50E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		8				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		8				7.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	8				7.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	8				7.90E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	8				1.10E-03	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	8				9.30E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		8				8.50E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	8				6.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		8				8.50E-04	5.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	8				7.60E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	8				6.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		8				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		8				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	8				7.90E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	8				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		8				1.10E-03	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	8				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	8	2	2.80E-03	6.80E-03	1.00E-03	5.00E-03	2.0E+00	3.4E-03	2.0E+00	3.4E-03	8.8E-01	7.7E-03
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	8				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	8				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	8				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	8				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	8				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	8				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	8				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		8				1.30E-03	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	8	1	2.50E-03	2.50E-03	7.50E-04	5.00E-03	3.1E+01	8.1E-05	3.1E+01	8.1E-05	5.2E-01	4.8E-03
Shallow	SVOC	2-Nitroaniline	88-74-4	T		8				7.00E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	8				7.10E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	8				1.30E-03	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	8				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		8				2.10E-03	5.20E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		8				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	8				1.40E-03	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	8				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	8				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	8				2.40E-03	6.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	8	1	2.30E-03	2.30E-03	8.20E-04	5.00E-03	1.0E+00	2.3E-03	1.0E+00	2.3E-03	5.2E-02	4.4E-02
Shallow	SVOC	Phenol	108-95-2	T	ID	8				1.60E-03	6.50E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	8				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		8				1.20E-03	5.00E-03			1.7E+02		7.3E-01	

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TABLE 3-7
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI W-05 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	8				1.70E-03	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	8				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		8	2	8.30E-03	9.80E-03	2.20E-03	2.50E-02			6.8E+01	1.4E-04	6.0E-03	**1.6E+00**
Shallow	INORG	Antimony	7440-36-0	T		8	2	9.25E-03	1.07E-02	2.20E-03	2.50E-02			6.8E+01	1.6E-04	6.0E-03	**1.8E+00**
Shallow	INORG	Arsenic	7440-38-2	D	A	8	4	5.10E-03	4.73E-02	3.90E-03	1.00E-02			4.3E+00	1.1E-02	5.0E-02	9.5E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	8	4	5.70E-03	5.85E-02	3.90E-03	1.00E-02			4.3E+00	1.4E-02	5.0E-02	**1.2E+00**
Shallow	INORG	Barium	7440-39-3	D	D	8	8	3.06E-02	3.00E-01					1.4E+04	2.1E-05	2.0E+00	1.5E-01
Shallow	INORG	Barium	7440-39-3	T	D	8	8	3.25E-02	2.85E-01					1.4E+04	2.0E-05	2.0E+00	1.4E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	8				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	8	1	5.60E-04	5.60E-04	5.40E-04	1.00E-03			2.9E+02	1.9E-06	4.0E-03	1.4E-01
Shallow	INORG	Cadmium	7440-43-9	D	B1	8	3	2.20E-04	3.60E-04	2.80E-04	5.00E-03			1.9E+02	2.1E-06	5.0E-03	7.8E-02
Shallow	INORG	Cadmium	7440-43-9	T	B1	8	3	2.90E-04	4.70E-04	2.80E-04	5.00E-03			1.9E+02	2.5E-06	5.0E-03	9.4E-02
Shallow	INORG	Chromium (total)	7440-47-3	D		8	2	9.60E-03	7.72E-02	1.40E-03	1.00E-02			4.6E+02	3.7E-05	1.0E-01	1.7E-01
Shallow	INORG	Chromium (total)	7440-47-3	T		8	2	1.00E-02	1.72E-02	1.40E-03	1.00E-02			4.6E+02	3.7E-05	1.0E-01	1.7E-01
Shallow	INORG	Cobalt	7440-48-4	D	B1	8	4	3.00E-03	5.80E-03	1.30E-03	2.00E-02			2.4E+03	2.4E-06	4.0E-02	1.5E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	8	4	1.70E-03	5.50E-03	1.30E-03	2.00E-02			2.4E+03	2.3E-06	4.0E-02	1.4E-01
Shallow	INORG	Copper	7440-50-8	D	D	8	2	1.03E-02	4.26E-02	4.20E-03	3.00E-03			7.4E+03	5.8E-06	1.4E+00	3.0E-02
Shallow	INORG	Copper	7440-50-8	T	D	8	2	1.37E-02	4.74E-02	4.20E-03	5.00E-03			7.4E+03	6.4E-06	1.4E+00	3.4E-02
Shallow	INORG	Lead	7439-92-1	D	B2	8				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	8				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Manganese	7439-96-5	D	D	8	8	1.38E-03	6.15E-01					9.1E+03	9.0E-05	8.6E-01	9.5E-01
Shallow	INORG	Manganese	7439-96-5	T	D	8	8	2.48E-03	7.66E-01					9.1E+03	8.4E-05	8.6E-01	8.9E-01
Shallow	INORG	Mercury	7439-97-6	D	D	8	2	8.20E-05	2.20E-04	6.90E-05	2.00E-04	5.6E-02	3.9E-03	5.6E-02	3.9E-03	2.0E-03	1.1E-01
Shallow	INORG	Mercury	7439-97-6	T	D	8	1	3.00E-04	3.00E-04	6.90E-05	2.00E-04	5.6E-02	5.4E-03	5.6E-02	5.4E-03	2.0E-03	1.5E-01
Shallow	INORG	Nickel	7440-02-0	D	A	8	6	2.70E-03	1.63E-02	2.20E-03	2.00E-02			7.4E+04	2.2E-07	1.0E-01	1.6E-01
Shallow	INORG	Nickel	7440-02-0	T	A	8	6	2.90E-03	1.62E-02	2.20E-03	2.00E-02			7.4E+04	2.2E-07	1.0E-01	1.6E-01
Shallow	INORG	Selenium	7782-49-2	D	D	8	2	2.78E-02	4.78E-02	4.50E-03	5.00E-03			9.7E+02	4.9E-05	5.0E-02	9.6E-01
Shallow	INORG	Selenium	7782-49-2	T	D	8	2	2.88E-02	4.89E-02	4.50E-03	5.00E-03			9.7E+02	5.0E-05	5.0E-02	9.8E-01
Shallow	INORG	Silver	7440-22-4	D	D	8				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	8				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		8	5	3.25E-05	9.00E-03	1.80E-05	5.00E-03			1.3E+01	6.9E-04	2.0E-03	**4.5E+00**
Shallow	INORG	Thallium	7440-28-0	T		8	3	3.60E-05	7.10E-03	1.80E-05	1.00E-02			1.3E+01	5.5E-04	2.0E-03	**3.6E+00**
Shallow	INORG	Vanadium	7440-62-2	D		8	3	1.00E-03	7.32E-02	8.20E-04	1.00E-02			9.7E+02	7.5E-05	4.5E-03	**1.6E+01**
Shallow	INORG	Vanadium	7440-62-2	T		8	4	8.30E-04	7.66E-02	8.20E-04	1.00E-02			9.7E+02	7.9E-05	4.5E-03	**1.7E+01**
Shallow	INORG	Zinc	7440-66-6	D	D	8	1	1.28E-02	1.28E-02	1.20E-02	2.00E-02			1.1E+05	1.2E-07	2.4E+00	5.3E-03
Shallow	INORG	Zinc	7440-66-6	T	D	8	2	1.33E-02	1.85E-02	1.20E-02	2.00E-02			1.1E+05	1.7E-07	2.4E+00	7.7E-03

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-4

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-07 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	8	4	3.50E-03	4.20E+01	5.10E-04	5.10E-03	1.0E+06	4.2E-05	3.1E+04	1.4E-03	7.3E-01	**5.8E+01**
Shallow	VOC	Benzene	71-43-2	T	A	8	2	2.40E-04	4.10E-04	1.60E-04	1.30E-01	3.5E+03	1.2E-05	1.1E+01	3.7E-05	5.0E-03	8.2E-02
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	8				1.70E-04	1.40E-01	3.7E+01		1.4E+01		1.0E-01	
Shallow	VOC	Bromoform	75-25-2	T	B2	8				1.80E-04	1.50E-01	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	8				2.00E-04	1.70E-01	9.8E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	8	1	4.70E-03	4.70E-03	4.10E-04	3.40E-01	2.4E+05	2.0E-08	2.4E+05	2.0E-08	1.3E+01	3.6E-04
Shallow	VOC	Carbon Disulfide	75-15-0	T		8				2.00E-04	1.70E-01	5.5E+02		1.2E+03		8.0E-01	
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	8				1.20E-04	1.00E-01	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	8				1.40E-04	1.20E-01	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		8				2.60E-04	2.20E-01	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	8				1.40E-04	1.20E-01	1.8E+02		1.5E+02		1.0E-01	
Shallow	VOC	Chloromethane	74-87-3	T	D	8	1	3.70E-04	3.70E-04	1.30E-04	1.10E-01	4.5E+01	8.2E-06	4.9E+02	7.6E-07	2.6E-01	1.4E-03
Shallow	VOC	Cumene	98-82-8	T	D	8				1.20E-04	1.00E-01	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	8	1	2.50E-04	2.50E-04	1.30E-04	1.10E-01						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				6.20E-04	5.20E-01	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	8				2.60E-04	2.20E-01	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				2.20E-04	1.80E-01	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				1.10E-04	1.20E-02	1.6E+02		1.6E+02		6.0E-01	
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				1.50E-04	1.20E-01			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				1.70E-04	1.40E-01	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		8				2.60E-04	2.20E-01	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	8				1.60E-04	1.30E-01	2.3E+03		2.4E+03		8.8E-01	
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.10E-04	1.70E-01	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	8				2.40E-04	2.00E-01	1.3E+00		1.1E+01		7.0E-03	
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8				2.20E-04	1.80E-01	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				1.50E-04	1.20E-01	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				1.70E-04	1.40E-01	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				2.70E-04	2.20E-01	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	8	1	2.30E-04	2.30E-04	1.20E-04	1.00E-01	1.7E+02	1.4E-06	1.7E+02	1.4E-06	7.0E-01	3.3E-04
Shallow	VOC	2-Hexanone	591-78-6	T		8				4.60E-04	3.80E-01	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		8				4.10E-04	3.40E-01						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		8				1.30E-04	1.10E-01	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8				2.30E-04	1.90E-01	2.0E+04		1.3E+04		1.8E+00	
Shallow	VOC	Methylcyclohexane	108-87-2	T		8	1	4.60E-04	4.60E-04	1.50E-04	1.20E-01						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	8				3.40E-04	2.80E-01	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		8				1.50E-04	1.20E-01	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				2.50E-04	2.10E-01	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	8	1	3.60E-03	3.60E-03	2.30E-04	1.90E-01	1.7E+02	2.1E-05	1.2E+01	3.0E-04	5.0E-03	7.2E-01
Shallow	VOC	Toluene	108-88-3	T	D	8	2	3.50E-04	1.80E-03	1.80E-04	1.50E-01	5.3E+02	3.4E-06	5.3E+02	3.4E-06	1.0E+00	1.8E-03
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				1.70E-04	1.40E-01	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8				1.50E-04	1.20E-01	1.3E+03		1.3E+03		2.0E-01	
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.00E-04	2.50E-01	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	8				1.40E-04	1.20E-01	9.7E+01		2.2E+01		5.0E-03	
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		8				2.80E-04	2.30E-01	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				3.20E-04	2.70E-01	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	8				1.50E-04	1.20E-01	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	1.20E-03	1.20E-03	3.30E-04	2.70E-01	1.9E+02	6.3E-06	1.9E+02	6.3E-06	1.0E+01	1.2E-04
Shallow	SVOC	Acenaphthene	83-32-9	T		8				8.00E-04	5.00E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	8				7.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	8				2.60E-03	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	8				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		8				2.50E-03	5.00E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		8				1.00E-03	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	8				7.00E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	8				7.30E-04	5.00E-03			2.0E-03		5.0E-03	

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TABLE 3.7-4

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-07 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	8				9.40E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	8				8.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	8				8.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	8				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	8				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	8				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	8				2.70E-03	5.00E-03			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	8				8.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	8				8.80E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		8	1	1.20E-01	1.20E-01	2.50E-03	1.00E-02			3.9E+05	3.1E-07	5.8E+00	2.1E-02
Shallow	SVOC	Carbazole	86-74-8	T	B2	8				8.20E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		8				9.90E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		8				9.60E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		8				8.50E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		8				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		8				7.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	8				7.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	8				7.90E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	8				1.10E-03	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	8				9.30E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		8				8.50E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	8				6.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		8				8.50E-04	5.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	8				7.60E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	8				6.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		8				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		8				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	8				7.90E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	8				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		8				1.10E-03	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	8				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	8				1.00E-03	5.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	8				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	8				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	8				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	8				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	8				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	8				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	8				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		8				1.30E-03	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	8				7.50E-04	5.00E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		8				7.00E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	8				7.10E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	8				1.30E-03	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	8				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		8				2.10E-03	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		8				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	8				1.40E-03	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	8				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	8				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	8				2.40E-03	5.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	8				8.20E-04	5.00E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	8				1.60E-03	5.00E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	8				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		8				1.20E-03	5.00E-03			1.7E+02		7.3E-01	

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TABLE 3.7.4.4
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR AOI M-07 (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	8				1.70E-03	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	8				8.20E-05	8.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		8				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Antimony	7440-36-0	T		8	1	2.70E-03	2.70E-03	2.20E-03	2.50E-02			6.8E+01	4.0E-05	6.0E-03	4.5E-01
Shallow	INORG	Arsenic	7440-38-2	D	A	8	2	4.20E-03	6.10E-03	3.90E-03	1.00E-02			4.3E+00	1.4E-03	5.0E-02	1.2E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	8	4	4.00E-03	1.46E-02	3.90E-03	1.00E-02			4.3E+00	3.4E-03	5.0E-02	2.9E-01
Shallow	INORG	Barium	7440-39-3	D	D	8	8	1.47E-01	3.15E-01					1.4E+04	2.3E-05	2.0E+00	1.6E-01
Shallow	INORG	Barium	7440-39-3	T	D	8	8	1.47E-01	3.86E-01					1.4E+04	2.8E-05	2.0E+00	1.9E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	8				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	8	1	7.20E-04	7.20E-04	5.40E-04	1.00E-03			2.9E+02	2.5E-06	4.0E-03	1.8E-01
Shallow	INORG	Cadmium	7440-43-9	D	B1	8	5	4.00E-04	6.80E-04	2.80E-04	2.80E-04			1.9E+02	3.6E-06	5.0E-03	1.4E-01
Shallow	INORG	Cadmium	7440-43-9	T	B1	8	7	3.50E-04	1.40E-03	2.80E-04	2.80E-04			1.9E+02	7.4E-06	5.0E-03	2.8E-01
Shallow	INORG	Chromium (total)	7440-47-3	D		8	1	1.40E-03	1.40E-03	1.40E-03	1.00E-02			4.6E+02	3.0E-06	1.0E-01	1.4E-02
Shallow	INORG	Chromium (total)	7440-47-3	T		8	3	8.50E-03	1.30E-01	1.40E-03	1.00E-02			4.6E+02	3.0E-04	1.0E-01	**1.4E+00**
Shallow	INORG	Cobalt	7440-48-4	D	B1	8	4	3.70E-03	1.36E-02	1.30E-03	2.00E-02			2.4E+03	5.7E-06	4.0E-02	3.4E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	8	5	1.40E-03	2.28E-02	1.30E-03	2.00E-02			2.4E+03	9.5E-06	4.0E-02	5.7E-01
Shallow	INORG	Copper	7440-50-8	D	D	9	1	5.60E-03	5.60E-03	4.20E-03	3.00E-03			7.4E+03	7.6E-07	1.4E+00	4.0E-03
Shallow	INORG	Copper	7440-50-8	T	D	8	3	1.20E-02	1.10E-02	4.20E-03	5.00E-03			7.4E+03	6.9E-06	1.4E+00	3.7E-02
Shallow	INORG	Lead	7439-92-1	D	B2	8				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	8	2	1.22E-02	2.38E-02	2.50E-03	3.00E-03					4.0E-03	**6.0E+00**
Shallow	INORG	Manganese	7439-96-5	D	D	8	8	1.62E-02	1.72E+00					9.1E+03	1.9E-04	8.6E-01	**2.0E+00**
Shallow	INORG	Manganese	7439-96-5	T	D	8	8	9.47E-02	1.55E+00					9.1E+03	1.7E-04	8.6E-01	**1.8E+00**
Shallow	INORG	Mercury	7439-97-6	D	D	8	1	9.40E-05	9.40E-05	6.90E-05	2.00E-04	5.6E-02	1.7E-03	5.6E-02	1.7E-03	2.0E-03	4.7E-02
Shallow	INORG	Mercury	7439-97-6	T	D	8	2	6.90E-05	3.40E-04	6.90E-05	2.00E-04	5.6E-02	6.1E-03	5.6E-02	6.1E-03	2.0E-03	1.7E-01
Shallow	INORG	Nickel	7440-02-0	D	A	8	7	4.00E-03	7.04E-02	2.20E-03	2.20E-03			7.4E+04	9.5E-07	1.0E-01	7.0E-01
Shallow	INORG	Nickel	7440-02-0	T	A	8	7	3.40E-03	9.41E-02	2.20E-03	2.20E-03			7.4E+04	1.3E-06	1.0E-01	9.4E-01
Shallow	INORG	Selenium	7782-49-2	D	D	8				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	8				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Silver	7440-22-4	D	D	8				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	8				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		8	8	2.10E-05	1.43E-02					1.3E+01	1.1E-03	2.0E-03	**7.2E+00**
Shallow	INORG	Thallium	7440-28-0	T		8	6	6.40E-05	1.56E-02	1.80E-05	5.00E-03			1.3E+01	1.2E-03	2.0E-03	**7.8E+00**
Shallow	INORG	Vanadium	7440-62-2	D		8				8.20E-04	1.00E-02			9.7E+02		4.5E-03	
Shallow	INORG	Vanadium	7440-62-2	T		8	3	1.17E-02	5.90E-02	8.20E-04	1.00E-02			9.7E+02	6.1E-05	4.5E-03	**1.3E+01**
Shallow	INORG	Zinc	7440-66-6	D	D	8	5	1.57E-02	1.46E-01	1.20E-02	2.00E-02			1.1E+05	1.3E-06	2.4E+00	6.1E-02
Shallow	INORG	Zinc	7440-66-6	T	D	8	4	3.46E-02	1.46E-01	1.20E-02	2.00E-02			1.1E+05	1.3E-06	2.4E+00	6.1E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 1-21

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	VOC	Acetone	67-64-1	T	ID	24	6	1.50E-02	7.80E-02	5.10E-04	1.00E-02	1.0E+06	7.8E-08	3.1E+04	2.5E-06	7.3E-01	1.1E-01
Shallow	VOC	Benzene	71-43-2	T	A	24				1.60E-04	1.00E-03	3.5E+03		1.1E+01		5.0E-03	
Shallow	VOC	Bromodichloromethane	75-27-4	T	B2	24	2	1.80E-04	4.20E-04	1.70E-04	1.00E-03	3.7E+01	1.1E-05	1.4E+01	3.0E-05	1.0E-01	4.2E-03
Shallow	VOC	Bromoform	75-25-2	T	B2	24				1.80E-04	1.00E-03	3.1E+03		1.4E+02		1.0E-01	
Shallow	VOC	Bromomethane	74-83-9	T	D	23				2.00E-04	1.00E-03	9.0E+00		7.0E+01		1.0E-02	
Shallow	VOC	2-Butanone	78-93-3	T	ID	24	1	5.00E-04	5.00E-04	4.10E-04	1.00E-02	2.4E+05	2.1E-09	2.4E+05	2.1E-09	1.3E+01	3.8E-05
Shallow	VOC	Carbon Disulfide	75-15-0	T		24				2.00E-04	1.00E-03	5.5E+02		1.2E+03		8.0E-01	
Shallow	VOC	Carbon Tetrachloride	56-23-5	T	B2	24				1.20E-04	1.00E-03	2.4E+00		4.6E+00		5.0E-03	
Shallow	VOC	Chlorobenzene	108-90-7	T	D	24				1.40E-04	1.00E-03	4.7E+02		8.6E+01		1.0E-01	
Shallow	VOC	Chloroethane	75-00-3	T		24				2.60E-04	1.00E-03	5.7E+03		4.4E+02		4.3E-01	
Shallow	VOC	Chloroform	67-66-3	T	B2	24	6	1.40E-04	1.70E-03	1.40E-04	1.00E-03	1.8E+02	9.4E-06	1.5E+02	1.1E-05	1.0E-01	1.7E-02
Shallow	VOC	Chloromethane	74-87-3	T	D	24	3	1.30E-04	3.35E-04	1.30E-04	1.00E-03	4.5E+01	7.4E-06	4.9E+02	6.8E-07	2.6E-01	1.3E-03
Shallow	VOC	Cumene	98-82-8	T	D	24				1.50E-04	1.00E-03	5.6E+01		5.6E+01		8.0E-01	
Shallow	VOC	Cyclohexane	110-82-7	T	ID	24				1.30E-04	1.00E-03						
Shallow	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	24				6.20E-04	2.00E-03	1.2E+00		3.9E-01		2.0E-04	
Shallow	VOC	Dibromochloromethane	124-48-1	T	C	24				2.60E-04	1.00E-03	1.1E+02		1.8E+01		1.0E-01	
Shallow	VOC	1,2-Dibromoethane	106-93-4	T	B2	24				2.20E-04	1.00E-03	1.5E+01		2.5E-02		1.0E-03	
Shallow	VOC	1,2-Dichlorobenzene	95-50-1	T	D	24	1	2.20E-04	2.20E-04	1.10E-04	1.00E-03	1.6E+02	1.4E-06	1.6E+02	1.4E-06	6.0E-01	3.7E-04
Shallow	VOC	1,3-Dichlorobenzene	541-73-1	T	D	24				1.50E-04	1.00E-03			2.0E+00		6.6E-03	
Shallow	VOC	1,4-Dichlorobenzene	106-46-7	T	C	24				1.70E-04	1.00E-03	7.4E+01		6.4E+00		7.5E-02	
Shallow	VOC	Dichlorodifluoromethane	75-71-8	T		24				2.60E-04	2.00E-03	3.0E+02		3.0E+02		1.7E+00	
Shallow	VOC	1,1-Dichloroethane	75-34-3	T	C	24	2	1.60E-04	1.00E-03	1.60E-04	1.00E-03	2.3E+03	4.3E-07	2.4E+03	4.2E-07	8.8E-01	1.1E-03
Shallow	VOC	1,2-Dichloroethane	107-06-2	T	B2	24				2.10E-04	1.00E-03	5.9E+01		1.9E+01		5.0E-03	
Shallow	VOC	1,1-Dichloroethene	75-35-4	T	C	24	2	8.10E-04	9.70E-04	2.40E-04	1.00E-03	1.3E+00	7.5E-04	1.1E+01	8.8E-05	7.0E-03	1.4E-01
Shallow	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	24				2.20E-04	5.00E-04	2.1E+02		2.0E+02		7.0E-02	
Shallow	VOC	trans-1,2-Dichloroethene	156-60-5	T		24				1.50E-04	5.00E-04	2.0E+02		2.2E+02		1.0E-01	
Shallow	VOC	1,2-Dichloropropane	78-87-5	T	B2	24				1.70E-04	1.00E-03	3.6E+01		1.6E+01		5.0E-03	
Shallow	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	24				2.70E-04	1.00E-03	2.6E+01		5.5E+00		8.5E-03	
Shallow	VOC	Ethyl Benzene	100-41-4	T	D	24	1	1.80E-04	1.80E-04	1.20E-04	1.00E-03	1.7E+02	1.1E-06	1.7E+02	1.1E-06	7.0E-01	2.6E-04
Shallow	VOC	2-Hexanone	591-78-6	T		24				4.60E-04	1.00E-02	8.7E+03		5.2E+03		1.0E+00	
Shallow	VOC	Methyl Acetate	79-20-9	T		24				4.10E-04	1.00E-02						
Shallow	VOC	Methyl tert-butyl ether	1634-04-4	T		24				1.30E-04	5.00E-03	4.7E+04		6.1E+02		2.4E-01	
Shallow	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	23				2.30E-04	1.00E-02	2.0E+04		1.3E+04		1.8E+00	
Shallow	VOC	Methylcyclohexane	108-87-2	T		24				1.50E-04	1.00E-03						
Shallow	VOC	Methylene Chloride	75-09-2	T	B2	24				2.90E-04	1.00E-03	1.4E+03		2.2E+02		5.0E-03	
Shallow	VOC	Styrene	100-42-5	T		24				1.50E-04	1.00E-03	3.1E+02		9.7E+00		1.0E-01	
Shallow	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	24				2.50E-04	1.00E-03	7.7E+01		4.7E+00		8.5E-03	
Shallow	VOC	Tetrachloroethene	127-18-4	T	C-B2	24	2	4.60E-04	5.50E-04	2.30E-04	1.00E-03	1.7E+02	3.2E-06	1.2E+01	4.6E-05	5.0E-03	1.1E-01
Shallow	VOC	Toluene	108-88-3	T	D	24	5	1.90E-04	8.10E-04	1.80E-04	1.00E-03	5.3E+02	1.5E-06	5.3E+02	1.5E-06	1.0E+00	8.1E-04
Shallow	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	24				1.70E-04	1.00E-03	3.0E+02		1.9E+01		7.0E-02	
Shallow	VOC	1,1,1-Trichloroethane	71-55-6	T	D	24	5	5.25E-04	7.00E-03	1.50E-04	1.00E-03	1.3E+03	5.4E-06	1.3E+03	5.4E-06	2.0E-01	3.5E-02
Shallow	VOC	1,1,2-Trichloroethane	79-00-5	T	C	24				3.00E-04	1.00E-03	1.1E+02		2.1E+01		5.0E-03	
Shallow	VOC	Trichloroethene	79-01-6	T	C-B2	24	2	7.10E-04	1.10E-03	1.40E-04	1.00E-03	9.7E+01	1.1E-05	2.2E+01	5.0E-05	5.0E-03	2.2E-01
Shallow	VOC	Trichlorofluoromethane	75-69-4	T		24				2.80E-04	1.00E-03	1.1E+03		1.1E+03		2.6E+00	
Shallow	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		24				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
Shallow	VOC	Vinyl Chloride	75-01-4	T	A	24				1.50E-04	1.00E-03	1.3E+01		1.0E+00		2.0E-03	
Shallow	VOC	Xylenes (total)	1330-20-7	T	ID	24	1	9.90E-04	9.90E-04	3.30E-04	1.00E-03	1.9E+02	5.2E-06	1.9E+02	5.2E-06	1.0E+01	9.9E-05
Shallow	SVOC	Acenaphthene	83-32-9	T		24				8.00E-04	5.00E-03	4.2E+00		4.2E+00		1.3E+00	
Shallow	SVOC	Acenaphthylene	208-96-8	T	D	24				7.10E-04	5.00E-03	3.9E+00		3.9E+00		5.2E-02	
Shallow	SVOC	Acetophenone	98-86-2	T	D	24				2.60E-03	1.00E-02	6.1E+03		6.1E+03		1.5E+00	
Shallow	SVOC	Anthracene	120-12-7	T	D	24				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
Shallow	SVOC	Atrazine	1912-24-9	T		24				2.50E-03	5.00E-03			5.4E+00		3.0E-03	
Shallow	SVOC	Benzaldehyde	100-52-7	T		24				1.00E-03	1.00E-02						
Shallow	SVOC	Benzo(a)anthracene	56-55-3	T	B2	24				7.00E-04	5.00E-03			9.4E-03		2.1E-03	
Shallow	SVOC	Benzo(a)pyrene	50-32-8	T	B2	24				7.30E-04	5.00E-03			2.0E-03		5.0E-03	

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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	24				9.40E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	24				8.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	24				8.40E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Biphenyl	92-52-4	T	D	24				2.60E-03	1.00E-02						
Shallow	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	24				8.70E-04	5.00E-03						
Shallow	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	24				9.70E-04	5.00E-03	2.1E+02		5.7E+00		2.0E-03	
Shallow	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	24				2.70E-03	5.00E-03			3.2E-01		6.0E-03	
Shallow	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	24				8.80E-04	5.00E-03						
Shallow	SVOC	Butylbenzylphthalate	85-68-7	T	C	24				8.80E-04	5.00E-03			2.7E+00		1.2E+00	
Shallow	SVOC	Caprolactam	105-60-2	T		24				2.50E-03	1.00E-02			3.9E+05		5.8E+00	
Shallow	SVOC	Carbazole	86-74-8	T	B2	24				8.20E-04	1.00E-02			7.4E+00		8.5E-02	
Shallow	SVOC	4-Chloro-3-methylphenol	59-50-7	T		24				9.90E-04	5.00E-03			7.9E+01		1.5E-01	
Shallow	SVOC	4-Chloroaniline	106-47-8	T		20				6.60E-04	1.00E-02						
Shallow	SVOC	2-Chloronaphthalene	91-58-7	T		24				8.50E-04	5.00E-03			6.7E+00		1.8E+00	
Shallow	SVOC	2-Chlorophenol	95-57-8	T		24				1.00E-03	5.00E-03			9.4E+01		4.5E-02	
Shallow	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		24				7.90E-04	5.00E-03						
Shallow	SVOC	Chrysene	218-01-9	T	B2	24				7.50E-04	5.00E-03			5.0E-03		5.0E-03	
Shallow	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	24				7.90E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Dibenzofuran	132-64-9	T	D	24				1.10E-03	5.00E-03						
Shallow	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	20				9.30E-04	2.00E-02			1.8E-01		1.1E-03	
Shallow	SVOC	2,4-Dichlorophenol	120-83-2	T		24				8.50E-04	1.00E-02			4.8E+01		7.3E-02	
Shallow	SVOC	Diethylphthalate	84-66-2	T	D	24				6.50E-04	5.00E-03			1.1E+03		5.5E+00	
Shallow	SVOC	2,4-Dimethylphenol	105-67-9	T		24				8.50E-04	5.00E-03			5.2E+02		3.7E-01	
Shallow	SVOC	Dimethylphthalate	131-11-3	T	D	24				7.60E-04	5.00E-03			4.2E+03		7.3E+01	
Shallow	SVOC	Di-n-butylphthalate	84-74-2	T	D	24				6.70E-04	5.00E-03			1.1E+01		8.8E-01	
Shallow	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		24				1.30E-03	2.00E-02			9.5E+00		2.0E-02	
Shallow	SVOC	2,4-Dinitrophenol	51-28-5	T		24				3.00E-03	2.00E-02						
Shallow	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	24				7.90E-04	5.00E-03			8.6E+00		7.7E-03	
Shallow	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	24				5.70E-04	5.00E-03						
Shallow	SVOC	Di-n-octylphthalate	117-84-0	T		24				1.10E-03	5.00E-03			4.0E-01		1.3E-01	
Shallow	SVOC	Fluoranthene	206-44-0	T	D	24				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
Shallow	SVOC	Fluorene	86-73-7	T	D	24				1.00E-03	5.00E-03	2.0E+00		2.0E+00		8.8E-01	
Shallow	SVOC	Hexachlorobenzene	118-74-1	T	B2	24				7.40E-04	5.00E-03	3.0E+00		4.6E-03		1.0E-03	
Shallow	SVOC	Hexachlorobutadiene	87-68-3	T	C	24				7.30E-04	5.00E-03	3.2E+00		4.0E-01		1.5E-02	
Shallow	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	24				1.10E-03	5.00E-03	4.2E-01		1.6E+00		5.0E-02	
Shallow	SVOC	Hexachloroethane	67-72-1	T	C	24				7.40E-04	5.00E-03	5.0E+01		1.9E+00		7.3E-03	
Shallow	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	24				6.30E-04	5.00E-03			2.0E-03		2.0E-03	
Shallow	SVOC	Isophorone	78-59-1	T	C	24				6.30E-04	5.00E-03			9.9E+02		7.7E-01	
Shallow	SVOC	2-Methylnaphthalene	91-57-6	T	ID	24				6.40E-04	5.00E-03			2.5E+01		2.6E-01	
Shallow	SVOC	Methylphenol (total)	1319-77-3	T		24				1.30E-03	5.00E-03			8.1E+02		3.7E-01	
Shallow	SVOC	Naphthalene	91-20-3	T	C	24				7.50E-04	5.00E-03	3.1E+01		3.1E+01		5.2E-01	
Shallow	SVOC	2-Nitroaniline	88-74-4	T		24				7.00E-04	2.00E-02						
Shallow	SVOC	3-Nitroaniline	99-09-2	T	C	20				7.10E-04	2.00E-02						
Shallow	SVOC	4-Nitroaniline	100-01-6	T	C	24				1.30E-03	2.00E-02						
Shallow	SVOC	Nitrobenzene	98-95-3	T	D	24				8.10E-04	5.00E-03	5.5E+02		1.1E+01		3.4E-03	
Shallow	SVOC	2-Nitrophenol	88-75-5	T		24				2.10E-03	5.00E-03			7.9E+01		2.0E-02	
Shallow	SVOC	4-Nitrophenol	100-02-7	T		24				1.90E-03	2.00E-02						
Shallow	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	24				1.40E-03	5.00E-03			3.5E+01		2.7E-01	
Shallow	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	24				6.70E-04	5.00E-03			3.6E-01		5.0E-03	
Shallow	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	24				7.80E-04	5.00E-03						
Shallow	SVOC	Pentachlorophenol	87-86-5	T	B2	24				2.40E-03	5.00E-03			2.0E-01		1.0E-03	
Shallow	SVOC	Phenanthrene	85-01-8	T	D	24				8.20E-04	5.00E-03	1.0E+00		1.0E+00		5.2E-02	
Shallow	SVOC	Phenol	108-95-2	T	ID	24				1.40E-03	5.00E-03			2.9E+04		4.4E+00	
Shallow	SVOC	Pyrene	129-00-0	T	D	24				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
Shallow	SVOC	2,4,5-Trichlorophenol	95-95-4	T		24				1.20E-03	5.00E-03			1.7E+02		7.3E-01	

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TABLE 4-4A

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (SHALLOW GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial GW Volatilization to Indoor Air (mg/L)	Ratio of Max Detect to Industrial GW Volatilization to Indoor Air	Groundwater Contact Criteria (mg/L)	Ratio of Max Detect to Groundwater Contact Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria
Shallow	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	24				1.70E-03	5.00E-03			1.0E+01		1.2E-01	
Shallow	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	P/PCB	PCBs (total)	1336-36-3	T	B2	9				8.20E-05	4.00E-04	4.5E-03		3.3E-03		5.0E-04	
Shallow	INORG	Antimony	7440-36-0	D		22	1	2.60E-03	2.60E-03	2.20E-03	2.50E-02			6.8E+01	3.8E-05	6.0E-03	4.3E-01
Shallow	INORG	Antimony	7440-36-0	T		24				2.20E-03	2.50E-02			6.8E+01		6.0E-03	
Shallow	INORG	Arsenic	7440-38-2	D	A	22	6	3.90E-03	7.80E-03	3.90E-03	1.00E-02			4.3E+00	1.8E-03	5.0E-02	1.6E-01
Shallow	INORG	Arsenic	7440-38-2	T	A	24	6	2.10E-03	9.60E-03	2.10E-03	1.00E-02			4.3E+00	2.2E-03	5.0E-02	1.9E-01
Shallow	INORG	Barium	7440-39-3	D	D	22	22	5.33E-02	9.29E-01					1.4E+04	6.6E-05	2.0E+00	4.6E-01
Shallow	INORG	Barium	7440-39-3	T	D	24	24	5.04E-02	9.29E-01					1.4E+04	6.6E-05	2.0E+00	4.6E-01
Shallow	INORG	Beryllium	7440-41-7	D	B1	22				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Beryllium	7440-41-7	T	B1	24				5.40E-04	1.00E-03			2.9E+02		4.0E-03	
Shallow	INORG	Cadmium	7440-43-9	D	B1	22	9	2.90E-04	1.45E-03	2.80E-04	5.00E-03			1.9E+02	7.7E-06	5.0E-03	2.9E-01
Shallow	INORG	Cadmium	7440-43-9	T	B1	24	6	3.50E-04	1.45E-03	2.80E-04	5.00E-03			1.9E+02	7.6E-06	5.0E-03	2.9E-01
Shallow	INORG	Chromium (total)	7440-47-3	D		22	4	1.80E-03	2.70E-03	1.40E-03	1.00E-02			4.6E+02	5.9E-06	1.0E-01	2.7E-02
Shallow	INORG	Chromium (total)	7440-47-3	T		24	6	1.90E-03	2.50E-03	1.40E-03	1.00E-02			4.6E+02	5.4E-06	1.0E-01	2.5E-02
Shallow	INORG	Cobalt	7440-48-4	D	B1	22	5	1.30E-03	4.60E-03	1.30E-03	2.00E-02			2.4E+03	1.9E-06	4.0E-02	1.2E-01
Shallow	INORG	Cobalt	7440-48-4	T	B1	24	8	1.40E-03	4.10E-03	7.40E-04	2.00E-02			2.4E+03	1.7E-06	4.0E-02	1.0E-01
Shallow	INORG	Copper	7440-50-8	D	D	22	4	4.40E-03	6.00E-03	4.20E-03	3.00E-03			7.4E+03	8.1E-07	1.4E+00	4.3E-03
Shallow	INORG	Copper	7440-50-8	T	D	24	2	4.70E-03	4.70E-03	1.70E-03	5.00E-03			7.4E+03	6.4E-07	1.4E+00	3.4E-03
Shallow	INORG	Lead	7439-92-1	D	B2	22				2.50E-03	3.00E-03					4.0E-03	
Shallow	INORG	Lead	7439-92-1	T	B2	24	1	3.50E-03	3.50E-03	1.60E-03	3.00E-03					4.0E-03	8.8E-01
Shallow	INORG	Manganese	7439-96-5	D	D	22	22	1.60E-03	6.17E-01					9.1E+03	6.8E-05	8.6E-01	7.2E-01
Shallow	INORG	Manganese	7439-96-5	T	D	24	24	9.30E-04	6.52E-01					9.1E+03	7.0E-05	8.6E-01	7.4E-01
Shallow	INORG	Mercury	7439-97-6	D	D	22	2	9.40E-05	1.00E-04	6.90E-05	2.00E-04	5.6E-02	1.8E-03	5.6E-02	1.8E-03	2.0E-03	5.0E-02
Shallow	INORG	Mercury	7439-97-6	T	D	24	2	7.50E-05	9.00E-05	6.90E-05	2.00E-04	5.6E-02	1.6E-03	5.6E-02	1.6E-03	2.0E-03	4.5E-02
Shallow	INORG	Nickel	7440-02-0	D	A	22	11	2.40E-03	1.08E-02	2.20E-03	2.00E-02			7.4E+04	1.5E-07	1.0E-01	1.1E-01
Shallow	INORG	Nickel	7440-02-0	T	A	24	13	2.20E-03	1.06E-02	2.20E-03	2.00E-02			7.4E+04	1.4E-07	1.0E-01	1.1E-01
Shallow	INORG	Selenium	7782-49-2	D	D	22				4.50E-03	5.00E-03			9.7E+02		5.0E-02	
Shallow	INORG	Selenium	7782-49-2	T	D	24	2	5.10E-03	6.00E-03	4.50E-03	5.00E-03			9.7E+02	6.2E-06	5.0E-02	1.2E-01
Shallow	INORG	Silver	7440-22-4	D	D	22				1.50E-03	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Silver	7440-22-4	T	D	24				9.80E-04	5.00E-03			1.5E+03		3.4E-02	
Shallow	INORG	Thallium	7440-28-0	D		22	13	3.10E-05	1.50E-02	1.80E-05	1.00E-02			1.3E+01	1.2E-03	2.0E-03	**7.5E+00**
Shallow	INORG	Thallium	7440-28-0	T		24	12	1.80E-05	1.59E-02	1.80E-05	1.00E-02			1.3E+01	1.2E-03	2.0E-03	**8.0E+00**
Shallow	INORG	Vanadium	7440-62-2	D		22	4	1.40E-03	6.50E-03	8.20E-04	1.00E-02			9.7E+02	6.7E-06	4.5E-03	**1.4E+00**
Shallow	INORG	Vanadium	7440-62-2	T		24	4	1.10E-03	6.40E-03	6.70E-04	1.00E-02			9.7E+02	6.6E-06	4.5E-03	**1.4E+00**
Shallow	INORG	Zinc	7440-66-6	D	D	22	3	1.73E-02	2.90E-02	1.20E-02	2.00E-02			1.1E+05	2.6E-07	2.4E+00	1.2E-02
Shallow	INORG	Zinc	7440-66-6	T	D	24	7	1.30E-02	3.46E-02	1.20E-02	2.00E-02			1.1E+05	3.1E-07	2.4E+00	1.4E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-25

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	VOC	Acetone	67-64-1	T	ID	12	9	2.40E-02	7.10E+00	5.10E-04	3.40E-03	2.1E+00	**3.4E+00**	7.3E-01	**9.7E+00**
Deep	VOC	Benzene	71-43-2	T	A	12	2	2.60E-04	1.60E-03	1.60E-04	8.30E-02	5.0E-03	3.2E-01	5.0E-03	3.2E-01
Deep	VOC	Bromodichloromethane	75-27-4	T	B2	12				1.70E-04	8.30E-02	1.0E-01		1.0E-01	
Deep	VOC	Bromoform	75-25-2	T	B2	12				1.80E-04	8.30E-02	1.0E-01		1.0E-01	
Deep	VOC	Bromomethane	74-83-9	T	D	12				2.00E-04	8.30E-02	2.9E-02		1.0E-02	
Deep	VOC	2-Butanone	78-93-3	T	ID	12				4.10E-04	8.30E-01	3.8E+01		1.3E+01	
Deep	VOC	Carbon Disulfide	75-15-0	T		12				2.90E-04	8.30E-02	2.3E+00		8.0E-01	
Deep	VOC	Carbon Tetrachloride	56-23-5	T	B2	12				1.20E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	Chlorobenzene	108-90-7	T	D	12				1.40E-04	8.30E-02	1.0E-01		1.0E-01	
Deep	VOC	Chloroethane	75-00-3	T		12				2.60E-04	8.30E-02	1.7E+00		4.3E-01	
Deep	VOC	Chloroform	67-66-3	T	B2	12	1	3.55E-04	3.55E-04	1.40E-04	8.30E-02	1.0E-01	3.6E-03	1.0E-01	3.6E-03
Deep	VOC	Chloromethane	74-87-3	T	D	12				1.30E-04	8.30E-02	1.1E+00		2.6E-01	
Deep	VOC	Cumene	98-82-8	T	D	12				1.20E-04	8.30E-02	2.3E+00		8.0E-01	
Deep	VOC	Cyclohexane	110-82-7	T	ID	12				1.30E-04	8.30E-02				
Deep	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	12				6.20E-04	1.70E-01	2.0E-04		2.0E-04	
Deep	VOC	Dibromochloromethane	124-48-1	T		12				2.60E-04	8.30E-02	1.0E-01		1.0E-01	
Deep	VOC	1,2-Dibromoethane	106-93-4	T	B2	12				2.20E-04	8.30E-02	1.0E-03		1.0E-03	
Deep	VOC	1,2-Dichlorobenzene	95-50-1	T	D	12				1.10E-04	8.30E-02	6.0E-01		6.0E-01	
Deep	VOC	1,3-Dichlorobenzene	541-73-1	T	D	12				1.50E-04	8.30E-02	1.9E-02		6.6E-03	
Deep	VOC	1,4-Dichlorobenzene	106-46-7	T	C	12				1.70E-04	8.30E-02	7.5E-02		7.5E-02	
Deep	VOC	Dichlorodifluoromethane	75-71-8	T		12				2.60E-04	1.70E-01	4.8E+00		1.7E+00	
Deep	VOC	1,1-Dichloroethane	75-34-3	T	C	12				1.60E-04	8.30E-02	2.5E+00		8.8E-01	
Deep	VOC	1,2-Dichloroethane	107-06-2	T	B2	12				2.10E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	1,1-Dichloroethene	75-35-4	T	C	12				2.40E-04	8.30E-02	7.0E-03		7.0E-03	
Deep	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	12				2.20E-04	4.20E-02	7.0E-02		7.0E-02	
Deep	VOC	trans-1,2-Dichloroethene	156-60-5	T		12				1.50E-04	4.20E-02	1.0E-01		1.0E-01	
Deep	VOC	1,2-Dichloropropane	78-87-5	T	B2	12				1.70E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	12				2.70E-04	8.30E-02	3.5E-02		8.5E-03	
Deep	VOC	Ethyl Benzene	100-41-4	T	D	12				1.20E-04	8.30E-02	7.0E-01		7.0E-01	
Deep	VOC	2-Hexanone	591-78-6	T		12				4.60E-04	8.30E-01	2.9E+00		1.0E+00	
Deep	VOC	Methyl Acetate	79-20-9	T		12				4.10E-04	8.30E-01				
Deep	VOC	Methyl tert-butyl ether	1634-04-4	T		12				1.30E-04	4.20E-01	6.9E-01		2.4E-01	
Deep	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	12				2.30E-04	8.30E-01	5.2E+00		1.8E+00	
Deep	VOC	Methylcyclohexane	108-87-2	T		12				1.50E-04	8.30E-02				
Deep	VOC	Methylene Chloride	75-09-2	T	B2	12				2.90E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	Styrene	100-42-5	T		12				1.50E-04	8.30E-02	1.0E-01		1.0E-01	
Deep	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	12				2.50E-04	8.30E-02	3.5E-02		8.5E-03	
Deep	VOC	Tetrachloroethene	127-18-4	T	C-B2	12				2.30E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	Toluene	108-88-3	T	D	12	3	4.30E-04	1.00E-03	1.80E-04	8.30E-02	1.0E+00	1.0E-03	1.0E+00	1.0E-03
Deep	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	12				1.70E-04	8.30E-02	7.0E-02		7.0E-02	
Deep	VOC	1,1,1-Trichloroethane	71-55-6	T	D	12				1.50E-04	8.30E-02	2.0E-01		2.0E-01	
Deep	VOC	1,1,2-Trichloroethane	79-00-5	T	C	12				3.00E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	Trichloroethene	79-01-6	T	C-B2	12				1.40E-04	8.30E-02	5.0E-03		5.0E-03	
Deep	VOC	Trichlorofluoromethane	75-69-4	T		12				2.80E-04	8.30E-02	7.3E+00		2.6E+00	
Deep	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		12				3.20E-04	8.30E-02	1.7E+02		1.7E+02	
Deep	VOC	Vinyl Chloride	75-01-4	T	A	12				1.50E-04	8.30E-02	2.0E-03		2.0E-03	
Deep	VOC	Xylenes (total)	1330-20-7	T	ID	12	3	3.50E-04	6.10E-04	3.30E-04	8.30E-02	1.0E+01	6.1E-05	1.0E+01	6.1E-05
Deep	SVOC	Acenaphthene	83-32-9	T		12				8.00E-04	5.00E-03	3.8E+00		1.3E+00	
Deep	SVOC	Acenaphthylene	208-96-8	T	D	12				7.10E-04	5.00E-03	1.5E-01		5.2E-02	
Deep	SVOC	Acetophenone	98-86-2	T	D	12				2.60E-03	1.00E-02	4.4E+00		1.5E+00	
Deep	SVOC	Anthracene	120-12-7	T	D	12				6.80E-04	5.00E-03	4.3E-02		4.3E-02	
Deep	SVOC	Atrazine	1912-24-9	T		12				2.50E-03	5.00E-03	3.0E-03		3.0E-03	
Deep	SVOC	Benzaldehyde	100-52-7	T		12				2.80E-03	1.00E-02				
Deep	SVOC	Benzo(a)anthracene	56-55-3	T	B2	12				7.00E-04	5.00E-03	8.5E-03		2.1E-03	
Deep	SVOC	Benzo(a)pyrene	50-32-8	T	B2	12				7.30E-04	5.00E-03	5.0E-03		5.0E-03	

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TABLE 4-25
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	12				9.40E-04	5.00E-03	2.0E-03		2.0E-03	
Deep	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	12				8.50E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	12				8.40E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	Biphenyl	92-52-4	T	D	12				2.60E-03	1.00E-02				
Deep	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	12				8.70E-04	5.00E-03				
Deep	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	12				9.70E-04	5.00E-03	8.3E-03		2.0E-03	
Deep	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	12	1	3.90E-03	3.90E-03	9.70E-03	5.00E-03	6.0E-03	6.5E-01	6.0E-03	6.5E-01
Deep	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	12				8.80E-04	5.00E-03				
Deep	SVOC	Butylbenzylphthalate	85-68-7	T	C	12				8.80E-04	5.00E-03	2.7E+00		1.2E+00	
Deep	SVOC	Caprolactam	105-60-2	T		12	5	9.70E-03	5.40E-01	2.50E-03	1.00E-02	1.7E+01	3.2E-02	5.8E+00	9.3E-02
Deep	SVOC	Carbazole	86-74-8	T	B2	12				8.20E-04	1.00E-02	3.5E-01		8.5E-02	
Deep	SVOC	4-Chloro-3-methylphenol	59-50-7	T		12				9.90E-04	5.00E-03	4.2E-01		1.5E-01	
Deep	SVOC	4-Chloroaniline	106-47-8	T		12				6.10E-04	1.00E-02				
Deep	SVOC	2-Chloronaphthalene	91-58-7	T		12				8.50E-04	5.00E-03	5.2E+00		1.8E+00	
Deep	SVOC	2-Chlorophenol	95-57-8	T		12				1.00E-03	5.00E-03	1.3E-01		4.5E-02	
Deep	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		12				9.00E-04	5.00E-03				
Deep	SVOC	Chrysene	218-01-9	T	B2	12				7.50E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	12				7.90E-04	5.00E-03	2.0E-03		2.0E-03	
Deep	SVOC	Dibenzofuran	132-64-9	T	D	12				1.10E-03	5.00E-03				
Deep	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	12				9.30E-04	2.00E-02	4.3E-03		1.1E-03	
Deep	SVOC	2,4-Dichlorophenol	120-83-2	T		12				8.50E-04	1.00E-02	2.1E-01		7.3E-02	
Deep	SVOC	Diethylphthalate	84-66-2	T	D	12				6.50E-04	5.00E-03	1.6E+01		5.5E+00	
Deep	SVOC	2,4-Dimethylphenol	105-67-9	T		12				8.50E-04	5.00E-03	1.0E+00		3.7E-01	
Deep	SVOC	Dimethylphthalate	131-11-3	T	D	12				7.60E-04	5.00E-03	2.1E+02		7.3E+01	
Deep	SVOC	Di-n-butylphthalate	84-74-2	T	D	12				6.70E-04	5.00E-03	2.5E+00		8.8E-01	
Deep	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		12				1.30E-03	2.00E-02	2.0E-02		2.0E-02	
Deep	SVOC	2,4-Dinitrophenol	51-28-5	T		12				3.00E-03	2.00E-02				
Deep	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	12				7.90E-04	5.00E-03	3.2E-02		7.7E-03	
Deep	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	12				5.70E-04	5.00E-03				
Deep	SVOC	Di-n-octylphthalate	117-84-0	T		12				1.10E-03	5.00E-03	3.8E-01		1.3E-01	
Deep	SVOC	Fluoranthene	206-44-0	T	D	12				8.10E-04	5.00E-03	2.1E-01		2.1E-01	
Deep	SVOC	Fluorene	86-73-7	T	D	12				1.00E-03	5.00E-03	2.0E+00		8.8E-01	
Deep	SVOC	Hexachlorobenzene	118-74-1	T	B2	12				7.40E-04	5.00E-03	1.0E-03		1.0E-03	
Deep	SVOC	Hexachlorobutadiene	87-68-3	T	C	12				7.30E-04	5.00E-03	4.2E-02		1.5E-02	
Deep	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	12				1.10E-03	5.00E-03	5.0E-02		5.0E-02	
Deep	SVOC	Hexachloroethane	67-72-1	T	C	12				7.40E-04	5.00E-03	2.1E-02		7.3E-03	
Deep	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	12				6.30E-04	5.00E-03	2.0E-03		2.0E-03	
Deep	SVOC	Isophorone	78-59-1	T	C	12	1	2.65E-03	2.65E-03	6.30E-04	5.00E-03	3.1E+00	8.5E-04	7.7E-01	3.4E-03
Deep	SVOC	2-Methylnaphthalene	91-57-6	T	ID	12				6.40E-04	5.00E-03	7.5E-01		2.6E-01	
Deep	SVOC	Methylphenol (total)	1319-77-3	T		12				1.30E-03	5.00E-03	1.0E+00		3.7E-01	
Deep	SVOC	Naphthalene	91-20-3	T	C	12				7.50E-04	5.00E-03	1.5E+00		5.2E-01	
Deep	SVOC	2-Nitroaniline	88-74-4	T		12				7.00E-04	2.00E-02				
Deep	SVOC	3-Nitroaniline	99-09-2	T	C	12				7.10E-04	2.00E-02				
Deep	SVOC	4-Nitroaniline	100-01-6	T	C	12				1.30E-03	2.00E-02				
Deep	SVOC	Nitrobenzene	98-95-3	T	D	12				8.10E-04	5.00E-03	9.6E-03		3.4E-03	
Deep	SVOC	2-Nitrophenol	88-75-5	T		12				2.10E-03	5.00E-03	5.8E-02		2.0E-02	
Deep	SVOC	4-Nitrophenol	100-02-7	T		12				1.90E-03	2.00E-02				
Deep	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	12				1.40E-03	5.00E-03	1.1E+00		2.7E-01	
Deep	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	12				6.70E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	12				7.80E-04	5.00E-03				
Deep	SVOC	Pentachlorophenol	87-86-5	T	B2	12				2.40E-03	5.00E-03	1.0E-03		1.0E-03	
Deep	SVOC	Phenanthrene	85-01-8	T	D	12				8.20E-04	5.00E-03	1.5E-01		5.2E-02	
Deep	SVOC	Phenol	108-95-2	T	ID	12				2.60E-03	5.00E-03	1.3E+01		4.4E+00	
Deep	SVOC	Pyrene	129-00-0	T	D	12				1.10E-03	5.00E-03	1.4E-01		1.4E-01	
Deep	SVOC	2,4,5-Trichlorophenol	95-95-4	T		12				1.20E-03	5.00E-03	2.1E+00		7.3E-01	

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TABLE 4-25

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Deep	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	12				1.70E-03	5.00E-03	4.7E-01		1.2E-01	
Deep	P/PCB	PCBs (total)	1336-36-3	T	B2	1				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
Deep	INORG	Antimony	7440-36-0	D		10				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
Deep	INORG	Antimony	7440-36-0	T		12				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
Deep	INORG	Arsenic	7440-38-2	D	A	10	6	6.90E-03	1.88E-02	3.90E-03	1.00E-02	5.0E-02	3.8E-01	5.0E-02	3.8E-01
Deep	INORG	Arsenic	7440-38-2	T	A	12	8	4.70E-03	3.19E-02	3.90E-03	1.00E-02	5.0E-02	6.4E-01	5.0E-02	6.4E-01
Deep	INORG	Barium	7440-39-3	D	D	10	10	6.46E-02	3.24E-01			2.0E+00	1.6E-01	2.0E+00	1.6E-01
Deep	INORG	Barium	7440-39-3	T	D	12	12	4.88E-02	3.31E-01			2.0E+00	1.7E-01	2.0E+00	1.7E-01
Deep	INORG	Beryllium	7440-41-7	D	B1	10				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Beryllium	7440-41-7	T	B1	12				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Cadmium	7440-43-9	D	B1	10				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
Deep	INORG	Cadmium	7440-43-9	T	B1	12	2	3.10E-04	3.30E-04	2.80E-04	5.00E-03	5.0E-03	6.6E-02	5.0E-03	6.6E-02
Deep	INORG	Chromium (total)	7440-47-3	D		10	10	1.50E-03	6.58E-03	1.40E-03	1.00E-02	1.0E-01	1.5E-02	1.0E-01	1.5E-02
Deep	INORG	Chromium (total)	7440-47-3	T		12	12	3.60E-03	1.13E-02	1.40E-03	1.00E-02	1.0E-01	1.1E-01	1.0E-01	1.1E-01
Deep	INORG	Cobalt	7440-48-4	D	B1	10				1.30E-03	2.00E-02	1.0E-01		4.0E-02	
Deep	INORG	Cobalt	7440-48-4	T	B1	12	2	1.30E-03	4.80E-03	1.30E-04	2.00E-02	1.0E-01	4.8E-02	4.0E-02	1.2E-01
Deep	INORG	Copper	7440-50-8	D	D	10				4.20E-03	5.00E-03	4.0E+00		1.4E+00	
Deep	INORG	Copper	7440-50-8	T	D	12	1	3.60E-03	3.60E-03	1.70E-03	5.00E-03	4.0E+00	9.0E-04	1.4E+00	2.6E-03
Deep	INORG	Lead	7439-92-1	D	B2	10				2.50E-03	3.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Lead	7439-92-1	T	B2	12				1.60E-03	3.00E-03	4.0E-03		4.0E-03	
Deep	INORG	Manganese	7439-96-5	D	D	10	10	3.11E-02	2.32E-01			2.5E+00	9.3E-02	8.6E-01	2.7E-01
Deep	INORG	Manganese	7439-96-5	T	D	12	12	3.44E-02	2.52E-01			2.5E+00	1.0E-01	8.6E-01	2.9E-01
Deep	INORG	Mercury	7439-97-6	D	D	10				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
Deep	INORG	Mercury	7439-97-6	T	D	12	1	8.80E-05	8.80E-05	6.90E-05	2.00E-04	2.0E-03	4.4E-02	2.0E-03	4.4E-02
Deep	INORG	Nickel	7440-02-0	D	A	10	3	2.40E-03	5.60E-03	2.20E-03	2.00E-02	1.0E-01	5.6E-02	1.0E-01	5.6E-02
Deep	INORG	Nickel	7440-02-0	T	A	12	8	2.90E-03	7.40E-03	2.20E-03	2.00E-02	1.0E-01	7.4E-02	1.0E-01	7.4E-02
Deep	INORG	Selenium	7782-49-2	D	D	10				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
Deep	INORG	Selenium	7782-49-2	T	D	12				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
Deep	INORG	Silver	7440-22-4	D	D	10				1.50E-03	5.00E-03	9.8E-02		3.4E-02	
Deep	INORG	Silver	7440-22-4	T	D	12				9.80E-04	5.00E-03	9.8E-02		3.4E-02	
Deep	INORG	Thallium	7440-28-0	D		11				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
Deep	INORG	Thallium	7440-28-0	T		13				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
Deep	INORG	Vanadium	7440-62-2	D		10				8.20E-04	1.00E-02	6.2E-02		4.5E-03	
Deep	INORG	Vanadium	7440-62-2	T		12				6.70E-04	1.00E-02	6.2E-02		4.5E-03	
Deep	INORG	Zinc	7440-66-6	D	D	10				1.20E-02	2.00E-02	5.0E+00		2.4E+00	
Deep	INORG	Zinc	7440-66-6	T	D	12	2	1.28E-02	2.76E-02	1.20E-02	2.00E-02	5.0E+00	5.5E-03	2.4E+00	1.2E-02
Intermediate	VOC	Acetone	67-64-1	T	ID	8	6	6.50E-01	1.30E+01	1.10E-03	3.60E-02	2.1E+00	**6.2E+00**	7.3E-01	**1.8E+01**
Intermediate	VOC	Benzene	71-43-2	T	A	8				3.70E-04	4.00E-02	5.0E-03		5.0E-03	
Intermediate	VOC	Bromodichloromethane	75-27-4	T	B2	8				3.20E-04	4.20E-02	1.0E-01		1.0E-01	
Intermediate	VOC	Bromoform	75-25-2	T	B2	8				3.70E-04	4.50E-02	1.0E-01		1.0E-01	
Intermediate	VOC	Bromomethane	74-83-9	T	D	7				3.00E-04	5.00E-02	2.9E-02		1.0E-02	
Intermediate	VOC	2-Butanone	78-93-3	T	ID	8				5.90E-04	1.40E-01	3.8E+01		1.3E+01	
Intermediate	VOC	Carbon Disulfide	75-15-0	T		8				2.40E-04	5.00E-02	2.3E+00		8.0E-01	
Intermediate	VOC	Carbon Tetrachloride	56-23-5	T	B2	8				3.70E-04	3.00E-02	5.0E-03		5.0E-03	
Intermediate	VOC	Chlorobenzene	108-90-7	T	D	8				3.80E-04	3.50E-02	1.0E-01		1.0E-01	
Intermediate	VOC	Chloroethane	75-00-3	T		8				2.90E-04	6.50E-02	1.7E+00		4.3E-01	
Intermediate	VOC	Chloroform	67-66-3	T	B2	8				3.50E-04	3.50E-02	1.0E-01		1.0E-01	
Intermediate	VOC	Chloromethane	74-87-3	T	D	8				4.90E-04	3.20E-02	1.1E+00		2.6E-01	
Intermediate	VOC	Cumene	98-82-8	T	D	8				3.90E-04	3.00E-02	2.3E+00		8.0E-01	
Intermediate	VOC	Cyclohexane	110-82-7	T	ID	8				3.30E-04	3.20E-02				
Intermediate	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				8.20E-04	1.60E-01	2.0E-04		2.0E-04	
Intermediate	VOC	Dibromochloromethane	124-48-1	T	C	8				3.70E-04	6.50E-02	1.0E-01		1.0E-01	
Intermediate	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				3.40E-04	5.50E-02	1.0E-03		1.0E-03	
Intermediate	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				3.80E-04	2.80E-02	6.0E-01		6.0E-01	
Intermediate	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				3.80E-04	3.80E-02	1.9E-02		6.6E-03	

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TABLE 4-25

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Intermediate	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				3.80E-04	4.20E-02	7.5E-02		7.5E-02	
Intermediate	VOC	Dichlorodifluoromethane	75-71-8	T		8				4.90E-04	6.50E-02	4.8E+00		1.7E+00	
Intermediate	VOC	1,1-Dichloroethane	75-34-3	T	C	8				3.00E-04	4.00E-02	2.5E+00		8.8E-01	
Intermediate	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.80E-04	5.20E-02	5.0E-03		5.0E-03	
Intermediate	VOC	1,1-Dichloroethene	75-35-4	T	C	8				3.10E-04	6.00E-02	7.0E-03		7.0E-03	
Intermediate	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8				3.50E-04	5.50E-02	7.0E-02		7.0E-02	
Intermediate	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				3.50E-04	3.80E-02	1.0E-01		1.0E-01	
Intermediate	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				4.10E-04	4.20E-02	5.0E-03		5.0E-03	
Intermediate	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				3.50E-04	6.80E-02	3.5E-02		8.5E-03	
Intermediate	VOC	Ethyl Benzene	100-41-4	T	D	8	1	6.50E-03	6.50E-03	4.20E-04	3.00E-02	7.0E-01	9.3E-03	7.0E-01	9.3E-03
Intermediate	VOC	2-Hexanone	591-78-6	T		8				3.60E-04	1.40E-01	2.9E+00		1.0E+00	
Intermediate	VOC	Methyl Acetate	79-20-9	T		8				5.40E-04	1.40E-01				
Intermediate	VOC	Methyl tert-butyl ether	1634-04-4	T		8				2.70E-04	7.10E-02	6.9E-01		2.4E-01	
Intermediate	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8	1	8.50E-03	8.50E-03	2.60E-04	1.40E-01	5.2E+00	1.6E-03	1.8E+00	4.7E-03
Intermediate	VOC	Methylcyclohexane	108-87-2	T		8				4.20E-04	3.80E-02				
Intermediate	VOC	Methylene Chloride	75-09-2	T	B2	8				3.90E-04	8.50E-02	5.0E-03		5.0E-03	
Intermediate	VOC	Styrene	100-42-5	T		8				3.50E-04	3.80E-02	1.0E-01		1.0E-01	
Intermediate	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				3.60E-04	6.20E-02	3.5E-02		8.5E-03	
Intermediate	VOC	Tetrachloroethene	127-18-4	T	C-B2	8				4.20E-04	5.80E-02	5.0E-03		5.0E-03	
Intermediate	VOC	Toluene	108-88-3	T	D	8	1	1.90E-02	1.90E-02	3.90E-04	4.50E-02	1.0E+00	1.9E-02	1.0E+00	1.9E-02
Intermediate	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				4.00E-04	4.20E-02	7.0E-02		7.0E-02	
Intermediate	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8				3.90E-04	3.80E-02	2.0E-01		2.0E-01	
Intermediate	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.60E-04	7.50E-02	5.0E-03		5.0E-03	
Intermediate	VOC	Trichloroethene	79-01-6	T	C-B2	8				4.20E-04	3.50E-02	5.0E-03		5.0E-03	
Intermediate	VOC	Trichlorofluoromethane	75-69-4	T		8				5.40E-04	7.00E-02	7.3E+00		2.6E+00	
Intermediate	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				3.20E-04	8.00E-02	1.7E+02		1.7E+02	
Intermediate	VOC	Vinyl Chloride	75-01-4	T	A	8				3.60E-04	3.80E-02	2.0E-03		2.0E-03	
Intermediate	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	2.50E-02	2.50E-02	4.40E-04	8.20E-02	1.0E+01	2.5E-03	1.0E+01	2.5E-03
Intermediate	SVOC	Acenaphthene	83-32-9	T		8				8.00E-04	5.00E-03	3.8E+00		1.3E+00	
Intermediate	SVOC	Acenaphthylene	208-96-8	T	D	8				7.10E-04	5.00E-03	1.5E-01		5.2E-02	
Intermediate	SVOC	Acetophenone	98-86-2	T	D	8				2.60E-03	1.00E-02	4.4E+00		1.5E+00	
Intermediate	SVOC	Anthracene	120-12-7	T	D	8				6.80E-04	5.00E-03	4.3E-02		4.3E-02	
Intermediate	SVOC	Atrazine	1912-24-9	T		8				2.50E-03	5.00E-03	3.0E-03		3.0E-03	
Intermediate	SVOC	Benzaldehyde	100-52-7	T		8				2.80E-03	1.00E-02				
Intermediate	SVOC	Benzo(a)anthracene	56-55-3	T	B2	8				7.00E-04	5.00E-03	8.5E-03		2.1E-03	
Intermediate	SVOC	Benzo(a)pyrene	50-32-8	T	B2	8				7.30E-04	5.00E-03	5.0E-03		5.0E-03	
Intermediate	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	8				9.40E-04	5.00E-03	2.0E-03		2.0E-03	
Intermediate	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	8				8.50E-04	5.00E-03	5.0E-03		5.0E-03	
Intermediate	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	8				8.40E-04	5.00E-03	5.0E-03		5.0E-03	
Intermediate	SVOC	Biphenyl	92-52-4	T	D	8				2.60E-03	1.00E-02				
Intermediate	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	8				8.70E-04	5.00E-03				
Intermediate	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	8				9.70E-04	5.00E-03	8.3E-03		2.0E-03	
Intermediate	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	8				2.70E-03	5.00E-03	6.0E-03		6.0E-03	
Intermediate	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	8				8.80E-04	5.00E-03				
Intermediate	SVOC	Butylbenzylphthalate	85-68-7	T	C	8				8.80E-04	5.00E-03	2.7E+00		1.2E+00	
Intermediate	SVOC	Caprolactam	105-60-2	T		8	5	3.30E-03	8.20E-01	2.50E-03	2.50E-03	1.7E+01	4.8E-02	5.8E+00	1.4E-01
Intermediate	SVOC	Carbazole	86-74-8	T	B2	8				8.20E-04	1.00E-02	3.5E-01		8.5E-02	
Intermediate	SVOC	4-Chloro-3-methylphenol	59-50-7	T		8				9.90E-04	5.00E-03	4.2E-01		1.5E-01	
Intermediate	SVOC	4-Chloroaniline	106-47-8	T		8				6.10E-04	1.00E-02				
Intermediate	SVOC	2-Chloronaphthalene	91-58-7	T		8				8.50E-04	5.00E-03	5.2E+00		1.8E+00	
Intermediate	SVOC	2-Chlorophenol	95-57-8	T		8				1.00E-03	5.00E-03	1.3E-01		4.5E-02	
Intermediate	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		8				7.90E-04	5.00E-03				
Intermediate	SVOC	Chrysene	218-01-9	T	B2	8				7.50E-04	5.00E-03	5.0E-03		5.0E-03	
Intermediate	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	8				7.90E-04	5.00E-03	2.0E-03		2.0E-03	
Intermediate	SVOC	Dibenzofuran	132-64-9	T	D	8				1.10E-03	5.00E-03				

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TABLE 4-4.5
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Intermediate	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	8				9.30E-04	2.00E-02	4.3E-03		1.1E-03	
Intermediate	SVOC	2,4-Dichlorophenol	120-83-2	T		8				8.50E-04	1.00E-02	2.1E-01		7.3E-02	
Intermediate	SVOC	Diethylphthalate	84-66-2	T	D	8				6.50E-04	5.00E-03	1.6E+01		5.5E+00	
Intermediate	SVOC	2,4-Dimethylphenol	105-67-9	T		8				8.50E-04	5.00E-03	1.0E+00		3.7E-01	
Intermediate	SVOC	Dimethylphthalate	131-11-3	T	D	8				7.60E-04	5.00E-03	2.1E+02		7.3E+01	
Intermediate	SVOC	Di-n-butylphthalate	84-74-2	T	D	8				6.70E-04	5.00E-03	2.5E+00		8.8E-01	
Intermediate	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		8				5.0E-03	2.00E-02	2.0E-02		2.0E-02	
Intermediate	SVOC	2,4-Dinitrophenol	51-28-5	T		8				3.00E-03	2.00E-02				
Intermediate	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	8				7.90E-04	5.00E-03	3.2E-02		7.7E-03	
Intermediate	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	8				5.20E-04	5.00E-03				
Intermediate	SVOC	Di-n-octylphthalate	117-84-0	T		8				1.10E-03	5.00E-03	3.8E-01		1.3E-01	
Intermediate	SVOC	Fluoranthene	206-44-0	T	D	8				8.10E-04	5.00E-03	2.1E-01		2.1E-01	
Intermediate	SVOC	Fluorene	86-73-7	T	D	8				1.00E-03	5.00E-03	2.0E+00		8.8E-01	
Intermediate	SVOC	Hexachlorobenzene	118-74-1	T	B2	8				7.40E-04	5.00E-03	1.0E-03		1.0E-03	
Intermediate	SVOC	Hexachlorobutadiene	87-68-3	T	C	8				7.30E-04	5.00E-03	4.2E-02		1.5E-02	
Intermediate	SVOC	Hexachlorocyclopentadiene	77-47-4	T	D	7				1.00E-03	5.00E-03	5.0E-02		5.0E-02	
Intermediate	SVOC	Hexachloroethane	67-72-1	T	C	8				7.40E-04	5.00E-03	2.1E-02		7.3E-03	
Intermediate	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	8				6.30E-04	5.00E-03	2.0E-03		2.0E-03	
Intermediate	SVOC	Isophorone	78-59-1	T	C	8				6.30E-04	5.00E-03	3.1E+00		7.7E-01	
Intermediate	SVOC	2-Methylnaphthalene	91-57-6	T	D	8				6.40E-04	5.00E-03	7.5E-01		2.6E-01	
Intermediate	SVOC	Methylphenol (total)	1319-77-3	T		6				1.30E-03	5.00E-03	1.0E+00		3.7E-01	
Intermediate	SVOC	Naphthalene	91-20-3	T	C	8				7.50E-04	5.00E-03	1.5E+00		5.2E-01	
Intermediate	SVOC	2-Nitroaniline	88-74-4	T		8				7.00E-04	2.00E-02				
Intermediate	SVOC	3-Nitroaniline	99-09-2	T	C	8				7.10E-04	2.00E-02				
Intermediate	SVOC	4-Nitroaniline	100-01-6	T	C	8				1.30E-03	2.00E-02				
Intermediate	SVOC	Nitrobenzene	98-95-3	T	D	8				8.10E-04	5.00E-03	9.6E-03		3.4E-03	
Intermediate	SVOC	2-Nitrophenol	88-75-5	T		8				2.10E-03	5.00E-03	5.8E-02		2.0E-02	
Intermediate	SVOC	4-Nitrophenol	100-02-7	T		8				1.90E-03	2.00E-02				
Intermediate	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	8				1.40E-03	5.00E-03	1.1E+00		2.7E-01	
Intermediate	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	8				6.70E-04	5.00E-03	5.0E-03		5.0E-03	
Intermediate	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	8				7.80E-04	5.00E-03				
Intermediate	SVOC	Pentachlorophenol	87-86-5	T	B2	8				2.40E-03	5.00E-03	1.0E-03		1.0E-03	
Intermediate	SVOC	Phenanthrene	85-01-8	T	D	8				8.20E-04	5.00E-03	1.5E-01		5.2E-02	
Intermediate	SVOC	Phenol	108-95-2	T	ID	8				2.60E-03	5.00E-03	1.3E+01		4.4E+00	
Intermediate	SVOC	Pyrene	129-00-0	T	D	8				1.10E-03	5.00E-03	1.4E-01		1.4E-01	
Intermediate	SVOC	2,4,5-Trichlorophenol	95-95-4	T		8				1.20E-03	5.00E-03	2.1E+00		7.3E-01	
Intermediate	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	8				1.70E-03	5.00E-03	4.7E-01		1.2E-01	
Intermediate	P/PCB	PCBs (total)	1336-36-3	T	B2	1				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
Intermediate	INORG	Antimony	7440-36-0	D		6				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
Intermediate	INORG	Antimony	7440-36-0	T		8				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
Intermediate	INORG	Arsenic	7440-38-2	D	A	6	4	6.10E-03	2.74E-02	3.90E-03	3.90E-03	5.0E-02	5.5E-01	5.0E-02	5.5E-01
Intermediate	INORG	Arsenic	7440-38-2	T	A	8	4	7.40E-03	2.66E-02	2.10E-03	3.90E-03	5.0E-02	5.3E-01	5.0E-02	5.3E-01
Intermediate	INORG	Barium	7440-39-3	D	D	6	6	8.18E-02	3.04E-01			2.0E+00	1.5E-01	2.0E+00	1.5E-01
Intermediate	INORG	Barium	7440-39-3	T	D	8	8	1.01E-01	2.88E-01			2.0E+00	1.4E-01	2.0E+00	1.4E-01
Intermediate	INORG	Beryllium	7440-41-7	D	B1	6				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
Intermediate	INORG	Beryllium	7440-41-7	T	B1	8				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
Intermediate	INORG	Cadmium	7440-43-9	D	B1	6				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
Intermediate	INORG	Cadmium	7440-43-9	T	B1	8	1	3.30E-04	3.30E-04	2.80E-04	5.00E-03	5.0E-03	6.6E-02	5.0E-03	6.6E-02
Intermediate	INORG	Chromium (total)	7440-47-3	D		6				1.40E-03	1.00E-02	1.0E-01		1.0E-01	
Intermediate	INORG	Chromium (total)	7440-47-3	T		8	6	1.90E-03	6.05E-02	1.40E-03	1.00E-02	1.0E-01	6.1E-01	1.0E-01	6.1E-01
Intermediate	INORG	Cobalt	7440-48-4	D	B1	6	2	1.50E-03	2.10E-03	1.30E-03	2.00E-02	1.0E-01	2.1E-02	4.0E-02	5.3E-02
Intermediate	INORG	Cobalt	7440-48-4	T	B1	8	5	1.80E-03	6.20E-03	1.30E-03	2.00E-02	1.0E-01	6.2E-02	4.0E-02	1.6E-01
Intermediate	INORG	Copper	7440-50-8	D	D	6				4.20E-03	5.00E-03	4.0E+00		1.4E+00	
Intermediate	INORG	Copper	7440-50-8	T	D	8	3	5.60E-03	9.90E-03	1.70E-03	4.20E-03	4.0E+00	2.5E-03	1.4E+00	7.1E-03
Intermediate	INORG	Lead	7439-92-1	D	B2	6				2.50E-03	3.00E-03	4.0E-03		4.0E-03	

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TABLE 4-425
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

DATA SUMMARY FOR SITE-WIDE HYDROGEOLOGIC INVESTIGATION (DEEP AND INTERMEDIATE GROUNDWATER)

Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	No of Analyses	No of Detects	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detect to Industrial Drinking Water Criteria	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detect to Residential Drinking Water Criteria
Intermediate	INORG	Lead	7439-92-1	T	B2	8	1	2.80E-03	2.80E-03	1.60E-03	3.00E-03	4.0E-03	7.0E-01	4.0E-03	7.0E-01
Intermediate	INORG	Manganese	7439-96-5	D	D	6	6	3.49E-02	2.19E-01			2.5E+00	8.8E-02	8.6E-01	2.5E-01
Intermediate	INORG	Manganese	7439-96-5	T	D	8	8	3.75E-02	3.52E-01			2.5E+00	1.4E-01	8.6E-01	4.1E-01
Intermediate	INORG	Mercury	7439-97-6	D	D	6				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
Intermediate	INORG	Mercury	7439-97-6	T	D	8				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
Intermediate	INORG	Nickel	7440-02-0	D	A	6	3	2.30E-03	2.32E-02	2.20E-03	2.00E-02	1.0E-01	2.3E-01	1.0E-01	2.3E-01
Intermediate	INORG	Nickel	7440-02-0	T	A	8	7	2.30E-03	5.90E-02	2.20E-03	2.20E-03	1.0E-01	5.9E-01	1.0E-01	5.9E-01
Intermediate	INORG	Selenium	7782-49-2	D	D	6				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
Intermediate	INORG	Selenium	7782-49-2	T	D	8				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
Intermediate	INORG	Silver	7440-22-4	D	D	6				4.50E-03	5.00E-03	9.8E-02		3.4E-02	
Intermediate	INORG	Silver	7440-22-4	T	D	8				9.60E-04	5.00E-03	9.8E-02		3.4E-02	
Intermediate	INORG	Thallium	7440-28-0	D		6	2	6.80E-04	6.10E-03	1.80E-05	1.00E-02	2.0E-03	**3.1E+00**	2.0E-03	**3.1E+00**
Intermediate	INORG	Thallium	7440-28-0	T		8	6	9.20E-05	5.20E-05	1.80E-05	1.00E-02	2.0E-03	4.6E-02	2.0E-03	4.6E-02
Intermediate	INORG	Vanadium	7440-62-2	D		6				8.20E-04	1.00E-02	6.2E-02		4.5E-03	
Intermediate	INORG	Vanadium	7440-62-2	T		8	2	2.20E-03	3.40E-03	6.70E-04	1.00E-02	6.2E-02	5.5E-02	4.5E-03	7.6E-01
Intermediate	INORG	Zinc	7440-66-6	D		6	6	1.56E-02	1.56E-02	1.20E-02	2.00E-02	5.0E+00	3.1E-03	2.4E+00	6.5E-03
Intermediate	INORG	Zinc	7440-66-6	T		8	8	1.34E-02	3.03E-02	1.20E-02	2.00E-02	5.0E+00	6.1E-03	2.4E+00	1.3E-02

Notes:
Screening Criteria is from Michigan DEQ Act 451, Part 201.
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to the Screening Criteria
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 4-43
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC MIGHIGAN
RCRA FACILITY INVESTIGATION

Well	Date (mm/dd/yy)	Depth to Water (feet bgs)	Depth to NAPL (feet bgs)	NAPL Thickness (feet)
LNAPL AREA NO. 1				
MWW1-05	11/11/02*	29.36	29.05	0.31
	10/27/03	30.66	29.56	1.1
LNAPL AREA NO. 3				
MWW8-08	10/28/03*	31.59	30.9	0.69
MWW8-14	10/28/03	30.25	30.21	0.04
MWW8-15	10/28/03	32.31	32.29	0.02
MWW8-16	10/28/03	29.99	29.39	0.6
RWW8-01	10/28/03	26.18	26.06	0.12
RWW8-02	10/28/03	31.5	29.93	1.57
LNAPL AREA NO. 4				
MWM2-04	01/02/02	16.08	16.02	0.06
	08/26/02**	16.49	16.48	0.01
MWM2-06	08/26/03	17.64	16.62	1.02
	11/11/02	17.52	16.81	0.71
	05/03/03	18.02	16.70	1.32
	06/12/03	16.92	16.68	0.24
	06/17/03	17.06	16.71	0.29
	06/23/03	17.53	16.98	0.55
	07/16/03	17.40	16.93	0.47
	08/01/03	17.55	17.01	0.54
	08/11/03	17.39	17.02	0.37
	08/27/03	17.44	17.03	0.41
LNAPL AREA NO. 5				
MWM4-06	07/24/03	5.99	5.54	0.45
	07/25/03	6.10	5.53	0.57
	07/28/03	9.15	5.48	3.67
	08/11/03	6.11	5.4	0.71
	08/27/03	6.16	5.41	0.75
MWM16-03	07/24/03	5.42	Globules in well	
	07/28/03	5.38	Oil sheen on water, petroleum odor	
	08/11/03	5.34	Globules present on probe	
	08/27/03	5.35	Globules in well	
LNAPL AREA NO. 6				
MWW9-02	07/31/03	33.7	--	--
	08/11/03	33.17	--	--
	08/27/03*	33.68	33.66	0.02
	10/27/03	33.92	33.67	0.25

Note:

* - LNAPL was observed for the first time on this date in this well.

** - LNAPL has not been detected at MWM2-04 since the August 2002 reading.

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TABLE 3-4

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SMEAR ZONE SOIL SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Max Detected (mg/kg)	Calculated Max Smear Zone Soil Conc (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Indoor Air Criteria	Industrial Soil Volatilization to Ambient Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Ambient Air Criteria	Industrial Particulate Inhalation Criteria (mg/kg)	Ratio of Max Conc to Industrial Particulate Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Conc to Industrial Direct Contact Criteria
M-02	VOC	Acetone	67-64-1	ID	1					1.1E+05		1.6E+05		1.7E+08		7.3E+04	
M-02	VOC	Benzene	71-43-2	A	1					8.4E+00		4.5E+01		4.7E+05		4.0E+02	
M-02	VOC	Bromodichloromethane	75-27-4	B2	1					6.4E+00		3.1E+01		1.1E+05		4.9E+02	
M-02	VOC	Bromoform	75-25-2	B2	1					7.7E+02		3.1E+03		3.6E+06		8.7E+02	
M-02	VOC	Bromomethane	74-83-9	D	1					1.6E+00		1.3E+01		1.5E+05		1.0E+03	
M-02	VOC	2-Butanone	78-93-3	ID	1					2.7E+04		3.5E+04		2.9E+07		2.7E+04	
M-02	VOC	Carbon Disulfide	75-15-0		1					1.4E+03		1.6E+03		2.1E+07		2.8E+02	
M-02	VOC	Carbon Tetrachloride	56-23-5	B2	1					3.9E+01		1.2E+01		1.7E+05		3.9E+02	
M-02	VOC	Chlorobenzene	108-90-7	D	1					2.2E+02		9.2E+02		2.1E+06		2.6E+02	
M-02	VOC	Chloroethane	75-00-3		1					9.5E+02		3.6E+04		2.9E+08		9.5E+02	
M-02	VOC	Chloroform	67-66-3	B2	1	1	4.20E-01	1.08E-01		3.3E+01	2.9E-03	1.5E+02	7.2E-04	1.6E+06	6.8E-08	1.5E+03	7.2E-05
M-02	VOC	Chloromethane	74-87-3	D	1					1.0E+01		1.2E+02		2.6E+06		1.1E+03	
M-02	VOC	Cumene	98-82-8	D	1	1	7.90E-01	2.04E-01		3.9E+02	5.2E-04	2.0E+03	1.0E-04	2.6E+06	7.8E-08	3.9E+02	5.2E-04
M-02	VOC	Cyclohexane	110-82-7	ID	1												
M-02	VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	1					1.2E+00		1.5E+01		5.9E+03		1.2E+00	
M-02	VOC	Dibromochloromethane	124-48-1	C	1					2.1E+01		8.0E+01		1.6E+05		5.0E+02	
M-02	VOC	1,2-Dibromoethane	106-93-4	B2	1					3.6E+00		5.8E+00		1.8E+04		4.3E-01	
M-02	VOC	1,2-Dichlorobenzene	95-50-1	D	1					2.1E+02		4.6E+04		4.4E+07		2.1E+02	
M-02	VOC	1,3-Dichlorobenzene	541-73-1	D	1											1.7E+02	
M-02	VOC	1,4-Dichlorobenzene	106-46-7	C	1					1.0E+02		2.6E+02		5.7E+05		1.9E+03	
M-02	VOC	Dichlorodifluoromethane	75-71-8		1					1.7E+03		6.3E+04		1.5E+09		1.0E+03	
M-02	VOC	1,1-Dichloroethane	75-34-3	C	1	1	2.10E+01	5.42E+00		4.3E+02	1.3E-02	2.5E+03	2.2E-03	1.5E+07	3.6E-07	8.9E+02	6.1E-03
M-02	VOC	1,2-Dichloroethane	107-06-2	B2	1					1.1E+01		2.1E+01		1.5E+05		4.2E+02	
M-02	VOC	1,1-Dichloroethene	75-35-4	C	1	1	2.40E+00	6.19E-01		3.3E-01	**1.9E+00**	3.7E+00	1.7E-01	7.8E+04	7.9E-06	5.7E+02	1.1E-03
M-02	VOC	cis-1,2-Dichloroethene	156-59-2	D	1					4.1E+01		2.1E+02		1.0E+06		6.4E+02	
M-02	VOC	trans-1,2-Dichloroethene	156-60-5		1					4.3E+01		3.3E+02		2.1E+06		1.4E+03	
M-02	VOC	1,2-Dichloropropane	78-87-5	B2	1					7.4E+00		3.0E+01		1.2E+05		5.5E+02	
M-02	VOC	1,3-Dichloropropene (total)	542-75-6	B2	1					5.4E+00		6.0E+01		5.9E+05		2.4E+02	
M-02	VOC	Ethyl Benzene	100-41-4	D	1	1	2.70E+00	6.97E-01		1.4E+02	5.0E-03	2.4E+03	2.9E-04	1.3E+07	5.4E-08	1.4E+02	5.0E-03
M-02	VOC	2-Hexanone	591-78-6		1					1.8E+03		1.3E+03		1.2E+06		2.5E+03	
M-02	VOC	Methyl Acetate	79-20-9		1												
M-02	VOC	Methyl tert-butyl ether	1634-04-4		1					5.9E+03		3.0E+04		8.8E+07		5.9E+03	
M-02	VOC	4-Methyl-2-pentanone	108-10-1	ID	1	1	3.40E-01	8.77E-02		2.7E+03	3.2E-05	5.3E+04	1.7E-06	6.0E+07	1.5E-09	2.7E+03	3.2E-05
M-02	VOC	Methylcyclohexane	108-87-2		1	1	2.70E-01	6.97E-02									
M-02	VOC	Methylene Chloride	75-09-2	B2	1	1	1.30E+00	3.35E-01		2.4E+02	1.4E-03	7.0E+02	4.8E-04	8.3E+06	4.0E-08	2.3E+03	1.5E-04
M-02	VOC	Styrene	100-42-5		1					5.2E+02		3.3E+03		6.9E+06		5.2E+02	
M-02	VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	1					2.3E+01		3.4E+01		6.8E+04		2.4E+02	
M-02	VOC	Tetrachloroethene	127-18-4	C-B2	1	1	1.10E+01	2.84E+00		6.0E+01	4.7E-02	6.0E+02	4.7E-03	6.8E+06	4.2E-07	8.8E+01	3.2E-02
M-02	VOC	Toluene	108-88-3	D	1	1	3.30E+00	8.51E-01		2.5E+02	3.4E-03	3.3E+03	2.6E-04	1.2E+07	7.1E-08	2.5E+02	3.4E-03
M-02	VOC	1,2,4-Trichlorobenzene	120-82-1	D	1					1.1E+03		3.4E+04		1.1E+07		1.1E+03	
M-02	VOC	1,1,1-Trichloroethane	71-55-6	D	1	1	4.40E+00	1.14E+00		4.6E+02	2.5E-03	4.5E+03	2.5E-04	2.9E+07	3.9E-08	4.6E+02	2.5E-03
M-02	VOC	1,1,2-Trichloroethane	79-00-5	C	1					2.4E+01		5.7E+01		2.5E+05		8.4E+02	
M-02	VOC	Trichloroethene	79-01-6	C-B2	1	1	1.40E+00	3.61E-01		3.7E+01	9.8E-03	2.6E+02	1.4E-03	2.3E+06	1.6E-07	5.0E+02	7.2E-04
M-02	VOC	Trichlorofluoromethane	75-69-4		1					5.6E+02		1.1E+05		1.7E+09		5.6E+02	
M-02	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		1					5.5E+02		2.1E+05		2.3E+09		5.5E+02	
M-02	VOC	Vinyl Chloride	75-01-4	A	1					2.8E+00		2.9E+01		8.9E+05		3.4E+01	
M-02	VOC	Xylenes (total)	1330-20-7	ID	1	1	1.00E+01	2.58E+00		1.5E+02	1.7E-02	5.4E+04	4.8E-05	1.3E+08	2.0E-08	1.5E+02	1.7E-02
M-02	SVOC	Acenaphthene	83-32-9		1					3.5E+05		9.7E+04		6.2E+06		1.3E+05	
M-02	SVOC	Acenaphthylene	208-96-8	D	1					3.0E+03		2.7E+03		1.0E+06		5.2E+03	
M-02	SVOC	Acetophenone	98-86-2	D	1					1.9E+03		5.2E+04		1.4E+07		1.1E+03	
M-02	SVOC	Anthracene	120-12-7	D	1	1	1.20E+02	3.10E+01		1.0E+06	3.1E-05	1.6E+06	1.9E-05	2.9E+07	1.1E-06	7.3E+05	4.2E-05
M-02	SVOC	Atrazine	1912-24-9		1											3.3E+02	
M-02	SVOC	Benzaldehyde	100-52-7		1												
M-02	SVOC	Benzo(a)anthracene	56-55-3	B2	1											8.0E+01	
M-02	SVOC	Benzo(a)pyrene	50-32-8	B2	1									1.9E+03		8.0E+00	

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TABLE 3-1

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SMEAR ZONE SOIL SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Max Detected (mg/kg)	Calculated Max Smear Zone Soil Conc (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Indoor Air Criteria	Industrial Soil Volatilization to Ambient Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Ambient Air Criteria	Industrial Particulate Inhalation Criteria (mg/kg)	Ratio of Max Conc to Industrial Particulate Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Conc to Industrial Direct Contact Criteria
M-02	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1											8.0E+01	
M-02	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1									3.5E+05		7.0E+03	
M-02	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1											8.0E+02	
M-02	SVOC	Biphenyl	92-52-4	D	1												
M-02	SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	1												
M-02	SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	1					4.4E+01		1.3E+01		1.2E+04		5.8E+01	
M-02	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1									8.9E+05		1.0E+04	
M-02	SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	1												
M-02	SVOC	Butylbenzylphthalate	85-68-7	C	1									2.1E+07		3.1E+02	
M-02	SVOC	Caprolactam	105-60-2		1									2.9E+05		3.1E+05	
M-02	SVOC	Carbazole	86-74-8	B2	1											2.4E+03	
M-02	SVOC	4-Chloro-3-methylphenol	59-50-7		1											1.5E+04	
M-02	SVOC	4-Chloroaniline	106-47-8		1												
M-02	SVOC	2-Chloronaphthalene	91-58-7		1											1.8E+05	
M-02	SVOC	2-Chlorophenol	95-57-8		1											4.5E+03	
M-02	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		1												
M-02	SVOC	Chrysene	218-01-9	B2	1											8.0E+03	
M-02	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1											8.0E+00	
M-02	SVOC	Dibenzofuran	132-64-9	D	1												
M-02	SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	1									8.2E+03		3.0E+01	
M-02	SVOC	2,4-Dichlorophenol	120-83-2		1									2.3E+06		1.8E+03	
M-02	SVOC	Diethylphthalate	84-66-2	D	1									1.5E+06		7.4E+02	
M-02	SVOC	2,4-Dimethylphenol	105-67-9		1									2.1E+06		3.6E+04	
M-02	SVOC	Dimethylphthalate	131-11-3	D	1									1.5E+06		7.9E+02	
M-02	SVOC	Di-n-butylphthalate	84-74-2	D	1									1.5E+06		7.6E+02	
M-02	SVOC	4,6-Dinitro-2-methylphenol	534-52-1		1											2.6E+02	
M-02	SVOC	2,4-Dinitrophenol	51-28-5		1												
M-02	SVOC	2,4-Dinitrotoluene	121-14-2	B2	1									2.0E+04		2.2E+02	
M-02	SVOC	2,6-Dinitrotoluene	606-20-2	B2	1												
M-02	SVOC	Di-n-octylphthalate	117-84-0		1											2.0E+04	
M-02	SVOC	Fluoranthene	206-44-0	D	1	1	1.30E+02	3.35E+01		1.0E+06	3.4E-05	8.9E+05	3.8E-05	4.1E+06	8.2E-06	1.3E+05	2.6E-04
M-02	SVOC	Fluorene	86-73-7	D	1	1	1.70E+02	4.39E+01		1.0E+06	4.4E-05	1.5E+05	2.9E-04	4.1E+06	1.1E-05	8.7E+04	5.0E-04
M-02	SVOC	Hexachlorobenzene	118-74-1	B2	1					2.2E+02		5.6E+01		8.5E+03		3.7E+01	
M-02	SVOC	Hexachlorobutadiene	87-68-3	C	1					3.5E+02		4.6E+02		1.8E+05		3.5E+02	
M-02	SVOC	Hexachlorocyclopentadiene	77-47-4	E	1					5.6E+01		6.0E+01		5.9E+03		7.2E+02	
M-02	SVOC	Hexachloroethane	67-72-1	C	1					7.9E+01		6.6E+02		1.0E+05		7.3E+02	
M-02	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1											8.0E+01	
M-02	SVOC	Isophorone	78-59-1	C	1									8.2E+06		2.4E+03	
M-02	SVOC	2-Methylnaphthalene	91-57-6	ID	1	1	5.90E+01	1.52E+01								2.6E+04	5.9E-04
M-02	SVOC	Methylphenol (total)	1319-77-3		1									2.9E+06		3.6E+04	
M-02	SVOC	Naphthalene	91-20-3	C	1					4.7E+02		3.5E+02		8.8E+04		5.2E+04	
M-02	SVOC	2-Nitroaniline	88-74-4		1												
M-02	SVOC	3-Nitroaniline	99-09-2	C	1												
M-02	SVOC	4-Nitroaniline	100-01-6	C	1												
M-02	SVOC	Nitrobenzene	98-95-3	D	1					1.7E+02		6.4E+01		2.1E+04		3.4E+02	
M-02	SVOC	2-Nitrophenol	88-75-5		1											2.0E+03	
M-02	SVOC	4-Nitrophenol	100-02-7		1												
M-02	SVOC	N-Nitrosodiphenylamine	86-30-6	B2	1											7.8E+03	
M-02	SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	1									2.0E+03		5.4E+00	
M-02	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	1												
M-02	SVOC	Pentachlorophenol	87-86-5	B2	1									1.3E+05		3.2E+02	
M-02	SVOC	Phenanthrene	85-01-8	D	1	1	6.60E+02	1.70E+02		5.1E+03	3.3E-02	1.9E+02	9.0E-01	2.9E+03	5.9E-02	5.2E+03	3.3E-02
M-02	SVOC	Phenol	108-95-2	ID	1									1.8E+07		1.2E+04	
M-02	SVOC	Pyrene	129-00-0	D	1	1	1.70E+02	4.39E+01		1.0E+06	4.4E-05	7.8E+05	5.6E-05	2.9E+06	1.5E-05	8.4E+04	5.2E-04
M-02	SVOC	2,4,5-Trichlorophenol	95-95-4		1									1.0E+07		7.3E+04	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SMEAR ZONE SOIL SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Max Detected (mg/kg)	Calculated Max Smear Zone Soil Conc (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Indoor Air Criteria	Industrial Soil Volatilization to Ambient Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Ambient Air Criteria	Industrial Particulate Inhalation Criteria (mg/kg)	Ratio of Max Conc to Industrial Particulate Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Conc to Industrial Direct Contact Criteria
M-02	SVOC	2,4,6-Trichlorophenol	88-06-2	B2	1									1.3E+06		3.3E+03	
M-02	P/PCB	PCBs (total)	1336-36-3	B2	1	1	1.70E+02	4.39E+01		1.6E+04	2.7E-03	8.1E+02	5.4E-02	6.5E+03	6.8E-03	1.6E+01	**2.7E+00**
M-02	INORG	Antimony	7440-36-0		1	1	4.80E-01	1.24E-01						5.9E+03	2.1E-05	6.7E+02	1.8E-04
M-02	INORG	Arsenic	7440-38-2	A	1	1	6.50E+00	1.68E+00	1.3E+01					9.1E+02		3.7E+01	
M-02	INORG	Barium	7440-39-3	D	1				1.1E+02					1.5E+05		1.3E+05	
M-02	INORG	Beryllium	7440-41-7	B1	1				1.5E+00					5.9E+02		1.6E+03	
M-02	INORG	Cadmium	7440-43-9	B1	1				1.2E+00					2.2E+03		2.1E+03	
M-02	INORG	Chromium (total)	7440-47-3		1	1	2.70E+00	6.97E-01	4.9E+01					2.4E+02		9.2E+03	
M-02	INORG	Cobalt	7440-48-4	B1	1	1	8.40E-02	2.17E-02	1.7E+01					5.9E+03		9.0E+03	
M-02	INORG	Copper	7440-50-8	D	1	1	3.20E+00	8.26E-01	3.2E+01					5.9E+04		7.3E+04	
M-02	INORG	Cyanide (total)	57-12-5	D	1	1	1.20E-01	3.10E-02						2.5E+02	1.2E-04	2.5E+02	1.2E-04
M-02	INORG	Lead	7439-92-1	B2	1	1	8.30E-01	2.14E-01	9.0E+01					4.4E+04		9.0E+02	
M-02	INORG	Manganese	7439-96-5	D	1				5.1E+02					1.5E+03		9.0E+04	
M-02	INORG	Mercury	7439-97-6	D	1				1.3E-01	8.9E+01		6.2E+01		8.8E+03		5.8E+02	
M-02	INORG	Nickel	7440-02-0	A	1	1	9.17E+01	2.37E+01	3.0E+01					1.6E+04		1.5E+05	
M-02	INORG	Selenium	7782-49-2	D	1				4.1E-01					5.9E+04		9.6E+03	
M-02	INORG	Silver	7440-22-4	D	1	1	1.10E-01	2.84E-02						2.9E+03	9.8E-06	9.0E+03	3.2E-06
M-02	INORG	Thallium	7440-28-0		1				5.2E-01							1.3E+02	
M-02	INORG	Vanadium	7440-62-2		1				3.3E+01							5.5E+03	
M-02	INORG	Zinc	7440-66-6	D	1	1	1.90E+00	4.90E-01	1.9E+02							6.3E+05	
M-16	VOC	Acetone	67-64-1	ID	1					1.1E+05		1.6E+05		1.7E+08		7.3E+04	
M-16	VOC	Benzene	71-43-2	A	1	1	1.40E-01	3.61E-02		8.4E+00	4.3E-03	4.5E+01	8.0E-04	4.7E+05	7.7E-08	4.0E+02	9.0E-05
M-16	VOC	Bromodichloromethane	75-27-4	B2	1					6.4E+00		3.1E+01		1.1E+05		4.9E+02	
M-16	VOC	Bromoform	75-25-2	B2	1					7.7E+02		3.1E+03		3.6E+06		8.7E+02	
M-16	VOC	Bromomethane	74-83-9	D	1					1.6E+00		1.3E+01		1.5E+05		1.0E+03	
M-16	VOC	2-Butanone	78-93-3	ID	1					2.7E+04		3.5E+04		2.9E+07		2.7E+04	
M-16	VOC	Carbon Disulfide	75-15-0		1					1.4E+02		1.6E+03		2.1E+07		2.8E+02	
M-16	VOC	Carbon Tetrachloride	56-23-5	B2	1					9.9E-01		1.2E+01		1.7E+05		3.9E+02	
M-16	VOC	Chlorobenzene	108-90-7	D	1					2.2E+02		9.2E+02		2.1E+06		2.6E+02	
M-16	VOC	Chloroethane	75-00-3		1					9.5E+02		3.6E+04		2.9E+08		9.5E+02	
M-16	VOC	Chloroform	67-66-3	B2	1					3.8E+01		1.5E+02		1.6E+06		1.5E+03	
M-16	VOC	Chloromethane	74-87-3	D	1					1.0E+01		1.2E+02		2.6E+06		1.1E+03	
M-16	VOC	Cumene	98-82-8	D	1	1	6.10E-01	1.57E-01		3.9E+02	4.0E-04	2.0E+03	7.9E-05	2.6E+06	6.1E-08	3.9E+02	4.0E-04
M-16	VOC	Cyclohexane	110-82-7	ID	1	1	7.30E-01	1.88E-01									
M-16	VOC	1,2-Dibromo-3-chloropropane	96-12-8	B2	1					1.2E+00		1.5E+01		5.9E+03		1.2E+00	
M-16	VOC	Dibromochloromethane	124-48-1	C	1					2.1E+01		8.0E+01		1.6E+05		5.0E+02	
M-16	VOC	1,2-Dibromoethane	106-93-4	B2	1					3.6E+00		5.8E+00		1.8E+04		4.3E-01	
M-16	VOC	1,2-Dichlorobenzene	95-50-1	D	1					2.1E+02		4.6E+04		4.4E+07		2.1E+02	
M-16	VOC	1,3-Dichlorobenzene	541-73-1	D	1											1.7E+02	
M-16	VOC	1,4-Dichlorobenzene	106-46-7	C	1					1.0E+02		2.6E+02		5.7E+05		1.9E+03	
M-16	VOC	Dichlorodifluoromethane	75-71-8		1					1.7E+03		6.3E+04		1.5E+09		1.0E+03	
M-16	VOC	1,1-Dichloroethane	75-34-3	C	1					4.3E+02		2.5E+03		1.5E+07		8.9E+02	
M-16	VOC	1,2-Dichloroethane	107-06-2	B2	1					1.1E+01		2.1E+01		1.5E+05		4.2E+02	
M-16	VOC	1,1-Dichloroethene	75-35-4	C	1					3.3E-01		3.7E+00		7.8E+04		5.7E+02	
M-16	VOC	cis-1,2-Dichloroethene	156-59-2	D	1	1	3.00E-01	7.74E-02		4.1E+01	1.9E-03	2.1E+02	3.7E-04	1.0E+06	7.7E-08	6.4E+02	1.2E-04
M-16	VOC	trans-1,2-Dichloroethene	156-60-5		1					4.3E+01		3.3E+02		2.1E+06		1.4E+03	
M-16	VOC	1,2-Dichloropropane	78-87-5	B2	1					7.4E+00		3.0E+01		1.2E+05		5.5E+02	
M-16	VOC	1,3-Dichloropropene (total)	542-75-6	B2	1					5.4E+00		6.0E+01		5.9E+05		2.4E+02	
M-16	VOC	Ethyl Benzene	100-41-4	D	1	1	7.10E+00	1.83E+00		1.4E+02	1.3E-02	2.4E+03	7.6E-04	1.3E+07	1.4E-07	1.4E+02	1.3E-02
M-16	VOC	2-Hexanone	591-78-6		1					1.2E+03		1.3E+03		1.2E+06		2.5E+03	
M-16	VOC	Methyl Acetate	79-20-9		1	1	4.80E-01	1.24E-01									
M-16	VOC	Methyl tert-butyl ether	1634-04-4		1					5.9E+03		3.0E+04		8.8E+07		5.9E+03	
M-16	VOC	4-Methyl-2-pentanone	108-10-1	ID	1					2.7E+03		5.3E+04		6.0E+07		2.7E+03	
M-16	VOC	Methylcyclohexane	108-87-2		1	1	1.90E+00	4.90E-01									
M-16	VOC	Methylene Chloride	75-09-2	B2	1					2.4E+02		7.0E+02		8.3E+06		2.3E+03	

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TABLE 3-4

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SMEAR ZONE SOIL SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Max Detected (mg/kg)	Calculated Max Smear Zone Soil Conc (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Indoor Air Criteria	Industrial Soil Volatilization to Ambient Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Ambient Air Criteria	Industrial Particulate Inhalation Criteria (mg/kg)	Ratio of Max Conc to Industrial Particulate Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Conc to Industrial Direct Contact Criteria
M-16	VOC	Styrene	100-42-5		1					5.2E+02		3.3E+03		6.9E+06		5.2E+02	
M-16	VOC	1,1,2,2-Tetrachloroethane	79-34-5	C	1					2.3E+01		3.4E+01		6.8E+04		2.4E+02	
M-16	VOC	Tetrachloroethene	127-18-4	C-B2	1	1	2.20E-01	5.68E-02		6.0E+01	9.5E-04	6.0E+02	9.5E-05	6.8E+06	8.3E-09	8.8E+01	6.5E-04
M-16	VOC	Toluene	108-88-3	D	1	1	1.20E+01	3.10E+00		2.5E+02	1.2E-02	3.3E+03	9.4E-04	1.2E+07	2.6E-07	2.5E+02	1.2E-02
M-16	VOC	1,2,4-Trichlorobenzene	120-82-1	D	1					1.1E+03		3.4E+04		1.1E+07		1.1E+03	
M-16	VOC	1,1,1-Trichloroethane	71-55-6	D	1					4.6E+02		4.5E+03		2.9E+07		4.6E+02	
M-16	VOC	1,1,2-Trichloroethane	79-00-5	C	1					2.4E+01		5.7E+01		2.5E+05		8.4E+02	
M-16	VOC	Trichloroethene	79-01-6	C-B2	1	1	5.30E-01	1.37E-01		3.7E+01	3.7E-03	2.6E+02	5.3E-04	2.3E+06	5.9E-08	5.0E+02	2.7E-04
M-16	VOC	Trichlorofluoromethane	75-69-4		1					5.6E+02		1.1E+05		1.7E+09		5.6E+02	
M-16	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		1					5.5E+02		2.1E+05		2.3E+09		5.5E+02	
M-16	VOC	Vinyl Chloride	75-01-4	A	1					2.3E+00		2.9E+01		8.9E+05		3.4E+01	
M-16	VOC	Xylenes (total)	1330-20-7	ID	1	1	3.90E+01	1.01E+01		1.5E+02	6.7E-02	5.4E+04	1.9E-04	1.3E+08	7.7E-08	1.5E+02	6.7E-02
M-16	SVOC	Acenaphthene	83-32-9		1					3.5E+05		9.7E+04		6.2E+06		1.3E+05	
M-16	SVOC	Acenaphthylene	208-96-8	D	1					3.0E+03		2.7E+03		1.0E+06		5.2E+03	
M-16	SVOC	Acetophenone	98-86-2	D	1					1.1E+03		5.2E+04		1.4E+07		1.1E+03	
M-16	SVOC	Anthracene	120-12-7	D	1					1.0E+06		1.6E+06		2.9E+07		7.3E+05	
M-16	SVOC	Atrazine	1912-24-9		1											3.3E+02	
M-16	SVOC	Benzaldehyde	100-52-7		1												
M-16	SVOC	Benzo(a)anthracene	56-55-3	B2	1											8.0E+01	
M-16	SVOC	Benzo(a)pyrene	50-32-8	B2	1									1.9E+03		8.0E+00	
M-16	SVOC	Benzo(b)fluoranthene	205-99-2	B2	1											8.0E+01	
M-16	SVOC	Benzo(g,h,i)perylene	191-24-2	D	1									3.5E+05		7.0E+03	
M-16	SVOC	Benzo(k)fluoranthene	207-08-9	B2	1											8.0E+02	
M-16	SVOC	Biphenyl	92-52-4	D	1												
M-16	SVOC	bis(2-Chloroethoxy)methane	111-91-1	D	1												
M-16	SVOC	bis(2-Chloroethyl) ether	111-44-4	B2	1					4.4E+01		1.3E+01		1.2E+04		5.8E+01	
M-16	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1	1	5.30E+02	1.37E+02						8.9E+05	1.5E-04	1.0E+04	1.4E-02
M-16	SVOC	4-Bromophenyl-phenyl ether	101-55-3	D	1												
M-16	SVOC	Butylbenzylphthalate	85-68-7	C	1	1	4.00E+02	1.03E+02						2.1E+07	4.9E-06	3.1E+02	3.3E-01
M-16	SVOC	Caprolactam	105-60-2		1									2.9E+05		3.1E+05	
M-16	SVOC	Carbazole	86-74-8	B2	1											2.4E+03	
M-16	SVOC	4-Chloro-3-methylphenol	59-50-7		1											1.5E+04	
M-16	SVOC	4-Chloroaniline	106-47-8		1												
M-16	SVOC	2-Chloronaphthalene	91-58-7		1											1.8E+05	
M-16	SVOC	2-Chlorophenol	95-57-8		1											4.5E+03	
M-16	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3		1												
M-16	SVOC	Chrysene	218-01-9	B2	1											8.0E+03	
M-16	SVOC	Dibenz(a,h)anthracene	53-70-3	B2	1											8.0E+00	
M-16	SVOC	Dibenzofuran	132-64-9	D	1												
M-16	SVOC	3,3'-Dichlorobenzidine	91-94-1	B2	1									8.2E+03		3.0E+01	
M-16	SVOC	2,4-Dichlorophenol	120-83-2		1									2.3E+06		1.8E+03	
M-16	SVOC	Diethylphthalate	84-66-2	D	1									1.5E+06		7.4E+02	
M-16	SVOC	2,4-Dimethylphenol	105-67-9		1									2.1E+06		3.6E+04	
M-16	SVOC	Dimethylphthalate	131-11-3	D	1									1.5E+06		7.9E+02	
M-16	SVOC	Di-n-butylphthalate	84-74-2	D	1									1.5E+06		7.6E+02	
M-16	SVOC	4,6-Dinitro-2-methylphenol	534-52-1		1											2.6E+02	
M-16	SVOC	2,4-Dinitrophenol	51-28-5		1												
M-16	SVOC	2,4-Dinitrotoluene	121-14-2	B2	1									2.0E+04		2.2E+02	
M-16	SVOC	2,6-Dinitrotoluene	606-20-2	B2	1												
M-16	SVOC	Di-n-octylphthalate	117-84-0		1											2.0E+04	
M-16	SVOC	Fluoranthene	206-44-0	D	1					1.0E+06		8.9E+05		4.1E+06		1.3E+05	
M-16	SVOC	Fluorene	86-73-7	D	1	1	1.40E+02	3.61E+01		1.0E+06	3.6E-05	1.5E+05	2.4E-04	4.1E+06	8.8E-06	8.7E+04	4.2E-04
M-16	SVOC	Hexachlorobenzene	118-74-1	B2	1					2.2E+02		5.6E+01		8.5E+03		3.7E+01	
M-16	SVOC	Hexachlorobutadiene	87-68-3	C	1					3.5E+02		4.6E+02		1.8E+05		3.5E+02	
M-16	SVOC	Hexachlorocyclopentadiene	77-47-4	E	1					5.6E+01		6.0E+01		5.9E+03		7.2E+02	

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TABLE 3-4

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SMEAR ZONE SOIL SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Carc Class	Analyzed	Detected	Max Detected (mg/kg)	Calculated Max Smear Zone Soil Conc (mg/kg)	Site Specific Background (mg/kg)	Industrial Soil Volatilization to Indoor Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Indoor Air Criteria	Industrial Soil Volatilization to Ambient Air Criteria (mg/kg)	Ratio of Max Conc to Industrial Soil Volatilization to Ambient Air Criteria	Industrial Particulate Inhalation Criteria (mg/kg)	Ratio of Max Conc to Industrial Particulate Inhalation Criteria	Industrial Direct Contact Criteria (mg/kg)	Ratio of Max Conc to Industrial Direct Contact Criteria
M-16	SVOC	Hexachloroethane	67-72-1	C	1					7.9E+01		6.6E+02		1.0E+05		7.3E+02	
M-16	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	B2	1											8.0E+01	
M-16	SVOC	Isophorone	78-59-1	C	1									8.2E+06		2.4E+03	
M-16	SVOC	2-Methylnaphthalene	91-57-6	ID	1											2.6E+04	
M-16	SVOC	Methylphenol (total)	1319-77-3		1									2.9E+06		3.6E+04	
M-16	SVOC	Naphthalene	91-20-3	C	1					4.7E+02		3.5E+02		8.8E+04		5.2E+04	
M-16	SVOC	2-Nitroaniline	88-74-4		1												
M-16	SVOC	3-Nitroaniline	99-09-2	C	1												
M-16	SVOC	4-Nitroaniline	100-01-6	C	1												
M-16	SVOC	Nitrobenzene	98-95-3	D	1					1.7E+02		6.4E+01		2.1E+04		3.4E+02	
M-16	SVOC	2-Nitrophenol	88-75-5		1											2.0E+03	
M-16	SVOC	4-Nitrophenol	100-02-7		1												
M-16	SVOC	N-Nitrosodiphenylamine	86-30-6	B2	1											7.8E+03	
M-16	SVOC	N-Nitroso-di-n-propylamine	621-64-7	B2	1									2.0E+03		5.4E+00	
M-16	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	C	1												
M-16	SVOC	Pentachlorophenol	87-86-5	B2	1									1.3E+05		3.2E+02	
M-16	SVOC	Phenanthrene	85-01-8	D	1	1	2.50E+02	6.45E+01		5.1E+03	1.3E-02	1.9E+02	3.4E-01	2.9E+03	2.2E-02	5.2E+03	1.2E-02
M-16	SVOC	Phenol	108-95-2	ID	1									1.8E+07		1.2E+04	
M-16	SVOC	Pyrene	129-00-0	D	1					2.0E+06		7.8E+05		2.9E+06		8.4E+04	
M-16	SVOC	2,4,5-Trichlorophenol	95-95-4		1									1.0E+07		7.3E+04	
M-16	SVOC	2,4,6-Trichlorophenol	88-06-2	B2	1									1.3E+06		3.3E+03	
M-16	P/PCB	PCBs (total)	1336-36-3	B2	1	1	8.32E+01	2.15E+01		1.6E+04	1.3E-03	8.1E+02	2.6E-02	6.5E+03	3.3E-03	1.6E+01	**1.3E+00**
M-16	INORG	Antimony	7440-36-0		1	1	2.70E-01	6.97E-02						5.9E+03	1.2E-05	6.7E+02	1.0E-04
M-16	INORG	Arsenic	7440-38-2	A	1	1	1.11E+01	2.86E+00	1.3E+01					9.1E+02		3.7E+01	
M-16	INORG	Barium	7440-39-3	D	1				1.1E+02					1.5E+05		1.3E+05	
M-16	INORG	Beryllium	7440-41-7	B1	1				1.5E+00					5.9E+02		1.6E+03	
M-16	INORG	Cadmium	7440-43-9	B1	1	1	8.90E-02	2.30E-02	1.2E+00					2.2E+03		2.1E+03	
M-16	INORG	Chromium (total)	7440-47-3		1	1	2.90E+00	7.48E-01	4.9E+01					2.4E+02		9.2E+03	
M-16	INORG	Cobalt	7440-48-4	B1	1	1	1.90E-01	4.90E-02	1.7E+01					5.9E+03		9.0E+03	
M-16	INORG	Copper	7440-50-8	D	1	1	4.10E+00	1.06E+00	3.2E+01					5.9E+04		7.3E+04	
M-16	INORG	Lead	7439-92-1	B2	1	1	1.40E+01	3.61E+00	4.9E+01					4.4E+04		9.0E+02	
M-16	INORG	Manganese	7439-96-5	D	1				5.1E+02					1.5E+03		9.0E+04	
M-16	INORG	Mercury	7439-97-6	D	1				1.3E-01	8.9E+01		6.2E+01		8.8E+03		5.8E+02	
M-16	INORG	Nickel	7440-02-0	A	1	1	1.30E+00	3.35E-01	3.0E+01					1.6E+04		1.5E+05	
M-16	INORG	Selenium	7782-49-2	D	1				4.1E-01					5.9E+04		9.6E+03	
M-16	INORG	Silver	7440-22-4	D	1									2.9E+03		9.0E+03	
M-16	INORG	Thallium	7440-28-0		1											1.3E+02	
M-16	INORG	Vanadium	7440-62-2		1	1	3.10E+00	8.00E-01	3.3E+01							5.5E+03	
M-16	INORG	Zinc	7440-66-6	D	1	1	2.79E+01	7.20E+00	1.9E+02							6.3E+05	

Notes:
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to Polychlorinated biphenyls (PCBs) for cancer effects and Aroclor 1254 for noncancer effects.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.

Chem Group - Chemical Group
Carc Class - EPA Weight-of-Evidence Cancer Classification

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-07	VOC	Acetone	67-64-1	T	ID	4				5.10E-04	1.00E-02	7.3E-01		1.0E+06		3.1E+04	
F-07	VOC	Benzene	71-43-2	T	A	4				1.60E-04	1.00E-03	5.0E-03		3.5E+01		1.1E+01	
F-07	VOC	Bromodichloromethane	75-27-4	T	B2	4	2	2.00E-03	2.20E-03	1.70E-04	1.00E-03	1.0E-01	2.2E-02	3.7E+01	5.9E-05	1.4E+01	1.6E-04
F-07	VOC	Bromoform	75-25-2	T	B2	4				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
F-07	VOC	Bromomethane	74-83-9	T	D	4				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
F-07	VOC	2-Butanone	78-93-3	T	ID	4				4.10E-04	1.00E-02	1.3E+01		2.4E+05		2.4E+05	
F-07	VOC	Carbon Disulfide	75-15-0	T		4	1	4.70E-04	4.70E-04	2.00E-04	1.00E-03	8.0E-01	5.9E-04	5.5E+02	8.5E-07	1.2E+03	3.9E-07
F-07	VOC	Carbon Tetrachloride	56-23-5	T	B2	4				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
F-07	VOC	Chlorobenzene	108-90-7	T	D	4				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
F-07	VOC	Chloroethane	75-00-3	T		4	2	3.30E-03	3.70E-03	2.60E-04	1.00E-03	4.2E-01	1.1E-02	5.7E+03	8.2E-07	4.4E+02	1.1E-05
F-07	VOC	Chloroform	67-66-3	T	B2	4	3	2.90E-03	9.50E-03	1.70E-04	1.40E-04	1.0E-01	9.5E-02	1.8E+02	5.3E-05	1.5E+02	6.3E-05
F-07	VOC	Chloromethane	74-87-3	T	D	4	1	2.80E-04	2.80E-04	2.30E-04	1.00E-03	2.6E-01	1.1E-03	4.5E+01	6.2E-06	4.9E+02	5.7E-07
F-07	VOC	Cumene	98-82-8	T	D	4				1.20E-04	1.00E-03	8.0E-01		5.6E+01		5.6E+01	
F-07	VOC	Cyclohexane	110-82-7	T	ID	4				1.30E-04	1.00E-03						
F-07	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	4				6.20E-04	2.00E-03	2.0E-04		1.2E+00		3.9E-01	
F-07	VOC	Dibromochloromethane	124-48-1	T	C	4				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
F-07	VOC	1,2-Dibromoethane	106-93-4	T	B2	4				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
F-07	VOC	1,2-Dichlorobenzene	95-50-1	T	D	4				1.10E-04	1.00E-03	6.0E-01		1.6E+02		1.6E+02	
F-07	VOC	1,3-Dichlorobenzene	541-73-1	T	D	4				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
F-07	VOC	1,4-Dichlorobenzene	106-46-7	T	C	4				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
F-07	VOC	Dichlorodifluoromethane	75-71-8	T		4				2.60E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	
F-07	VOC	1,1-Dichloroethane	75-34-3	T	C	4	4	6.00E-03	2.30E-02			8.8E-01	2.6E-02	2.3E+03	1.0E-05	2.4E+03	9.6E-06
F-07	VOC	1,2-Dichloroethane	107-06-2	T	B2	4				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
F-07	VOC	1,1-Dichloroethene	75-35-4	T	C	7	6	1.10E-03	2.00E-02	2.20E-04	2.20E-04	7.0E-03	**2.9E+00**	1.3E+00	1.5E-02	1.1E+01	1.8E-03
F-07	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4	4	2.30E-04	5.60E-04			7.0E-02	8.0E-03	2.1E+02	2.7E-06	2.0E+02	2.8E-06
F-07	VOC	trans-1,2-Dichloroethene	156-60-5	T		4				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
F-07	VOC	1,2-Dichloropropane	78-87-5	T	B2	4				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
F-07	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	4				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
F-07	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
F-07	VOC	2-Hexanone	591-78-6	T		4				4.60E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	
F-07	VOC	Methyl Acetate	79-20-9	T		4				4.10E-04	1.00E-02						
F-07	VOC	Methyl tert-butyl ether	1634-04-4	T		4				1.30E-04	5.00E-03	2.4E-01		4.7E+04		6.1E+02	
F-07	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	4				2.30E-04	1.00E-02	1.8E+00		2.0E+04		1.3E+04	
F-07	VOC	Methylcyclohexane	108-87-2	T		4				1.50E-04	1.00E-03						
F-07	VOC	Methylene Chloride	75-09-2	T	B2	4				3.40E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
F-07	VOC	Styrene	100-42-5	T		4				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
F-07	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	4				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
F-07	VOC	Tetrachloroethene	127-18-4	T	C-B2	7	6	5.60E-04	6.30E-03	1.20E-04	1.20E-04	5.0E-03	**1.3E+00**	1.7E+02	3.7E-05	1.2E+01	5.3E-04
F-07	VOC	Toluene	108-88-3	T	D	4	3	2.00E-04	2.60E-04	1.80E-04	1.80E-04	1.0E+00	2.6E-04	5.3E+02	4.9E-07	5.3E+02	4.9E-07
F-07	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	4				1.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
F-07	VOC	1,1,1-Trichloroethane	71-55-6	T	D	4	4	6.30E-03	1.00E-02			2.0E-01	5.0E-02	1.3E+03	7.7E-06	1.3E+03	7.7E-06
F-07	VOC	1,1,2-Trichloroethane	79-00-5	T	C	4				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
F-07	VOC	Trichloroethene	79-01-6	T	C-B2	4	2	3.90E-04	4.20E-04	1.40E-04	1.00E-03	5.0E-03	8.4E-02	9.7E+01	4.3E-06	2.2E+01	1.9E-05
F-07	VOC	Trichlorofluoromethane	75-69-4	T		4				2.80E-04	1.00E-03	2.6E+00		1.1E+03		1.1E+03	
F-07	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		4				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
F-07	VOC	Vinyl Chloride	75-01-4	T	A	4				1.50E-04	1.00E-03	2.0E-03		1.3E+01		1.0E+00	
F-07	VOC	Xylenes (total)	1330-20-7	T	ID	4				3.30E-04	1.00E-03	1.0E+01		1.9E+02		1.9E+02	
F-07	SVOC	Acenaphthene	83-32-9	T		4				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
F-07	SVOC	Acenaphthylene	208-96-8	T	D	4				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
F-07	SVOC	Acetophenone	98-86-2	T	D	4				3.60E-04	5.00E-03	1.5E+00		6.1E+03		6.1E+03	
F-07	SVOC	Anthracene	120-12-7	T	D	4				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
F-07	SVOC	Atrazine	1912-24-9	T		4				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
F-07	SVOC	Benzaldehyde	100-52-7	T		4				3.80E-03	1.00E-02						
F-07	SVOC	Benzo(a)anthracene	56-55-3	T	B2	4				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
F-07	SVOC	Benzo(a)pyrene	50-32-8	T	B2	4				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
F-07	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	4				9.40E-04	5.00E-03	2.0E-03				2.0E-03	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-07	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	4				8.50E-04	5.00E-03					5.0E-03	
F-07	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	4				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
F-07	SVOC	Biphenyl	92-52-4	T	D	4				2.60E-03	1.00E-02						
F-07	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	4				8.70E-04	5.00E-03						
F-07	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	4				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
F-07	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	4				2.70E-03	5.00E-03	6.0E-03				3.2E-01	
F-07	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	4				8.80E-04	5.00E-03						
F-07	SVOC	Butylbenzylphthalate	85-68-7	T	C	4				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
F-07	SVOC	Caprolactam	105-60-2	T		4	1	4.10E-03	4.10E-03	2.50E-03	1.00E-02	5.8E+00	7.1E-04			3.9E+05	1.1E-08
F-07	SVOC	Carbazole	86-74-8	T	B2	4				8.50E-04	1.00E-02	3.3E-02				7.4E+00	
F-07	SVOC	4-Chloro-3-methylphenol	59-50-7	T		4				2.50E-04	5.00E-03	1.8E+01				7.9E+01	
F-07	SVOC	4-Chloroaniline	106-47-8	T		4				5.10E-04	1.00E-02						
F-07	SVOC	2-Chloronaphthalene	91-58-7	T		4				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
F-07	SVOC	2-Chlorophenol	95-57-8	T		4				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
F-07	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		4				7.90E-04	5.00E-03						
F-07	SVOC	Chrysene	218-01-9	T	B2	4				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
F-07	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	4				7.90E-04	5.00E-03	2.0E-03				2.0E-03	
F-07	SVOC	Dibenzofuran	132-64-9	T	D	4				1.10E-03	5.00E-03						
F-07	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	4				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
F-07	SVOC	2,4-Dichlorophenol	120-83-2	T		4				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
F-07	SVOC	Diethylphthalate	84-66-2	T	D	4				6.50E-04	5.00E-03	5.5E+00				1.1E+03	
F-07	SVOC	2,4-Dimethylphenol	105-67-9	T		4				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
F-07	SVOC	Dimethylphthalate	131-11-3	T	D	4				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
F-07	SVOC	Di-n-butylphthalate	84-74-2	T	D	4				6.70E-04	5.00E-03	8.8E-01				1.1E+01	
F-07	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		4				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
F-07	SVOC	2,4-Dinitrophenol	51-28-5	T		4				3.00E-03	2.00E-02						
F-07	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	4				7.90E-04	5.00E-03	7.7E-03				8.6E+00	
F-07	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	4				5.70E-04	5.00E-03						
F-07	SVOC	Di-n-octylphthalate	117-84-0	T		4				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
F-07	SVOC	Fluoranthene	206-44-0	T	D	4				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
F-07	SVOC	Fluorene	86-73-7	T	D	4				1.00E-03	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
F-07	SVOC	Hexachlorobenzene	118-74-1	T	B2	4				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
F-07	SVOC	Hexachlorobutadiene	87-68-3	T	C	4				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
F-07	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	4				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
F-07	SVOC	Hexachloroethane	67-72-1	T	C	4				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
F-07	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	4				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
F-07	SVOC	Isophorone	78-59-1	T	C	4				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
F-07	SVOC	2-Methylnaphthalene	91-57-6	T	ID	4				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
F-07	SVOC	Methylphenol (total)	1319-77-3	T		4				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
F-07	SVOC	Naphthalene	91-20-3	T	C	4				7.50E-04	5.00E-03	5.2E-01		3.1E+01		3.1E+01	
F-07	SVOC	2-Nitroaniline	88-74-4	T		4				7.00E-04	2.00E-02						
F-07	SVOC	3-Nitroaniline	99-09-2	T	C	4				7.10E-04	2.00E-02						
F-07	SVOC	4-Nitroaniline	100-01-6	T	C	4				1.30E-03	2.00E-02						
F-07	SVOC	Nitrobenzene	98-95-3	T	D	4				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
F-07	SVOC	2-Nitrophenol	88-75-5	T		4				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
F-07	SVOC	4-Nitrophenol	100-02-7	T		4				1.90E-03	2.00E-02						
F-07	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	4				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
F-07	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	4				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
F-07	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	4				7.80E-04	5.00E-03						
F-07	SVOC	Pentachlorophenol	87-86-5	T	B2	4				3.40E-03	5.00E-03	1.0E-03				2.0E-01	
F-07	SVOC	Phenanthrene	85-01-8	T	D	4				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
F-07	SVOC	Phenol	108-95-2	T	ID	4				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
F-07	SVOC	Pyrene	129-00-0	T	D	4				1.40E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
F-07	SVOC	2,4,5-Trichlorophenol	95-95-4	T		4				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
F-07	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	4				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
F-07	P/PCB	PCBs (total)	1336-36-3	D	B2	2				4.00E-04	4.00E-04	5.0E-04		4.5E-02		3.3E-03	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-07	P/PCB	PCBs (total)	1336-36-3	T	B2	4				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
F-07	INORG	Antimony	7440-36-0	D		4	1	3.00E-03	3.00E-03	2.20E-03	2.50E-02	6.0E-03	5.0E-01			6.8E+01	4.4E-05
F-07	INORG	Antimony	7440-36-0	T		4				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
F-07	INORG	Arsenic	7440-38-2	D	A	4	2	1.24E-02	4.16E-02	3.90E-03	1.00E-02	5.0E-02	8.3E-01			4.3E+00	9.7E-03
F-07	INORG	Arsenic	7440-38-2	T	A	4	2	2.36E-02	3.00E-02	3.90E-03	1.00E-02	5.0E-02	6.0E-01			4.3E+00	7.0E-03
F-07	INORG	Barium	7440-39-3	D	D	4	4	1.85E-02	6.46E-02			2.0E+00	3.2E-02			1.4E+04	4.6E-06
F-07	INORG	Barium	7440-39-3	T	D	4	4	1.73E-02	5.72E-02			2.0E+00	2.9E-02			1.4E+04	4.1E-06
F-07	INORG	Beryllium	7440-41-7	D	B1	4				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
F-07	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
F-07	INORG	Cadmium	7440-43-9	D	B1	4				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
F-07	INORG	Cadmium	7440-43-9	T	B1	4	1	3.80E-03	3.80E-03	2.80E-04	5.00E-03	5.0E-03	7.6E-02			1.9E+02	2.0E-06
F-07	INORG	Chromium (total)	7440-47-3	D		4				1.40E-03	1.00E-02	1.0E-01				4.6E+02	
F-07	INORG	Chromium (total)	7440-47-3	T		4	2	1.50E-03	2.90E-03	1.40E-03	1.00E-02	1.0E-01	2.9E-02			4.6E+02	6.3E-06
F-07	INORG	Cobalt	7440-48-4	D	B1	4				1.30E-03	3.00E-02	4.0E-02				2.4E+03	
F-07	INORG	Cobalt	7440-48-4	T	B1	4				1.30E-03	3.00E-02	4.0E-02				2.4E+03	
F-07	INORG	Copper	7440-50-8	D	D	4	1	5.50E-02	5.50E-02	4.20E-03	5.00E-03	1.4E+00	1.1E-02			7.4E+03	2.1E-06
F-07	INORG	Copper	7440-50-8	T	D	4	4	1.79E-02	1.79E-02	4.20E-03	5.00E-03	1.4E+00	1.3E-02			7.4E+03	2.4E-06
F-07	INORG	Lead	7439-92-1	D	B2	4				2.50E-03	3.00E-03	4.0E-03					
F-07	INORG	Lead	7439-92-1	T	B2	4	1	3.00E-03	3.00E-03	2.50E-03	3.00E-03	4.0E-03	7.5E-01				
F-07	INORG	Manganese	7439-96-5	D	D	4	4	1.10E-03	2.69E-01			8.6E-01	3.1E-01			9.1E+03	3.0E-05
F-07	INORG	Manganese	7439-96-5	T	D	4	4	1.50E-03	2.34E-01			8.6E-01	2.7E-01			9.1E+03	2.6E-05
F-07	INORG	Mercury	7439-97-6	D	D	4				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
F-07	INORG	Mercury	7439-97-6	T	D	4	1	1.70E-04	1.70E-04	6.90E-05	2.00E-04	2.0E-03	8.5E-02	5.6E-02	3.0E-03	5.6E-02	3.0E-03
F-07	INORG	Nickel	7440-02-0	D	A	4	2	2.70E-03	3.60E-03	2.20E-03	2.00E-02	1.0E-01	3.6E-02			7.4E+04	4.9E-08
F-07	INORG	Nickel	7440-02-0	T	A	4	2	4.10E-03	4.90E-03	2.20E-03	2.00E-02	1.0E-01	4.9E-02			7.4E+04	6.6E-08
F-07	INORG	Selenium	7782-49-2	D	D	4				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
F-07	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
F-07	INORG	Silver	7440-22-4	D	D	4				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
F-07	INORG	Silver	7440-22-4	T	D	4				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
F-07	INORG	Thallium	7440-28-0	D		4	1	2.50E-05	2.50E-05	1.80E-05	1.00E-02	2.0E-03	1.3E-02			1.3E+01	1.9E-06
F-07	INORG	Thallium	7440-28-0	T		4	1	2.50E-05	2.50E-05	1.80E-05	1.00E-02	2.0E-03	1.3E-02			1.3E+01	1.9E-06
F-07	INORG	Vanadium	7440-62-2	D		4	3	8.40E-04	2.47E-02	8.20E-04	8.20E-04	4.5E-03	**5.5E+00**			9.7E+02	2.5E-05
F-07	INORG	Vanadium	7440-62-2	T		4	2	7.80E-03	1.71E-02	8.20E-04	1.00E-02	4.5E-03	**3.8E+00**			9.7E+02	1.8E-05
F-07	INORG	Zinc	7440-66-6	D	D	4	2	1.58E-02	2.08E-02	1.20E-02	2.00E-02	2.4E+00	8.7E-03			1.1E+05	1.9E-07
F-07	INORG	Zinc	7440-66-6	T	D	4	3	1.24E-02	1.69E-01	2.00E-02	2.00E-02	2.4E+00	7.0E-02			1.1E+05	1.5E-06
F-08	VOC	Acetone	67-64-1	T	ID	2				5.10E-04	1.00E-02	7.3E-01		1.0E+06		3.1E+04	
F-08	VOC	Benzene	71-43-2	T	A	2				1.60E-04	1.00E-03	5.0E-03		3.5E+01		1.1E+01	
F-08	VOC	Bromodichloromethane	75-27-4	T	B2	2				1.70E-04	1.00E-03	1.0E-01		3.7E+01		1.4E+01	
F-08	VOC	Bromoform	75-25-2	T	B2	2				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
F-08	VOC	Bromomethane	74-83-9	T	D	2				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
F-08	VOC	2-Butanone	78-93-3	T	ID	2				4.10E-04	1.00E-02	1.3E+01		2.4E+05		2.4E+05	
F-08	VOC	Carbon Disulfide	75-15-0	T		2				2.00E-04	1.00E-03	8.0E-01		5.5E+02		1.2E+03	
F-08	VOC	Carbon Tetrachloride	56-23-5	T	B2	2				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
F-08	VOC	Chlorobenzene	108-90-7	T	D	2				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
F-08	VOC	Chloroethane	75-00-3	T		2				2.60E-04	1.00E-03	4.3E-01		5.7E+03		4.4E+02	
F-08	VOC	Chloroform	67-66-3	T	B2	2	2	9.60E-04	2.80E-03			1.0E-01	2.8E-02	1.8E+02	1.6E-05	1.5E+02	1.9E-05
F-08	VOC	Chloromethane	74-87-3	T	D	2				1.30E-04	1.00E-03	2.6E-01		4.5E+01		4.9E+02	
F-08	VOC	Cumene	98-82-8	T	D	2				1.20E-04	1.00E-03	8.0E-01		5.6E+01		5.6E+01	
F-08	VOC	Cyclohexane	110-82-7	T	ID	2				1.30E-04	1.00E-03						
F-08	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	2				1.20E-04	2.00E-03	2.0E-04		1.2E+00		3.9E-01	
F-08	VOC	Dibromochloromethane	124-48-1	T	C	2				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
F-08	VOC	1,2-Dibromoethane	106-93-4	T	B2	2				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
F-08	VOC	1,2-Dichlorobenzene	95-50-1	T	D	2				1.40E-04	1.00E-03	6.0E-01		1.6E+02		1.6E+02	
F-08	VOC	1,3-Dichlorobenzene	541-73-1	T	D	2				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
F-08	VOC	1,4-Dichlorobenzene	106-46-7	T	C	2				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
F-08	VOC	Dichlorodifluoromethane	75-71-8	T		2				2.60E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-08	VOC	1,1-Dichloroethane	75-34-3	T	C	2				1.60E-04	1.00E-03	8.8E-01		2.3E+03		2.4E+03	
F-08	VOC	1,2-Dichloroethane	107-06-2	T	B2	2				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
F-08	VOC	1,1-Dichloroethene	75-35-4	T	C	2				2.40E-04	1.00E-03	7.0E-03		1.3E+00		1.1E+01	
F-08	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	2				2.20E-04	5.00E-04	7.0E-02		2.1E+02		2.0E+02	
F-08	VOC	trans-1,2-Dichloroethene	156-60-5	T		2				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
F-08	VOC	1,2-Dichloropropane	78-87-5	T	B2	2				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
F-08	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	2				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
F-08	VOC	Ethyl Benzene	100-41-4	T	D	2				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
F-08	VOC	2-Hexanone	591-78-6	T		2				4.60E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	
F-08	VOC	Methyl Acetate	79-20-9	T		2				4.10E-04	1.00E-02						
F-08	VOC	Methyl tert-butyl ether	1634-04-4	T		2				1.50E-04	5.00E-03	2.4E-01		4.7E+04		6.1E+02	
F-08	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	2				2.30E-04	1.00E-02	1.8E+00		2.0E+04		1.3E+04	
F-08	VOC	Methylcyclohexane	108-87-2	T		2				1.50E-04	1.00E-03						
F-08	VOC	Methylene Chloride	75-09-2	T	B2	2				3.40E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
F-08	VOC	Styrene	100-42-5	T		2				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
F-08	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	2				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
F-08	VOC	Tetrachloroethene	127-18-4	T	C-B2	2				2.30E-04	1.00E-03	5.0E-03		1.7E+02		1.2E+01	
F-08	VOC	Toluene	108-88-3	T	D	2				1.80E-04	1.00E-03	1.0E+00		5.3E+02		5.3E+02	
F-08	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	2				1.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
F-08	VOC	1,1,1-Trichloroethane	71-55-6	T	D	2				1.50E-04	1.00E-03	2.0E-01		1.3E+03		1.3E+03	
F-08	VOC	1,1,2-Trichloroethane	79-00-5	T	C	2				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
F-08	VOC	Trichloroethene	79-01-6	T	C-B2	2				1.40E-04	1.00E-03	5.0E-03		9.7E+01		2.2E+01	
F-08	VOC	Trichlorofluoromethane	75-69-4	T		2				2.80E-04	1.00E-03	2.6E+00		1.1E+03		1.1E+03	
F-08	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		2				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
F-08	VOC	Vinyl Chloride	75-01-4	T	A	2				1.50E-04	1.00E-03	2.0E-03		1.3E+01		1.0E+00	
F-08	VOC	Xylenes (total)	1330-20-7	T	ID	2				3.30E-04	1.00E-03	1.0E+01		1.9E+02		1.9E+02	
F-08	SVOC	Acenaphthene	83-32-9	T		2				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
F-08	SVOC	Acenaphthylene	208-96-8	T	D	2				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
F-08	SVOC	Acetophenone	98-86-2	T	D	2				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
F-08	SVOC	Anthracene	120-12-7	T	D	2				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
F-08	SVOC	Atrazine	1912-24-9	T		2				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
F-08	SVOC	Benzaldehyde	100-52-7	T		2				2.80E-03	1.00E-02						
F-08	SVOC	Benzo(a)anthracene	56-55-3	T	B2	2				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
F-08	SVOC	Benzo(a)pyrene	50-32-8	T	B2	2				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
F-08	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	2				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
F-08	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	2				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
F-08	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	2				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
F-08	SVOC	Biphenyl	92-52-4	T	D	2				2.60E-03	1.00E-02						
F-08	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	2				8.70E-04	5.00E-03						
F-08	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	2				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
F-08	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	2				2.70E-03	5.00E-03	6.0E-03				3.2E-01	
F-08	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	2				8.80E-04	5.00E-03						
F-08	SVOC	Butylbenzylphthalate	85-68-7	T	C	2				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
F-08	SVOC	Caprolactam	105-60-2	T		2				2.50E-03	1.00E-02	5.8E+00				3.9E+05	
F-08	SVOC	Carbazole	86-74-8	T	B2	2				8.20E-04	1.00E-02	8.5E-02				7.4E+00	
F-08	SVOC	4-Chloro-3-methylphenol	59-50-7	T		2				9.90E-04	5.00E-03	1.5E-01				7.9E+01	
F-08	SVOC	4-Chloroaniline	106-47-8	T		2				6.10E-04	1.00E-02						
F-08	SVOC	2-Chloronaphthalene	91-58-7	T		2				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
F-08	SVOC	2-Chlorophenol	95-57-8	T		2				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
F-08	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		2				1.00E-03	5.00E-03						
F-08	SVOC	Chrysene	218-01-9	T	B2	2				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
F-08	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	2				7.90E-04	5.00E-03	2.0E-03				2.0E-03	
F-08	SVOC	Dibenzofuran	132-64-9	T	D	2				1.00E-03	5.00E-03						
F-08	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	2				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
F-08	SVOC	2,4-Dichlorophenol	120-83-2	T		2				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
F-08	SVOC	Diethylphthalate	84-66-2	T	D	2				6.50E-04	5.00E-03	5.5E+00				1.1E+03	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-08	SVOC	2,4-Dimethylphenol	105-67-9	T		2				8.50E-04	5.00E-03	7.3E-01				5.2E+02	
F-08	SVOC	Dimethylphthalate	131-11-3	T	D	2				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
F-08	SVOC	Di-n-butylphthalate	84-74-2	T	D	2				6.70E-04	5.00E-03	8.8E-01				1.1E+01	
F-08	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		2				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
F-08	SVOC	2,4-Dinitrophenol	51-28-5	T		2				3.00E-03	2.00E-02						
F-08	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	2				7.90E-04	5.00E-03	7.7E-03				8.6E+00	
F-08	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	2				5.70E-04	5.00E-03						
F-08	SVOC	Di-n-octylphthalate	117-84-0	T		2				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
F-08	SVOC	Fluoranthene	206-44-0	T	D	2				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
F-08	SVOC	Fluorene	86-73-7	T	D	2				1.00E-03	5.00E-03	2.8E-01		2.0E+00		2.0E+00	
F-08	SVOC	Hexachlorobenzene	118-74-1	T	B2	2				7.50E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
F-08	SVOC	Hexachlorobutadiene	87-68-3	T	C	2				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
F-08	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	2				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
F-08	SVOC	Hexachloroethane	67-72-1	T	C	2				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
F-08	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	2				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
F-08	SVOC	Isophorone	78-59-1	T	C	2				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
F-08	SVOC	2-Methylnaphthalene	91-57-6	T	ID	2				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
F-08	SVOC	Methylphenol (total)	1319-77-3	T		2				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
F-08	SVOC	Naphthalene	91-20-3	T	C	2				7.50E-04	5.00E-03	5.2E-01		3.1E+01		3.1E+01	
F-08	SVOC	2-Nitroaniline	88-74-4	T		2				7.00E-04	2.00E-02						
F-08	SVOC	3-Nitroaniline	99-09-2	T	C	2				7.10E-04	2.00E-02						
F-08	SVOC	4-Nitroaniline	100-01-6	T	C	2				1.30E-03	2.00E-02						
F-08	SVOC	Nitrobenzene	98-95-3	T	D	2				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
F-08	SVOC	2-Nitrophenol	88-75-5	T		2				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
F-08	SVOC	4-Nitrophenol	100-02-7	T		2				1.90E-03	2.00E-02						
F-08	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	2				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
F-08	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	2				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
F-08	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	2				7.80E-04	5.00E-03						
F-08	SVOC	Pentachlorophenol	87-86-5	T	B2	2				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
F-08	SVOC	Phenanthrene	85-01-8	T	D	2				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
F-08	SVOC	Phenol	108-95-2	T	ID	2				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
F-08	SVOC	Pyrene	129-00-0	T	D	2				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
F-08	SVOC	2,4,5-Trichlorophenol	95-95-4	T		2				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
F-08	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	2				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
F-08	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
F-08	P/PCB	PCBs (total)	1336-36-3	T	B2	2				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
F-08	INORG	Antimony	7440-36-0	D		2				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
F-08	INORG	Antimony	7440-36-0	T		2				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
F-08	INORG	Arsenic	7440-38-2	D	A	2				3.90E-03	1.00E-02	5.0E-02				4.3E+00	
F-08	INORG	Arsenic	7440-38-2	T	A	2				3.90E-03	1.00E-02	5.0E-02				4.3E+00	
F-08	INORG	Barium	7440-39-3	D	D	2	2	5.46E-02	5.75E-02			2.0E+00	2.9E-02			1.4E+04	4.1E-06
F-08	INORG	Barium	7440-39-3	T	D	2	2	5.49E-02	5.82E-02			2.0E+00	2.9E-02			1.4E+04	4.2E-06
F-08	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
F-08	INORG	Beryllium	7440-41-7	T	B1	2				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
F-08	INORG	Cadmium	7440-43-9	D	B1	2	1	3.20E-04	3.20E-04	5.00E-03	5.00E-03	5.0E-03	6.4E-02			1.9E+02	1.7E-06
F-08	INORG	Cadmium	7440-43-9	T	B1	2				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
F-08	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.00E-02	1.0E-01				4.6E+02	
F-08	INORG	Chromium (total)	7440-47-3	T		2				1.40E-03	1.00E-02	1.0E-01				4.6E+02	
F-08	INORG	Cobalt	7440-48-4	D	B1	2	2	1.40E-03	2.80E-03			4.0E-02	7.0E-02			2.4E+03	1.2E-06
F-08	INORG	Cobalt	7440-48-4	T	B1	2	1	3.00E-03	3.00E-03	3.30E-03	3.30E-03	4.0E-02	7.5E-02			2.4E+03	1.3E-06
F-08	INORG	Copper	7440-50-8	D	D	2				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
F-08	INORG	Copper	7440-50-8	T	D	2				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
F-08	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	3.00E-03	4.0E-03					
F-08	INORG	Lead	7439-92-1	T	B2	2				2.50E-03	3.00E-03	4.0E-03					
F-08	INORG	Manganese	7439-96-5	D	D	2	1	3.60E-01	3.60E-01	9.00E-04	9.00E-04	8.6E-01	4.2E-01			9.1E+03	4.0E-05
F-08	INORG	Manganese	7439-96-5	T	D	2	2	1.05E-01	3.64E-01			8.6E-01	4.2E-01			9.1E+03	4.0E-05

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-08	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
F-08	INORG	Mercury	7439-97-6	T	D	2				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
F-08	INORG	Nickel	7440-02-0	D	A	2	2	6.20E-03	6.70E-03			1.0E-01	6.7E-02			7.4E+04	9.1E-08
F-08	INORG	Nickel	7440-02-0	T	A	2	2	5.00E-03	7.70E-03			1.0E-01	7.7E-02			7.4E+04	1.0E-07
F-08	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
F-08	INORG	Selenium	7782-49-2	T	D	2				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
F-08	INORG	Silver	7440-22-4	D	D	2				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
F-08	INORG	Silver	7440-22-4	T	D	2				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
F-08	INORG	Thallium	7440-28-0	D		2	2	4.10E-05	5.40E-03			2.0E-03	**2.7E+00**			1.3E+01	4.2E-04
F-08	INORG	Thallium	7440-28-0	T		2	1	4.30E-05	4.30E-05	1.00E-02	1.00E-02	2.0E-03	2.2E-02			1.3E+01	3.3E-06
F-08	INORG	Vanadium	7440-62-2	D		2				9.50E-04	1.00E-02	4.3E-03				9.7E+02	
F-08	INORG	Vanadium	7440-62-2	T		2				9.20E-04	1.00E-02	4.3E-03				9.7E+02	
F-08	INORG	Zinc	7440-66-6	D	D	2	1	2.30E-02	2.30E-02	1.20E-02	1.20E-02	2.4E+00	5.5E-03			1.1E+05	1.2E-07
F-08	INORG	Zinc	7440-66-6	T	D	2	2	2.12E-02	2.12E-02	1.20E-02	1.20E-02	2.4E+00	8.8E-03			1.1E+05	1.9E-07
F-12	VOC	Acetone	67-64-1	T	ID	1	1	7.05E-04	7.05E-04	5.10E-04	2.80E-03	7.3E-01	9.7E-04	1.0E+06	7.1E-10	3.1E+04	2.3E-08
F-12	VOC	Benzene	71-43-2	T	A	8				1.60E-04	9.20E-04	5.0E-03		3.5E+01		1.1E+01	
F-12	VOC	Bromodichloromethane	75-27-4	T	B2	8				1.70E-04	8.00E-04	1.0E-01		3.7E+01		1.4E+01	
F-12	VOC	Bromoform	75-25-2	T	B2	8				1.80E-04	9.20E-04	1.0E-01		3.1E+03		1.4E+02	
F-12	VOC	Bromomethane	74-83-9	T	D	6				2.00E-04	6.00E-04	1.0E-02		9.0E+00		7.0E+01	
F-12	VOC	2-Butanone	78-93-3	T	ID	8				4.10E-04	1.50E-03	1.3E+01		2.4E+05		2.4E+05	
F-12	VOC	Carbon Disulfide	75-15-0	T		8				2.00E-04	6.00E-04	8.0E-01		5.5E+02		1.2E+03	
F-12	VOC	Carbon Tetrachloride	56-23-5	T	B2	8				1.20E-04	9.20E-04	5.0E-03		2.4E+00		4.6E+00	
F-12	VOC	Chlorobenzene	108-90-7	T	D	8				1.40E-04	9.50E-04	1.0E-01		4.7E+02		8.6E+01	
F-12	VOC	Chloroethane	75-00-3	T		8				2.60E-04	7.20E-04	4.3E-01		5.7E+03		4.4E+02	
F-12	VOC	Chloroform	67-66-3	T	B2	8	1	1.60E-04	1.60E-04	1.40E-04	8.80E-04	1.0E-01	1.6E-03	1.8E+02	8.9E-07	1.5E+02	1.1E-06
F-12	VOC	Chloromethane	74-87-3	T	D	8				1.30E-04	1.20E-03	2.6E-01		4.5E+01		4.9E+02	
F-12	VOC	Cumene	98-82-8	T	D	8				1.20E-04	9.80E-04	8.0E-01		5.6E+01		5.6E+01	
F-12	VOC	Cyclohexane	110-82-7	T	ID	8				1.30E-04	8.20E-04						
F-12	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				6.20E-04	2.00E-03	2.0E-04		1.2E+00		3.9E-01	
F-12	VOC	Dibromochloromethane	124-48-1	T	C	8				2.60E-04	9.20E-04	1.0E-01		1.1E+02		1.8E+01	
F-12	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				2.20E-04	8.50E-04	1.0E-03		1.5E+01		2.5E-02	
F-12	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				1.10E-04	9.50E-04	6.0E-01		1.6E+02		1.6E+02	
F-12	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				1.50E-04	9.50E-04	6.6E-03				2.0E+00	
F-12	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				1.70E-04	9.50E-04	7.5E-02		7.4E+01		6.4E+00	
F-12	VOC	Dichlorodifluoromethane	75-71-8	T		8				2.60E-04	1.20E-03	1.7E+00		3.0E+02		3.0E+02	
F-12	VOC	1,1-Dichloroethane	75-34-3	T	C	8	8	5.05E-04	2.50E-02			8.8E-01	2.8E-02	2.3E+03	1.1E-05	2.4E+03	1.0E-05
F-12	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.10E-04	7.00E-04	5.0E-03		5.9E+01		1.9E+01	
F-12	VOC	1,1-Dichloroethene	75-35-4	T	C	8	5	1.21E-03	5.80E-03	2.40E-04	3.10E-04	7.0E-03	8.3E-01	1.3E+00	4.5E-03	1.1E+01	5.3E-04
F-12	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8	2	1.30E-03	1.60E-03	2.20E-04	4.40E-04	7.0E-02	2.3E-02	2.1E+02	7.6E-06	2.0E+02	8.0E-06
F-12	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				1.50E-04	8.20E-04	1.0E-01		2.0E+02		2.2E+02	
F-12	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
F-12	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				2.70E-04	8.80E-04	8.5E-03		2.6E+01		5.5E+00	
F-12	VOC	Ethyl Benzene	100-41-4	T	D	8				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
F-12	VOC	2-Hexanone	591-78-6	T		8				4.60E-04	1.40E-03	1.0E+00		8.7E+03		5.2E+03	
F-12	VOC	Methyl Acetate	79-20-9	T		8				4.10E-04	1.40E-03						
F-12	VOC	Methyl tert-butyl ether	1634-04-4	T		8				1.30E-04	6.80E-04	2.4E-01		4.7E+04		6.1E+02	
F-12	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	6				2.30E-04	5.20E-04	1.8E+00		2.0E+04		1.3E+04	
F-12	VOC	Methylcyclohexane	108-87-2	T		8				1.50E-04	1.00E-03						
F-12	VOC	Methylene Chloride	75-09-2	T	B2	8				2.90E-04	7.20E-04	5.0E-03		1.4E+03		2.2E+02	
F-12	VOC	Styrene	100-42-5	T		8				1.50E-04	9.80E-04	1.0E-01		3.1E+02		9.7E+00	
F-12	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				2.50E-04	9.00E-04	8.5E-03		7.7E+01		4.7E+00	
F-12	VOC	Tetrachloroethene	127-18-4	T	C-B2	8				2.30E-04	1.00E-03	5.0E-03		1.7E+02		1.2E+01	
F-12	VOC	Toluene	108-88-3	T	D	8	1	4.70E-04	4.70E-04	1.80E-04	9.80E-04	1.0E+00	4.7E-04	5.3E+02	8.9E-07	5.3E+02	8.9E-07
F-12	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				1.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
F-12	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8	8	1.38E-04	7.30E-02			2.0E-01	3.7E-01	1.3E+03	5.6E-05	1.3E+03	5.6E-05
F-12	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.00E-04	9.00E-04	5.0E-03		1.1E+02		2.1E+01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-12	VOC	Trichloroethene	79-01-6	T	C-B2	8	1	1.40E-04	1.40E-04	1.40E-04	1.00E-03	5.0E-03	2.8E-02	9.7E+01	1.4E-06	2.2E+01	6.4E-06
F-12	VOC	Trichlorofluoromethane	75-69-4	T		8				2.80E-04	1.40E-03	2.6E+00		1.1E+03		1.1E+03	
F-12	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				3.20E-04	8.00E-04	1.7E+02		1.7E+02		1.7E+02	
F-12	VOC	Vinyl Chloride	75-01-4	T	A	8				1.50E-04	9.00E-04	2.0E-03		1.3E+01		1.0E+00	
F-12	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	3.48E-04	3.48E-04	3.30E-04	1.00E-03	1.0E+01	3.5E-05	1.9E+02	1.8E-06	1.9E+02	1.8E-06
F-12	SVOC	Acenaphthene	83-32-9	T		7				8.00E-04	8.00E-04	1.3E+00		4.2E+00		4.2E+00	
F-12	SVOC	Acenaphthylene	208-96-8	T	D	7				7.10E-04	7.10E-04	5.2E-02		3.9E+00		3.9E+00	
F-12	SVOC	Acetophenone	98-86-2	T	D	7				2.60E-03	2.60E-03	1.5E+00		6.1E+03		6.1E+03	
F-12	SVOC	Anthracene	120-12-7	T	D	7				6.80E-04	6.80E-04	4.3E-02		4.3E-02		4.3E-02	
F-12	SVOC	Atrazine	1912-24-9	T		7				2.50E-03	2.50E-03	3.0E-03				5.4E+00	
F-12	SVOC	Benzaldehyde	100-52-7	T		7				2.80E-03	2.80E-03						
F-12	SVOC	Benzo(a)anthracene	56-55-3	T	B2	7				7.00E-04	7.00E-04	2.1E-03				9.4E-03	
F-12	SVOC	Benzo(a)pyrene	50-32-8	T	B2	7				7.30E-04	7.30E-04	5.0E-03				2.0E-03	
F-12	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	7				9.40E-04	9.40E-04	2.0E-03				2.0E-03	
F-12	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	7				8.50E-04	8.50E-04	5.0E-03				5.0E-03	
F-12	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	7				8.40E-04	8.40E-04	5.0E-03				5.0E-03	
F-12	SVOC	Biphenyl	92-52-4	T	D	7				2.60E-03	2.60E-03						
F-12	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	5				8.70E-04	8.70E-04						
F-12	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	7				9.70E-04	9.70E-04	2.0E-03		2.1E+02		5.7E+00	
F-12	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	7				2.70E-03	2.70E-03	6.0E-03				3.2E-01	
F-12	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	7				8.80E-04	8.80E-04						
F-12	SVOC	Butylbenzylphthalate	85-68-7	T	C	7				8.80E-04	8.80E-04	1.2E+00				2.7E+00	
F-12	SVOC	Caprolactam	105-60-2	T		7				2.50E-03	2.50E-03	5.8E+00				3.9E+05	
F-12	SVOC	Carbazole	86-74-8	T	B2	7				8.20E-04	8.20E-04	8.5E-02				7.4E+00	
F-12	SVOC	4-Chloro-3-methylphenol	59-50-7	T		7				9.90E-04	9.90E-04	1.5E-01				7.9E+01	
F-12	SVOC	4-Chloroaniline	106-47-8	T		5				6.10E-04	6.10E-04						
F-12	SVOC	2-Chloronaphthalene	91-58-7	T		7				8.50E-04	8.50E-04	1.8E+00				6.7E+00	
F-12	SVOC	2-Chlorophenol	95-57-8	T		7				1.00E-03	1.00E-03	4.5E-02				9.4E+01	
F-12	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		7				7.90E-04	7.90E-04						
F-12	SVOC	Chrysene	218-01-9	T	B2	7				7.50E-04	7.50E-04	5.0E-03				5.0E-03	
F-12	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	7				7.90E-04	7.90E-04	2.0E-03				2.0E-03	
F-12	SVOC	Dibenzofuran	132-64-9	T	D	7				1.10E-03	1.10E-03						
F-12	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	7				9.30E-04	9.30E-04	1.1E-03				1.8E-01	
F-12	SVOC	2,4-Dichlorophenol	120-83-2	T		7				8.50E-04	8.50E-04	7.3E-02				4.8E+01	
F-12	SVOC	Diethylphthalate	84-66-2	T	D	7				6.50E-04	6.50E-04	5.5E+00				1.1E+03	
F-12	SVOC	2,4-Dimethylphenol	105-67-9	T		7				8.50E-04	8.50E-04	3.7E-01				5.2E+02	
F-12	SVOC	Dimethylphthalate	131-11-3	T	D	7				7.60E-04	7.60E-04	7.3E+01				4.2E+03	
F-12	SVOC	Di-n-butylphthalate	84-74-2	T	D	7				6.70E-04	6.70E-04	8.8E-01				1.1E+01	
F-12	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		7				1.30E-03	1.30E-03	2.0E-02				9.5E+00	
F-12	SVOC	2,4-Dinitrophenol	51-28-5	T		7				3.00E-03	3.00E-03						
F-12	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	7				7.90E-04	7.90E-04	7.7E-03				8.6E+00	
F-12	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	7				5.70E-04	5.70E-04						
F-12	SVOC	Di-n-octylphthalate	117-84-0	T		7				1.10E-03	1.10E-03	1.3E-01				4.0E-01	
F-12	SVOC	Fluoranthene	206-44-0	T	D	7				8.10E-04	8.10E-04	2.1E-01		2.1E-01		2.1E-01	
F-12	SVOC	Fluorene	86-73-7	T	D	7				1.00E-03	1.00E-03	8.8E-01		2.0E+00		2.0E+00	
F-12	SVOC	Hexachlorobenzene	118-74-1	T	B2	7				7.40E-04	7.40E-04	1.0E-03		3.0E+00		4.6E-03	
F-12	SVOC	Hexachlorobutadiene	87-68-3	T	C	7				7.30E-04	7.30E-04	1.5E-02		3.2E+00		4.0E-01	
F-12	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	7				1.10E-03	1.10E-03	5.0E-02		4.2E-01		1.6E+00	
F-12	SVOC	Hexachloroethane	67-72-1	T	C	7				7.40E-04	7.40E-04	7.3E-03		5.0E+01		1.9E+00	
F-12	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	7				6.30E-04	6.30E-04	2.0E-03				2.0E-03	
F-12	SVOC	Isophorone	78-59-1	T	C	7				6.30E-04	6.30E-04	7.7E-01				9.9E+02	
F-12	SVOC	2-Methylnaphthalene	91-57-6	T	ID	7				6.40E-04	6.40E-04	2.6E-01				2.5E+01	
F-12	SVOC	Methylphenol (total)	1319-77-3	T		7				1.30E-03	1.30E-03	3.7E-01				8.1E+02	
F-12	SVOC	Naphthalene	91-20-3	T	C	7				7.50E-04	7.50E-04	5.2E-01		3.1E+01		3.1E+01	
F-12	SVOC	2-Nitroaniline	88-74-4	T		7				7.00E-04	7.00E-04						
F-12	SVOC	3-Nitroaniline	99-09-2	T	C	7				7.10E-04	7.10E-04						

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-12	SVOC	4-Nitroaniline	100-01-6	T	C	7				1.30E-03	1.30E-03						
F-12	SVOC	Nitrobenzene	98-95-3	T	D	7				8.10E-04	8.10E-04	3.4E-03		5.5E+02		1.1E+01	
F-12	SVOC	2-Nitrophenol	88-75-5	T		7				2.10E-03	2.10E-03	2.0E-02				7.9E+01	
F-12	SVOC	4-Nitrophenol	100-02-7	T		7				1.90E-03	1.90E-03						
F-12	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	7				1.40E-03	1.40E-03	2.7E-01				3.5E+01	
F-12	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	7				6.70E-04	6.70E-04	5.0E-03				3.6E-01	
F-12	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	7				7.80E-04	7.80E-04						
F-12	SVOC	Pentachlorophenol	87-86-5	T	B2	7				2.40E-03	2.40E-03	1.0E-03				2.0E-01	
F-12	SVOC	Phenanthrene	85-01-8	T	D	7				8.20E-04	8.20E-04	5.2E-02		1.0E+00		1.0E+00	
F-12	SVOC	Phenol	108-95-2	T	ID	7				2.60E-03	2.60E-03	2.7E-02				2.9E+04	
F-12	SVOC	Pyrene	129-00-0	T	D	7				1.10E-03	1.10E-03	1.4E-01		1.4E-01		1.4E-01	
F-12	SVOC	2,4,5-Trichlorophenol	95-95-4	T		7				1.20E-03	1.20E-03	7.3E-01				1.7E+02	
F-12	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	7				1.70E-03	1.70E-03	1.2E-01				1.0E+01	
F-12	P/PCB	PCBs (total)	1336-36-3	D	B2	3				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
F-12	P/PCB	PCBs (total)	1336-36-3	T	B2	7				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
F-12	INORG	Antimony	7440-36-0	D		3				2.20E-03	2.20E-03	6.0E-03				6.8E+01	
F-12	INORG	Antimony	7440-36-0	T		7	2	2.20E-03	2.20E-03	2.20E-03	3.40E-03	6.0E-03	3.7E-01			6.8E+01	3.2E-05
F-12	INORG	Arsenic	7440-38-2	D	A	3				3.90E-03	3.90E-03	5.0E-02				4.3E+00	
F-12	INORG	Arsenic	7440-38-2	T	A	7				2.10E-03	3.90E-03	5.0E-02				4.3E+00	
F-12	INORG	Barium	7440-39-3	D	D	3	3	2.70E-02	8.63E-02			2.0E+00	4.3E-02			1.4E+04	6.2E-06
F-12	INORG	Barium	7440-39-3	T	D	7	7	2.46E-02	8.63E-02			2.0E+00	4.3E-02			1.4E+04	6.2E-06
F-12	INORG	Beryllium	7440-41-7	D	B1	3	1	4.70E-04	4.70E-04	5.40E-04	5.40E-04	4.0E-03	1.2E-01			2.9E+02	1.6E-06
F-12	INORG	Beryllium	7440-41-7	T	B1	7				5.40E-04	6.00E-04	4.0E-03				2.9E+02	
F-12	INORG	Cadmium	7440-43-9	D	B1	3				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
F-12	INORG	Cadmium	7440-43-9	T	B1	7	1	3.50E-04	3.50E-04	2.80E-04	2.80E-04	5.0E-03	7.0E-02			1.9E+02	1.8E-06
F-12	INORG	Chromium (total)	7440-47-3	D		3				1.40E-03	1.40E-03	1.0E-01				4.6E+02	
F-12	INORG	Chromium (total)	7440-47-3	T		7				1.40E-03	1.50E-03	1.0E-01				4.6E+02	
F-12	INORG	Cobalt	7440-48-4	D	B1	3	2	2.40E-03	2.88E-03	1.30E-03	1.30E-03	4.0E-02	7.2E-02			2.4E+03	1.2E-06
F-12	INORG	Cobalt	7440-48-4	T	B1	7	6	9.30E-04	2.93E-03	1.30E-03	1.30E-03	4.0E-02	7.3E-02			2.4E+03	1.2E-06
F-12	INORG	Copper	7440-50-8	D	D	3				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
F-12	INORG	Copper	7440-50-8	T	D	7				1.70E-03	4.20E-03	1.4E+00				7.4E+03	
F-12	INORG	Lead	7439-92-1	D	B2	3				2.50E-03	2.50E-03	4.0E-03					
F-12	INORG	Lead	7439-92-1	T	B2	7				1.60E-03	2.50E-03	4.0E-03					
F-12	INORG	Manganese	7439-96-5	D	D	3	3	1.08E+00	1.46E+00			8.6E-01	**1.7E+00**			9.1E+03	1.6E-04
F-12	INORG	Manganese	7439-96-5	T	D	7	7	1.01E+00	1.34E+00			8.6E-01	**1.6E+00**			9.1E+03	1.5E-04
F-12	INORG	Mercury	7439-97-6	D	D	3				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
F-12	INORG	Mercury	7439-97-6	T	D	7				6.90E-05	8.70E-05	2.0E-03		5.6E-02		5.6E-02	
F-12	INORG	Nickel	7440-02-0	D	A	3	3	3.40E-03	6.50E-03			1.0E-01	6.5E-02			7.4E+04	8.8E-08
F-12	INORG	Nickel	7440-02-0	T	A	7	4	3.20E-03	6.80E-03	2.20E-03	2.90E-03	1.0E-01	6.8E-02			7.4E+04	9.2E-08
F-12	INORG	Selenium	7782-49-2	D	D	3				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
F-12	INORG	Selenium	7782-49-2	T	D	7	1	3.43E-03	3.43E-03	4.50E-03	4.70E-03	5.0E-02	6.9E-02			9.7E+02	3.5E-06
F-12	INORG	Silver	7440-22-4	D	D	3				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
F-12	INORG	Silver	7440-22-4	T	D	7				9.80E-04	1.50E-03	3.4E-02				1.5E+03	
F-12	INORG	Thallium	7440-28-0	D		3	2	2.90E-05	4.30E-05	5.00E-03	5.00E-03	2.0E-03	2.2E-02			1.3E+01	3.3E-06
F-12	INORG	Thallium	7440-28-0	T		7	2	1.90E-05	5.05E-05	3.30E-05	5.00E-03	2.0E-03	2.5E-02			1.3E+01	3.9E-06
F-12	INORG	Vanadium	7440-62-2	D		3				8.20E-04	8.20E-04	4.5E-03				9.7E+02	
F-12	INORG	Vanadium	7440-62-2	T		7				6.70E-04	8.20E-04	4.5E-03				9.7E+02	
F-12	INORG	Zinc	7440-66-6	D	D	3				1.20E-02	1.20E-02	2.4E+00				1.1E+05	
F-12	INORG	Zinc	7440-66-6	T	D	7	1	1.79E-02	1.79E-02	1.20E-02	1.40E-02	2.4E+00	7.4E-03			1.1E+05	1.6E-07
F-15	VOC	Acetone	67-64-1	T	ID	2				5.10E-03	5.10E-03	7.3E-01		1.0E+06		3.1E+04	
F-15	VOC	Benzene	71-43-2	T	A	2				1.60E-04	1.00E-03	5.0E-03		3.5E+01		1.1E+01	
F-15	VOC	Bromodichloromethane	75-27-4	T	B2	2				1.70E-04	1.00E-03	1.0E-01		3.7E+01		1.4E+01	
F-15	VOC	Bromoform	75-25-2	T	B2	2				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
F-15	VOC	Bromomethane	74-83-9	T	D	2				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
F-15	VOC	2-Butanone	78-93-3	T	ID	2				4.10E-04	1.00E-02	1.3E+01		2.4E+05		2.4E+05	
F-15	VOC	Carbon Disulfide	75-15-0	T		2				2.00E-04	1.00E-03	8.0E-01		5.5E+02		1.2E+03	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-15	VOC	Carbon Tetrachloride	56-23-5	T	B2	2				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
F-15	VOC	Chlorobenzene	108-90-7	T	D	2				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
F-15	VOC	Chloroethane	75-00-3	T		2				2.60E-04	1.00E-03	4.3E-01		5.7E+03		4.4E+02	
F-15	VOC	Chloroform	67-66-3	T	B2	2	1	5.40E-04	5.40E-04	1.40E-04	1.00E-04	1.0E-01	5.4E-03	1.8E+02	3.0E-06	1.5E+02	3.6E-06
F-15	VOC	Chloromethane	74-87-3	T	D	2	1	4.10E-04	4.10E-04	1.30E-04	1.00E-04	2.6E-01	1.6E-03	4.5E+01	9.1E-06	4.9E+02	8.4E-07
F-15	VOC	Cumene	98-82-8	T	D	2				1.20E-04	1.00E-03	8.0E-01		5.6E+01		5.6E+01	
F-15	VOC	Cyclohexane	110-82-7	T	ID	2				1.30E-04	1.00E-03						
F-15	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	2				6.20E-04	2.00E-04	2.0E-04		1.2E+00		3.9E-01	
F-15	VOC	Dibromochloromethane	124-48-1	T	C	2				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
F-15	VOC	1,2-Dibromoethane	106-93-4	T	B2	2				2.50E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
F-15	VOC	1,2-Dichlorobenzene	95-50-1	T	D	2				1.50E-04	1.00E-03	6.0E-01		1.6E+02		1.6E+02	
F-15	VOC	1,3-Dichlorobenzene	541-73-1	T	D	2				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
F-15	VOC	1,4-Dichlorobenzene	106-46-7	T	C	2				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
F-15	VOC	Dichlorodifluoromethane	75-71-8	T		2				2.60E-04	1.00E-03	1.7E+00		3.0E+02		3.0E+02	
F-15	VOC	1,1-Dichloroethane	75-34-3	T	C	2	2	2.00E-03	7.60E-03			8.8E-01	8.6E-03	2.3E+03	3.3E-06	2.4E+03	3.2E-06
F-15	VOC	1,2-Dichloroethane	107-06-2	T	B2	2				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
F-15	VOC	1,1-Dichloroethene	75-35-4	T	C	2				2.40E-04	1.00E-03	7.0E-03		1.3E+00		1.1E+01	
F-15	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	2				2.20E-04	5.00E-04	7.0E-02		2.1E+02		2.0E+02	
F-15	VOC	trans-1,2-Dichloroethene	156-60-5	T		2				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
F-15	VOC	1,2-Dichloropropane	78-87-5	T	B2	2				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
F-15	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	2				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
F-15	VOC	Ethyl Benzene	100-41-4	T	D	2				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
F-15	VOC	2-Hexanone	591-78-6	T		2				4.60E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	
F-15	VOC	Methyl Acetate	79-20-9	T		2				4.10E-04	1.00E-02						
F-15	VOC	Methyl tert-butyl ether	1634-04-4	T		2				1.30E-04	5.00E-03	2.4E-01		4.7E+04		6.1E+02	
F-15	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	2				2.30E-04	1.00E-02	1.8E+00		2.0E+04		1.3E+04	
F-15	VOC	Methylcyclohexane	108-87-2	T		2				1.50E-04	1.00E-03						
F-15	VOC	Methylene Chloride	75-09-2	T	B2	2				3.40E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
F-15	VOC	Styrene	100-42-5	T		2				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
F-15	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	2				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
F-15	VOC	Tetrachloroethene	127-18-4	T	C-B2	2	1	2.80E-04	2.80E-04	2.30E-04	2.30E-04	5.0E-03	5.6E-02	1.7E+02	1.6E-06	1.2E+01	2.3E-05
F-15	VOC	Toluene	108-88-3	T	D	2	2	2.90E-04	3.60E-04			1.0E+00	3.6E-04	5.3E+02	6.8E-07	5.3E+02	6.8E-07
F-15	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	2				1.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
F-15	VOC	1,1,1-Trichloroethane	71-55-6	T	D	2	1	6.10E-04	6.10E-04	1.00E-03	1.00E-03	2.0E-01	3.1E-03	1.3E+03	4.7E-07	1.3E+03	4.7E-07
F-15	VOC	1,1,2-Trichloroethane	79-00-5	T	C	2				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
F-15	VOC	Trichloroethene	79-01-6	T	C-B2	2				1.40E-04	1.00E-03	5.0E-03		9.7E+01		2.2E+01	
F-15	VOC	Trichlorofluoromethane	75-69-4	T		2				2.80E-04	1.00E-03	2.6E+00		1.1E+03		1.1E+03	
F-15	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		2				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
F-15	VOC	Vinyl Chloride	75-01-4	T	A	2				1.50E-04	1.00E-03	2.0E-03		1.3E+01		1.0E+00	
F-15	VOC	Xylenes (total)	1330-20-7	T	ID	2	1	6.40E-04	6.40E-04	1.00E-03	1.00E-03	1.0E+01	6.4E-05	1.9E+02	3.4E-06	1.9E+02	3.4E-06
F-15	SVOC	Acenaphthene	83-32-9	T		2				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
F-15	SVOC	Acenaphthylene	208-96-8	T	D	2				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
F-15	SVOC	Acetophenone	98-86-2	T	D	2				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
F-15	SVOC	Anthracene	120-12-7	T	D	2				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
F-15	SVOC	Atrazine	1912-24-9	T		2				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
F-15	SVOC	Benzaldehyde	100-52-7	T		2				2.80E-03	1.00E-02						
F-15	SVOC	Benzo(a)anthracene	56-55-3	T	B2	2				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
F-15	SVOC	Benzo(a)pyrene	50-32-8	T	B2	2				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
F-15	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	2				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
F-15	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	2				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
F-15	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	2				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
F-15	SVOC	Biphenyl	92-52-4	T	D	2				2.60E-03	1.00E-02						
F-15	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	2				9.70E-04	5.00E-03						
F-15	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	2				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
F-15	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	2				2.70E-03	5.00E-03	6.0E-03				3.2E-01	
F-15	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	2				8.80E-04	5.00E-03						

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-15	SVOC	Butylbenzylphthalate	85-68-7	T	C	2				8.80E-04	5.00E-03	2.2E+00				2.7E+00	
F-15	SVOC	Caprolactam	105-60-2	T		2				2.50E-03	1.00E-02	3.8E+00				3.9E+05	
F-15	SVOC	Carbazole	86-74-8	T	B2	2				8.20E-04	1.00E-02	8.5E-02				7.4E+00	
F-15	SVOC	4-Chloro-3-methylphenol	59-50-7	T		2				9.90E-04	5.00E-03	1.5E-01				7.9E+01	
F-15	SVOC	4-Chloroaniline	106-47-8	T		2				6.10E-04	2.00E-02						
F-15	SVOC	2-Chloronaphthalene	91-58-7	T		2				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
F-15	SVOC	2-Chlorophenol	95-57-8	T		2				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
F-15	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		2				7.90E-04	5.00E-03						
F-15	SVOC	Chrysene	218-01-9	T	B2	2				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
F-15	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	2				7.90E-04	5.00E-03	5.0E-03				2.0E-03	
F-15	SVOC	Dibenzofuran	132-64-9	T	D	2				7.10E-03	5.00E-03						
F-15	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	2				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
F-15	SVOC	2,4-Dichlorophenol	120-83-2	T		2				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
F-15	SVOC	Diethylphthalate	84-66-2	T	D	2				6.50E-04	5.00E-03	5.5E+00				1.1E+03	
F-15	SVOC	2,4-Dimethylphenol	105-67-9	T		2				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
F-15	SVOC	Dimethylphthalate	131-11-3	T	D	2				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
F-15	SVOC	Di-n-butylphthalate	84-74-2	T	D	2				6.70E-04	5.00E-03	8.8E-01				1.1E+01	
F-15	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		2				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
F-15	SVOC	2,4-Dinitrophenol	51-28-5	T		2				3.00E-03	2.00E-02						
F-15	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	2				7.90E-04	5.00E-03	7.7E-03				8.6E+00	
F-15	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	2				5.70E-04	5.00E-03						
F-15	SVOC	Di-n-octylphthalate	117-84-0	T		2				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
F-15	SVOC	Fluoranthene	206-44-0	T	D	2				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
F-15	SVOC	Fluorene	86-73-7	T	D	2				1.00E-03	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
F-15	SVOC	Hexachlorobenzene	118-74-1	T	B2	2				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
F-15	SVOC	Hexachlorobutadiene	87-68-3	T	C	2				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
F-15	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	2				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
F-15	SVOC	Hexachloroethane	67-72-1	T	C	2				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
F-15	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	2				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
F-15	SVOC	Isophorone	78-59-1	T	C	2				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
F-15	SVOC	2-Methylnaphthalene	91-57-6	T	ID	2				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
F-15	SVOC	Methylphenol (total)	1319-77-3	T		2				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
F-15	SVOC	Naphthalene	91-20-3	T	C	2				7.50E-04	5.00E-03	5.2E-01		3.1E+01		3.1E+01	
F-15	SVOC	2-Nitroaniline	88-74-4	T		2				7.00E-04	2.00E-02						
F-15	SVOC	3-Nitroaniline	99-09-2	T	C	2				7.10E-04	2.00E-02						
F-15	SVOC	4-Nitroaniline	100-01-6	T	C	2				1.30E-03	2.00E-02						
F-15	SVOC	Nitrobenzene	98-95-3	T	D	2				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
F-15	SVOC	2-Nitrophenol	88-75-5	T		2				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
F-15	SVOC	4-Nitrophenol	100-02-7	T		2				1.90E-03	2.00E-02						
F-15	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	2				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
F-15	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	2				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
F-15	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	2				7.80E-04	5.00E-03						
F-15	SVOC	Pentachlorophenol	87-86-5	T	B2	2				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
F-15	SVOC	Phenanthrene	85-01-8	T	D	2				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
F-15	SVOC	Phenol	108-95-2	T	ID	2				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
F-15	SVOC	Pyrene	129-00-0	T	D	2				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
F-15	SVOC	2,4,5-Trichlorophenol	95-95-4	T		2				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
F-15	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	2				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
F-15	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
F-15	P/PCB	PCBs (total)	1336-36-3	T	B2	2				8.20E-04	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
F-15	INORG	Antimony	7440-36-0	D		2				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
F-15	INORG	Antimony	7440-36-0	T		2				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
F-15	INORG	Arsenic	7440-38-2	D	A	2				3.90E-03	1.00E-02	5.0E-02				4.3E+00	
F-15	INORG	Arsenic	7440-38-2	T	A	2				3.90E-03	1.00E-02	5.0E-02				4.3E+00	
F-15	INORG	Barium	7440-39-3	D	D	2	2	1.78E-02	2.14E-02			2.0E+00	1.1E-02			1.4E+04	1.5E-06
F-15	INORG	Barium	7440-39-3	T	D	2	2	1.81E-02	2.15E-02			2.0E+00	1.1E-02			1.4E+04	1.5E-06

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
F-15	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
F-15	INORG	Beryllium	7440-41-7	T	B1	2				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
F-15	INORG	Cadmium	7440-43-9	D	B1	2				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
F-15	INORG	Cadmium	7440-43-9	T	B1	2	1	4.10E-04	4.10E-04	5.00E-03	5.00E-03	5.0E-03	8.2E-02			1.9E+02	2.2E-06
F-15	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.00E-02	1.0E-01				4.6E+02	
F-15	INORG	Chromium (total)	7440-47-3	T		2				1.40E-03	1.00E-02	1.0E-01				4.6E+02	
F-15	INORG	Cobalt	7440-48-4	D	B1	2				1.30E-03	2.00E-02	4.0E-02				2.4E+03	
F-15	INORG	Cobalt	7440-48-4	T	B1	2	2	1.60E-03	1.70E-03			4.0E-02	4.3E-02			2.4E+03	7.1E-07
F-15	INORG	Copper	7440-50-8	D	D	2				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
F-15	INORG	Copper	7440-50-8	T	D	2				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
F-15	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	3.00E-03	4.0E-03					
F-15	INORG	Lead	7439-92-1	T	B2	2				2.50E-03	3.00E-03	4.0E-03					
F-15	INORG	Manganese	7439-96-5	D	D	2	2	3.59E-01	3.33E-01			8.6E-01	7.4E-01			9.1E+03	7.0E-05
F-15	INORG	Manganese	7439-96-5	T	D	2	2	3.93E-01	6.57E-01			8.6E-01	7.6E-01			9.1E+03	7.2E-05
F-15	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
F-15	INORG	Mercury	7439-97-6	T	D	2				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
F-15	INORG	Nickel	7440-02-0	D	A	2	2	6.50E-03	6.60E-03	2.00E-02	2.00E-02	1.0E-01	6.6E-02			7.4E+04	8.9E-08
F-15	INORG	Nickel	7440-02-0	T	A	2	2	2.80E-03	7.40E-03			1.0E-01	7.4E-02			7.4E+04	1.0E-07
F-15	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
F-15	INORG	Selenium	7782-49-2	T	D	2				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
F-15	INORG	Silver	7440-22-4	D	D	2				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
F-15	INORG	Silver	7440-22-4	T	D	2				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
F-15	INORG	Thallium	7440-28-0	D		2	1	6.40E-05	6.40E-05	1.00E-02	1.00E-02	2.0E-03	3.2E-02			1.3E+01	4.9E-06
F-15	INORG	Thallium	7440-28-0	T		2	1	5.40E-05	5.40E-05	1.00E-02	1.00E-02	2.0E-03	2.7E-02			1.3E+01	4.2E-06
F-15	INORG	Vanadium	7440-62-2	D		2				8.20E-04	1.00E-02	4.5E-03				9.7E+02	
F-15	INORG	Vanadium	7440-62-2	T		2				8.20E-04	1.00E-02	4.5E-03				9.7E+02	
F-15	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	2.00E-02	2.4E+00				1.1E+05	
F-15	INORG	Zinc	7440-66-6	T	D	2				1.20E-02	2.00E-02	2.4E+00				1.1E+05	
M-01	VOC	Acetone	67-64-1	T	ID	6				5.10E-04	1.00E-02	7.3E-01		1.0E+06		3.1E+04	
M-01	VOC	Benzene	71-43-2	T	A	6				1.60E-04	1.00E-03	5.0E-03		3.5E+01		1.1E+01	
M-01	VOC	Bromodichloromethane	75-27-4	T	B2	6	1	1.90E-04	1.90E-04	1.70E-04	1.00E-03	1.0E-01	1.9E-03	3.7E+01	5.1E-06	1.4E+01	1.4E-05
M-01	VOC	Bromoform	75-25-2	T	B2	6				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
M-01	VOC	Bromomethane	74-83-9	T	D	6				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
M-01	VOC	2-Butanone	78-93-3	T	ID	6				4.10E-04	1.00E-02	1.3E+01		2.4E+05		2.4E+05	
M-01	VOC	Carbon Disulfide	75-15-0	T		6				2.00E-04	1.00E-03	8.0E-01		5.5E+02		1.2E+03	
M-01	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
M-01	VOC	Chlorobenzene	108-90-7	T	D	6				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
M-01	VOC	Chloroethane	75-00-3	T		6				2.60E-04	1.00E-03	4.3E-01		5.7E+03		4.4E+02	
M-01	VOC	Chloroform	67-66-3	T	B2	6	3	4.20E-04	6.70E-04	1.40E-04	1.40E-04	1.0E-01	6.7E-03	1.8E+02	3.7E-06	1.5E+02	4.5E-06
M-01	VOC	Chloromethane	74-87-3	T	D	6				1.30E-04	1.00E-03	2.6E-01		4.5E+01		4.9E+02	
M-01	VOC	Cumene	98-82-8	T	D	6				1.20E-04	1.00E-03	8.0E-01		5.6E+01		5.6E+01	
M-01	VOC	Cyclohexane	110-82-7	T	ID	6				1.30E-04	1.00E-03						
M-01	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				6.20E-04	2.00E-03	2.0E-04		1.2E+00		3.9E-01	
M-01	VOC	Dibromochloromethane	124-48-1	T	C	6				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
M-01	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
M-01	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.10E-04	1.00E-03	6.0E-01		1.6E+02		1.6E+02	
M-01	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
M-01	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
M-01	VOC	Dichlorodifluoromethane	75-71-8	T		6	4	6.70E-04	2.40E-02	2.60E-04	2.60E-04	1.7E+00	1.4E-02	3.0E+02	8.0E-05	3.0E+02	8.0E-05
M-01	VOC	1,1-Dichloroethane	75-34-3	T	C	6				1.60E-04	1.00E-03	8.8E-01		2.3E+03		2.4E+03	
M-01	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
M-01	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.40E-04	1.00E-03	7.0E-03		1.3E+00		1.1E+01	
M-01	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	6				2.00E-04	5.00E-04	7.0E-02		2.1E+02		2.0E+02	
M-01	VOC	trans-1,2-Dichloroethene	156-60-5	T		6				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
M-01	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
M-01	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-01	VOC	Ethyl Benzene	100-41-4	T	D	6				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
M-01	VOC	2-Hexanone	591-78-6	T		6				4.60E-04	1.00E-02	4.0E+00		8.7E+03		5.2E+03	
M-01	VOC	Methyl Acetate	79-20-9	T		6				4.10E-04	1.00E-02						
M-01	VOC	Methyl tert-butyl ether	1634-04-4	T		6				1.30E-04	5.00E-03	2.4E-01		4.7E+04		6.1E+02	
M-01	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	6				2.30E-04	1.00E-02	1.8E+00		2.0E+04		1.3E+04	
M-01	VOC	Methylcyclohexane	108-87-2	T		6				1.50E-04	1.00E-03						
M-01	VOC	Methylene Chloride	75-09-2	T	B2	6				3.40E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
M-01	VOC	Styrene	100-42-5	T		6				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
M-01	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
M-01	VOC	Tetrachloroethene	127-18-4	T	C-B2	6	2	3.80E-04	3.10E-04	2.30E-04	1.00E-03	5.0E-03	8.2E-02	1.7E+02	2.4E-06	1.2E+01	3.4E-05
M-01	VOC	Toluene	108-88-3	T	D	6	1	4.40E-04	4.40E-04	1.60E-04	1.00E-03	1.0E+00	4.4E-04	5.3E+02	8.3E-07	5.3E+02	8.3E-07
M-01	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				2.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
M-01	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6	3	3.50E-04	2.90E-03	1.50E-04	1.00E-03	2.0E-01	5.0E-03	1.3E+03	7.7E-07	1.3E+03	7.7E-07
M-01	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
M-01	VOC	Trichloroethene	79-01-6	T	C-B2	6				1.40E-04	1.00E-03	5.0E-03		9.7E+01		2.2E+01	
M-01	VOC	Trichlorofluoromethane	75-69-4	T		6				2.80E-04	1.00E-03	2.6E+00		1.1E+03		1.1E+03	
M-01	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		6				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
M-01	VOC	Vinyl Chloride	75-01-4	T	A	6				1.50E-04	1.00E-03	2.0E-03		1.3E+01		1.0E+00	
M-01	VOC	Xylenes (total)	1330-20-7	T	ID	6	1	3.70E-04	3.70E-04	3.30E-04	1.00E-03	1.0E+01	3.7E-05	1.9E+02	1.9E-06	1.9E+02	1.9E-06
M-01	SVOC	Acenaphthene	83-32-9	T		6				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
M-01	SVOC	Acenaphthylene	208-96-8	T	D	6				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
M-01	SVOC	Acetophenone	98-86-2	T	D	6				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
M-01	SVOC	Anthracene	120-12-7	T	D	6				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
M-01	SVOC	Atrazine	1912-24-9	T		6				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
M-01	SVOC	Benzaldehyde	100-52-7	T		6				2.80E-03	1.00E-02						
M-01	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
M-01	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
M-01	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
M-01	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
M-01	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
M-01	SVOC	Biphenyl	92-52-4	T	D	6				2.60E-03	1.00E-02						
M-01	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				8.70E-04	5.00E-03						
M-01	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	6				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
M-01	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6				2.70E-03	5.00E-03	6.0E-03				3.2E-01	
M-01	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				8.80E-04	5.00E-03						
M-01	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
M-01	SVOC	Caprolactam	105-60-2	T		6				2.50E-03	1.00E-02	5.8E+00				3.9E+05	
M-01	SVOC	Carbazole	86-74-8	T	B2	6				8.20E-04	1.00E-02	8.5E-02				7.4E+00	
M-01	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				9.90E-04	5.00E-03	1.5E-01				7.9E+01	
M-01	SVOC	4-Chloroaniline	106-47-8	T		3				6.10E-04	1.00E-02						
M-01	SVOC	2-Chloronaphthalene	91-58-7	T		6				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
M-01	SVOC	2-Chlorophenol	95-57-8	T		6				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
M-01	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				7.90E-04	5.00E-03						
M-01	SVOC	Chrysene	218-01-9	T	B2	6				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
M-01	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				7.90E-04	5.00E-03	2.0E-03				2.0E-03	
M-01	SVOC	Dibenzofuran	132-64-9	T	D	6				1.10E-03	5.00E-03						
M-01	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	3				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
M-01	SVOC	2,4-Dichlorophenol	120-83-2	T		6				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
M-01	SVOC	Diethylphthalate	84-66-2	T	D	6				6.50E-04	5.00E-03	5.5E+00				1.1E+03	
M-01	SVOC	2,4-Dimethylphenol	105-67-9	T		6				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
M-01	SVOC	Dimethylphthalate	131-11-3	T	D	6				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
M-01	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				6.70E-04	5.00E-03	8.8E-01				1.1E+01	
M-01	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				3.00E-03	2.00E-02	2.0E-02				9.5E+00	
M-01	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.00E-03	2.00E-02						
M-01	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				7.90E-04	5.00E-03	7.7E-03				8.6E+00	
M-01	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				5.70E-04	5.00E-03						

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-01	SVOC	Di-n-octylphthalate	117-84-0	T		6				1.10E-03	5.00E-03	3.6E-01				4.0E-01	
M-01	SVOC	Fluoranthene	206-44-0	T	D	6				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
M-01	SVOC	Fluorene	86-73-7	T	D	6				1.00E-03	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
M-01	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
M-01	SVOC	Hexachlorobutadiene	87-68-3	T	C	6				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
M-01	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	6				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
M-01	SVOC	Hexachloroethane	67-72-1	T	C	6				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
M-01	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
M-01	SVOC	Isophorone	78-59-1	T	C	6				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
M-01	SVOC	2-Methylnaphthalene	91-57-6	T	ID	6				6.40E-04	5.00E-03	2.5E-01				2.5E+01	
M-01	SVOC	Methylphenol (total)	1319-77-3	T		6				1.50E-03	5.00E-03	3.7E-01				8.1E+02	
M-01	SVOC	Naphthalene	91-20-3	T	C	6				7.50E-04	5.00E-03	9.2E-01		3.1E+01		3.1E+01	
M-01	SVOC	2-Nitroaniline	88-74-4	T		6				7.00E-04	2.00E-02						
M-01	SVOC	3-Nitroaniline	99-09-2	T	C	3				7.10E-04	2.00E-02						
M-01	SVOC	4-Nitroaniline	100-01-6	T	C					1.30E-03	2.00E-02						
M-01	SVOC	Nitrobenzene	98-95-3	T	D	6				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
M-01	SVOC	2-Nitrophenol	88-75-5	T		6				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
M-01	SVOC	4-Nitrophenol	100-02-7	T		6				1.90E-03	2.00E-02						
M-01	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
M-01	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
M-01	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				7.80E-04	5.00E-03						
M-01	SVOC	Pentachlorophenol	87-86-5	T	B2	6				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
M-01	SVOC	Phenanthrene	85-01-8	T	D	6				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
M-01	SVOC	Phenol	108-95-2	T	ID	6				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
M-01	SVOC	Pyrene	129-00-0	T	D	6				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
M-01	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
M-01	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
M-01	P/PCB	PCBs (total)	1336-36-3	D	B2	3				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-01	P/PCB	PCBs (total)	1336-36-3	T	B2	6				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-01	INORG	Antimony	7440-36-0	D		6	2	4.20E-03	6.00E-03	2.20E-03	2.50E-02	6.0E-03	1.0E+00			6.8E+01	8.8E-05
M-01	INORG	Antimony	7440-36-0	T		6	2	5.00E-03	7.70E-03	2.20E-03	2.50E-02	6.0E-03	**1.3E+00**			6.8E+01	1.1E-04
M-01	INORG	Arsenic	7440-38-2	D	A	6	3	4.20E-03	6.40E-03	3.90E-03	1.00E-02	5.0E-02	1.3E-01			4.3E+00	1.5E-03
M-01	INORG	Arsenic	7440-38-2	T	A	6	5	4.70E-03	7.00E-03	1.00E-02	1.00E-02	5.0E-02	1.4E-01			4.3E+00	1.6E-03
M-01	INORG	Barium	7440-39-3	D	D	6	6	1.41E-02	1.77E-01			2.0E+00	8.9E-02			1.4E+04	1.3E-05
M-01	INORG	Barium	7440-39-3	T	D	6	6	1.36E-02	1.72E-01			2.0E+00	8.6E-02			1.4E+04	1.2E-05
M-01	INORG	Beryllium	7440-41-7	D	B1	6				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
M-01	INORG	Beryllium	7440-41-7	T	B1	6				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
M-01	INORG	Cadmium	7440-43-9	D	B1	6				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
M-01	INORG	Cadmium	7440-43-9	T	B1	6	1	3.80E-04	3.80E-04	2.80E-04	5.00E-03	5.0E-03	7.6E-02			1.9E+02	2.0E-06
M-01	INORG	Chromium (total)	7440-47-3	D		4	1	3.64E-02	3.64E-02	1.40E-03	1.00E-02	1.0E-01	3.6E-01			4.6E+02	7.9E-05
M-01	INORG	Chromium III	16065-83-1	D	D	2	1	3.87E-02	3.87E-02	1.40E-03	1.40E-03	3.8E+01	1.0E-03			2.9E+05	1.3E-07
M-01	INORG	Chromium III	16065-83-1	T	D	6	2		4.85E-02	1.40E-03	1.00E-02	3.8E+01	1.3E-03			2.9E+05	1.7E-07
M-01	INORG	Chromium VI	18540-29-9	D	A	2				6.90E-03	6.90E-03	1.0E-01				4.6E+02	
M-01	INORG	Chromium VI	18540-29-9	T	A	6	1	3.38E-02	3.38E-02	6.90E-03	2.00E-02	1.0E-01	3.4E-01			4.6E+02	7.3E-05
M-01	INORG	Cobalt	7440-48-4	D	B1	6	4	2.20E-03	2.90E-03	1.30E-03	1.30E-03	4.0E-02	7.3E-02			2.4E+03	1.2E-06
M-01	INORG	Cobalt	7440-48-4	T	B1	6	4	2.20E-03	2.80E-03	1.30E-03	1.30E-03	4.0E-02	7.0E-02			2.4E+03	1.2E-06
M-01	INORG	Copper	7440-50-8	D	D	6				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
M-01	INORG	Copper	7440-50-8	T	D	6				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
M-01	INORG	Cyanide (total)	57-12-5	T	D	11	7	5.50E-03	1.30E+00	1.70E-03	1.80E-03	2.0E-01	**6.5E+00**			5.7E+01	2.3E-02
M-01	INORG	Lead	7439-92-1	D	B2	6				3.50E-03	4.00E-03	4.0E-03					
M-01	INORG	Lead	7439-92-1	T	B2	6				2.50E-03	3.00E-03	4.0E-03					
M-01	INORG	Manganese	7439-96-5	D	D	6	5	9.40E-04	5.46E-01	9.00E-04	9.00E-04	8.6E-01	6.3E-01			9.1E+03	6.0E-05
M-01	INORG	Manganese	7439-96-5	T	D	6	5	2.60E-03	5.46E-01	9.00E-04	9.00E-04	8.6E-01	6.4E-01			9.1E+03	6.0E-05
M-01	INORG	Mercury	7439-97-6	D	D	6				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
M-01	INORG	Mercury	7439-97-6	T	D	6				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
M-01	INORG	Nickel	7440-02-0	D	A	6	2	2.40E-03	3.00E-03	2.20E-03	2.20E-03	1.0E-01	3.0E-02			7.4E+04	4.1E-08

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-01	INORG	Nickel	7440-02-0	T	A	6	1	3.70E-03	3.70E-03	2.20E-03	2.00E-02	7.3E-01	3.7E-02			7.4E+04	5.0E-08
M-01	INORG	Selenium	7782-49-2	D	D	6	2	5.00E-03	5.60E-03	4.50E-03	5.00E-03	5.0E-02	1.1E-01			9.7E+02	5.8E-06
M-01	INORG	Selenium	7782-49-2	T	D	6	2	4.50E-03	6.50E-03	4.50E-03	5.00E-03	5.0E-02	1.3E-01			9.7E+02	6.7E-06
M-01	INORG	Silver	7440-22-4	D	D	6				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
M-01	INORG	Silver	7440-22-4	T	D	6				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
M-01	INORG	Thallium	7440-28-0	D		6	3	2.60E-05	5.40E-05	5.00E-03	1.00E-02	2.0E-03	2.7E-02			1.3E+01	4.2E-06
M-01	INORG	Thallium	7440-28-0	T		6	1	4.50E-05	4.50E-05	1.80E-05	1.00E-02	2.0E-03	2.3E-02			1.3E+01	3.5E-06
M-01	INORG	Vanadium	7440-62-2	D		6	2	1.00E-03	1.70E-03	8.20E-04	1.00E-02	4.5E-03	3.8E-01			9.7E+02	1.8E-06
M-01	INORG	Vanadium	7440-62-2	T		6	1	2.80E-03	2.80E-03	8.20E-04	1.00E-02	4.5E-03	6.2E-01			9.7E+02	2.9E-06
M-01	INORG	Zinc	7440-66-6	D	D	6	1	1.89E-02	1.89E-02	1.50E-02	2.00E-02	2.4E+00	7.9E-03			1.1E+05	1.7E-07
M-01	INORG	Zinc	7440-66-6	T	D	6				1.50E-02	2.00E-02	2.4E+00				1.1E+05	
M-02	VOC	Acetone	67-64-1	T	ID	36	16	8.25E-04	3.40E-03	5.10E-04	6.90E-03	7.3E-01	**4.7E+00**	1.0E+06	3.4E-06	3.1E+04	1.1E-04
M-02	VOC	Benzene	71-43-2	T	A	36				1.60E-04	2.50E-02	5.0E-03		3.5E+01		1.1E+01	
M-02	VOC	Bromodichloromethane	75-27-4	T	B2	36	2	4.80E-04	7.20E-04	1.70E-04	2.50E-02	1.0E-01	7.2E-03	3.7E+01	1.9E-05	1.4E+01	5.1E-05
M-02	VOC	Bromoform	75-25-2	T	B2	36				1.80E-04	2.50E-02	1.0E-01		3.1E+03		1.4E+02	
M-02	VOC	Bromomethane	74-83-9	T	D	36				2.00E-04	2.50E-02	1.0E-02		9.0E+00		7.0E+01	
M-02	VOC	2-Butanone	78-93-3	T	ID	36				4.10E-04	2.50E-02	1.3E+01		2.4E+05		2.4E+05	
M-02	VOC	Carbon Disulfide	75-15-0	T		36				2.00E-04	2.50E-02	8.0E-01		5.5E+02		1.2E+03	
M-02	VOC	Carbon Tetrachloride	56-23-5	T	B2	36				1.20E-04	2.50E-02	5.0E-03		2.4E+00		4.6E+00	
M-02	VOC	Chlorobenzene	108-90-7	T	D	36				1.40E-04	2.50E-02	1.0E-01		4.7E+02		8.6E+01	
M-02	VOC	Chloroethane	75-00-3	T		36	7	2.70E-04	1.80E-02	2.60E-04	1.80E-02	4.3E-01	1.3E-01	5.7E+03	1.0E-05	4.4E+02	1.3E-04
M-02	VOC	Chloroform	67-66-3	T	B2	36	11	2.00E-04	5.80E-03	1.40E-04	2.20E-02	1.0E-01	5.8E-02	1.8E+02	3.2E-05	1.5E+02	3.9E-05
M-02	VOC	Chloromethane	74-87-3	T	D	36	1	1.60E-04	1.60E-04	1.30E-04	3.10E-02	2.6E-01	6.2E-04	4.5E+01	3.6E-06	4.9E+02	3.3E-07
M-02	VOC	Cumene	98-82-8	T	D	36				1.20E-04	2.50E-02	8.0E-01		5.6E+01		5.6E+01	
M-02	VOC	Cyclohexane	110-82-7	T	ID	36				1.30E-04	2.50E-02						
M-02	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	36				6.20E-04	5.10E-02	2.0E-04		1.2E+00		3.9E-01	
M-02	VOC	Dibromochloromethane	124-48-1	T	C	36				2.60E-04	2.50E-02	1.0E-01		1.1E+02		1.8E+01	
M-02	VOC	1,2-Dibromoethane	106-93-4	T	B2	36				2.20E-04	2.50E-02	1.0E-03		1.5E+01		2.5E-02	
M-02	VOC	1,2-Dichlorobenzene	95-50-1	T	D	36				1.10E-04	2.50E-02	6.0E-01		1.6E+02		1.6E+02	
M-02	VOC	1,3-Dichlorobenzene	541-73-1	T	D	36				1.50E-04	2.50E-02	6.6E-03				2.0E+00	
M-02	VOC	1,4-Dichlorobenzene	106-46-7	T	C	36				1.70E-04	2.50E-02	7.5E-02		7.4E+01		6.4E+00	
M-02	VOC	Dichlorodifluoromethane	75-71-8	T		36				2.60E-04	5.00E-02	1.7E+00		3.0E+02		3.0E+02	
M-02	VOC	1,1-Dichloroethane	75-34-3	T	C	36	34	4.80E-04	1.90E+00	3.20E-03	1.10E-02	8.8E-01	**2.2E+00**	2.3E+03	8.3E-04	2.4E+03	7.9E-04
M-02	VOC	1,2-Dichloroethane	107-06-2	T	B2	36	6	6.20E-04	1.00E-02	2.10E-04	2.50E-02	5.0E-03	**2.0E+00**	5.9E+01	1.7E-04	1.9E+01	5.3E-04
M-02	VOC	1,1-Dichloroethene	75-35-4	T	C	36	25	3.30E-04	9.10E-02	2.40E-04	1.60E-02	7.0E-03	**1.3E+01**	1.3E+00	7.0E-02	1.1E+01	8.3E-03
M-02	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	36	9	5.80E-04	7.15E-02	2.20E-04	2.20E-02	7.0E-02	1.0E+00	2.1E+02	3.4E-04	2.0E+02	3.6E-04
M-02	VOC	trans-1,2-Dichloroethene	156-60-5	T		36	3	5.45E-04	3.20E-03	1.50E-04	2.10E-02	1.0E-01	3.2E-02	2.0E+02	1.6E-05	2.2E+02	1.5E-05
M-02	VOC	1,2-Dichloropropane	78-87-5	T	B2	36				1.70E-04	2.60E-02	5.0E-03		3.6E+01		1.6E+01	
M-02	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	36				2.70E-04	2.50E-02	8.5E-03		2.6E+01		5.5E+00	
M-02	VOC	Ethyl Benzene	100-41-4	T	D	29				1.20E-04	2.50E-02	7.0E-01		1.7E+02		1.7E+02	
M-02	VOC	2-Hexanone	591-78-6	T		36				4.60E-04	2.50E-01	1.0E+00		8.7E+03		5.2E+03	
M-02	VOC	Methyl Acetate	79-20-9	T		36				4.10E-04	2.50E-01						
M-02	VOC	Methyl tert-butyl ether	1634-04-4	T		36				1.30E-04	1.20E-01	2.4E-01		4.7E+04		6.1E+02	
M-02	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	36	3	1.00E-03	3.20E-02	2.30E-04	2.50E-01	1.8E+00	1.8E-02	2.0E+04	1.6E-06	1.3E+04	2.5E-06
M-02	VOC	Methylcyclohexane	108-87-2	T		36				1.50E-04	2.60E-02						
M-02	VOC	Methylene Chloride	75-09-2	T	B2	36	10	3.75E-04	2.40E-02	2.90E-04	2.50E-02	5.0E-03	**4.8E+00**	1.4E+03	1.7E-05	2.2E+02	1.1E-04
M-02	VOC	Styrene	100-42-5	T		36				1.50E-04	2.50E-02	1.0E-01		3.1E+02		9.7E+00	
M-02	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	36				2.50E-04	2.50E-02	8.5E-03		7.7E+01		4.7E+00	
M-02	VOC	Tetrachloroethene	127-18-4	T	C-B2	36	6	7.20E-04	7.50E-03	2.30E-04	2.60E-02	5.0E-03	**1.5E+00**	1.7E+02	4.4E-05	1.2E+01	6.3E-04
M-02	VOC	Toluene	108-88-3	T	D	36	1	2.00E-03	2.00E-03	1.80E-04	2.50E-02	1.0E+00	2.0E-03	5.3E+02	3.8E-06	5.3E+02	3.8E-06
M-02	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	36				1.70E-04	2.50E-02	7.0E-02		3.0E+02		1.9E+01	
M-02	VOC	1,1,1-Trichloroethane	71-55-6	T	D	36	27	4.50E-04	6.00E-01	1.50E-04	1.00E-02	2.0E-01	**3.0E+00**	1.3E+03	4.6E-04	1.3E+03	4.6E-04
M-02	VOC	1,1,2-Trichloroethane	79-00-5	T	C	36	3	1.00E-03	2.00E-03	2.20E-04	2.20E-02	5.0E-03	**4.0E+00**	1.1E+02	1.8E-04	2.1E+01	9.5E-04
M-02	VOC	Trichloroethene	79-01-6	T	C-B2	36	10	1.40E-03	5.60E-02	1.40E-04	2.60E-02	5.0E-03	**1.1E+01**	9.7E+01	5.8E-04	2.2E+01	2.5E-03
M-02	VOC	Trichlorofluoromethane	75-69-4	T		36				2.80E-04	3.40E-02	2.6E+00		1.1E+03		1.1E+03	
M-02	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		36	1	6.30E-04	6.30E-04	3.20E-04	2.50E-02	1.7E+02	3.7E-06	1.7E+02	3.7E-06	1.7E+02	3.7E-06

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-02	VOC	Vinyl Chloride	75-01-4	T	A	36	8	3.80E-04	2.10E-02	1.50E-04	2.50E-02	2.0E-03	**1.1E+01**	1.3E+01	1.6E-03	1.0E+00	2.1E-02
M-02	VOC	Xylenes (total)	1330-20-7	T	ID	36				3.30E-04	2.80E-02	1.0E+01		1.9E+02		1.9E+02	
M-02	SVOC	Acenaphthene	83-32-9	T		32	1	8.40E-04	8.40E-04	6.90E-04	5.00E-03	1.3E+00	6.5E-04	4.2E+00	2.0E-04	4.2E+00	2.0E-04
M-02	SVOC	Acenaphthylene	208-96-8	T	D	32				4.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
M-02	SVOC	Acetophenone	98-86-2	T	D	32				6.50E-04	5.00E-02	1.5E+00		6.1E+03		6.1E+03	
M-02	SVOC	Anthracene	120-12-7	T	D	32	1	7.80E-04	7.80E-04	5.90E-04	5.00E-03	4.3E-02	1.8E-02	4.3E-02	1.8E-02	4.3E-02	1.8E-02
M-02	SVOC	Atrazine	1912-24-9	T		32				3.50E-04	5.00E-03	3.0E-03				5.4E+00	
M-02	SVOC	Benzaldehyde	100-52-7	T		32				5.90E-04	5.00E-02						
M-02	SVOC	Benzo(a)anthracene	56-55-3	T	B2	32				6.80E-04	5.00E-03	2.1E-03				9.4E-03	
M-02	SVOC	Benzo(a)pyrene	50-32-8	T	B2	32				5.30E-04	5.00E-03	2.0E-03				2.0E-03	
M-02	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	32				5.70E-04	5.00E-03	2.0E-03				2.0E-03	
M-02	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	32				7.00E-04	5.00E-03	5.0E-03				5.0E-03	
M-02	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	32				6.40E-04	5.00E-03	5.0E-03				5.0E-03	
M-02	SVOC	Biphenyl	92-52-4	T	D	32				6.50E-04	1.00E-02						
M-02	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	32				8.70E-04	5.00E-03						
M-02	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	32				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
M-02	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	32	3	1.10E-03	2.40E-02	2.00E-04	5.00E-03	6.0E-03	**4.0E+00**			3.2E-01	7.5E-02
M-02	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	32				7.80E-04	5.00E-03						
M-02	SVOC	Butylbenzylphthalate	85-68-7	T	C	32				2.30E-04	5.00E-03	1.2E+00				2.7E+00	
M-02	SVOC	Caprolactam	105-60-2	T		32	1	4.90E-04	4.90E-04	4.50E-04	1.00E-02	5.8E+00	8.4E-05			3.9E+05	1.3E-09
M-02	SVOC	Carbazole	86-74-8	T	B2	32				6.10E-04	1.00E-02	8.5E-02				7.4E+00	
M-02	SVOC	4-Chloro-3-methylphenol	59-50-7	T		32				5.50E-04	5.00E-03	1.5E-01				7.9E+01	
M-02	SVOC	4-Chloroaniline	106-47-8	T		30				6.10E-04	1.00E-02						
M-02	SVOC	2-Chloronaphthalene	91-58-7	T		32				7.30E-04	5.00E-03	1.8E+00				6.7E+00	
M-02	SVOC	2-Chlorophenol	95-57-8	T		32				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
M-02	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		32				6.60E-04	5.00E-03						
M-02	SVOC	Chrysene	218-01-9	T	B2	32				6.70E-04	5.00E-03	5.0E-03				5.0E-03	
M-02	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	32				6.80E-04	5.00E-03	2.0E-03				2.0E-03	
M-02	SVOC	Dibenzofuran	132-64-9	T	D	32				6.60E-04	5.00E-03						
M-02	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	29				4.70E-04	2.00E-02	1.1E-03				1.8E-01	
M-02	SVOC	2,4-Dichlorophenol	120-83-2	T		32				7.00E-04	1.00E-02	7.3E-02				4.8E+01	
M-02	SVOC	Diethylphthalate	84-66-2	T	D	32	3	5.50E-04	2.40E-03	2.50E-04	5.00E-03	5.5E+00	4.4E-04			1.1E+03	2.2E-06
M-02	SVOC	2,4-Dimethylphenol	105-67-9	T		32	3	1.00E-03	1.30E-03	8.50E-04	5.00E-03	3.7E-01	3.5E-03			5.2E+02	2.5E-06
M-02	SVOC	Dimethylphthalate	131-11-3	T	D	32				2.00E-04	5.00E-03	7.3E+01				4.2E+03	
M-02	SVOC	Di-n-butylphthalate	84-74-2	T	D	32	5	4.40E-04	1.10E-03	3.70E-04	5.00E-03	8.8E-01	1.3E-03			1.1E+01	1.0E-04
M-02	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		32				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
M-02	SVOC	2,4-Dinitrophenol	51-28-5	T		32				3.00E-03	2.00E-02						
M-02	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	32				4.60E-04	5.00E-03	7.7E-03				8.6E+00	
M-02	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	32				5.70E-04	5.00E-03						
M-02	SVOC	Di-n-octylphthalate	117-84-0	T		32				6.90E-04	5.00E-03	1.3E-01				4.0E-01	
M-02	SVOC	Fluoranthene	206-44-0	T	D	32				7.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
M-02	SVOC	Fluorene	86-73-7	T	D	32	6	1.20E-03	4.40E-03	7.50E-04	5.00E-03	8.8E-01	5.0E-03	2.0E+00	2.2E-03	2.0E+00	2.2E-03
M-02	SVOC	Hexachlorobenzene	118-74-1	T	B2	32				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
M-02	SVOC	Hexachlorobutadiene	87-68-3	T	C	32				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
M-02	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	32				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
M-02	SVOC	Hexachloroethane	67-72-1	T	C	32				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
M-02	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	32				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
M-02	SVOC	Isophorone	78-59-1	T	C	32				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
M-02	SVOC	2-Methylnaphthalene	91-57-6	T	ID	32	4	1.10E-03	2.10E-03	6.40E-04	5.00E-03	2.6E-01	8.1E-03			2.5E+01	8.4E-05
M-02	SVOC	Methylphenol (total)	1319-77-3	T		32				8.00E-04	5.00E-03	3.7E-01				8.1E+02	
M-02	SVOC	Naphthalene	91-20-3	T	C	32	4	1.30E-03	1.60E-03	7.50E-04	5.00E-03	5.2E-01	3.1E-03	3.1E+01	5.2E-05	3.1E+01	5.2E-05
M-02	SVOC	2-Nitroaniline	88-74-4	T		32				4.90E-04	2.00E-02						
M-02	SVOC	3-Nitroaniline	99-09-2	T	C	29				5.80E-04	2.00E-02						
M-02	SVOC	4-Nitroaniline	100-01-6	T	C	31				5.90E-04	2.00E-02						
M-02	SVOC	Nitrobenzene	98-95-3	T	D	32				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
M-02	SVOC	2-Nitrophenol	88-75-5	T		32				9.50E-04	5.00E-03	2.0E-02				7.9E+01	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-02	SVOC	4-Nitrophenol	100-02-7	T		32				1.90E-03	2.00E-02						
M-02	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	32				6.40E-04	5.00E-03	2.7E-01				3.5E+01	
M-02	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	32				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
M-02	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	32				7.80E-04	5.00E-03						
M-02	SVOC	Pentachlorophenol	87-86-5	T	B2	32				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
M-02	SVOC	Phenanthrene	85-01-8	T	D	32	7	9.10E-04	7.50E-03	6.80E-04	5.00E-03	5.2E-02	1.4E-01	1.0E+00	7.5E-03	1.0E+00	7.5E-03
M-02	SVOC	Phenol	108-95-2	T	ID	32				1.30E-03	5.00E-03	4.4E+00				2.9E+04	
M-02	SVOC	Pyrene	129-00-0	T	D	32				6.30E-04	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
M-02	SVOC	2,4,5-Trichlorophenol	95-95-4	T		32				8.60E-04	5.00E-03	7.3E-01				1.7E+02	
M-02	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	32				7.10E-04	5.00E-03	5.2E-03				1.0E+01	
M-02	P/PCB	PCBs (total)	1336-36-3	D	B2	5				3.50E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-02	P/PCB	PCBs (total)	1336-36-3	T	B2	32	1	4.12E-04	4.12E-04	8.20E-05	4.00E-04	5.0E-04	8.2E-01	4.5E-02	9.1E-03	3.3E-03	1.2E-01
M-02	INORG	Antimony	7440-36-0	D		10	2	2.40E-03	2.90E-03	2.20E-03	2.20E-03	6.0E-03	6.5E-01			6.8E+01	5.7E-05
M-02	INORG	Antimony	7440-36-0	T		32	1	2.30E-03	2.30E-03	2.20E-03	2.20E-03	6.0E-03	4.2E-01			6.8E+01	3.7E-05
M-02	INORG	Arsenic	7440-38-2	D	A	10	2	1.27E-02	3.07E-02	3.90E-03	3.90E-03	5.0E-02	6.1E-01			4.3E+00	7.1E-03
M-02	INORG	Arsenic	7440-38-2	T	A	17	17	1.80E-03	3.61E-02	2.10E-03	3.90E-03	5.0E-02	7.6E-01			4.3E+00	8.9E-03
M-02	INORG	Barium	7440-39-3	D	D	10	10	2.05E-02	2.09E-01			2.0E+00	1.0E-01			1.4E+04	1.5E-05
M-02	INORG	Barium	7440-39-3	T	D	32	32	1.62E-02	2.58E-01			2.0E+00	1.3E-01			1.4E+04	1.8E-05
M-02	INORG	Beryllium	7440-41-7	D	B1	10				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
M-02	INORG	Beryllium	7440-41-7	T	B1	32				5.40E-04	6.00E-04	4.0E-03				2.9E+02	
M-02	INORG	Cadmium	7440-43-9	D	B1	10	2	2.20E-04	2.80E-04	2.80E-04	2.80E-04	5.0E-03	6.6E-02			1.9E+02	1.7E-06
M-02	INORG	Cadmium	7440-43-9	T	B1	32	8	2.80E-04	3.80E-04	2.80E-04	2.80E-04	5.0E-03	7.6E-02			1.9E+02	2.0E-06
M-02	INORG	Chromium (total)	7440-47-3	D		6				1.40E-03	1.40E-03	1.0E-01				4.6E+02	
M-02	INORG	Chromium (total)	7440-47-3	T		24	6	1.28E-03	3.20E-03	1.50E-03	1.50E-03	1.0E-01	3.2E-02			4.6E+02	7.0E-06
M-02	INORG	Chromium III	16065-83-1	D	D	4	1	3.45E-03	3.45E-03	1.40E-03	1.40E-03	3.8E+01	9.1E-05			2.9E+05	1.2E-08
M-02	INORG	Chromium III	16065-83-1	T	D	8				1.40E-03	1.40E-03	3.8E+01				2.9E+05	
M-02	INORG	Chromium VI	18540-29-9	D	A	4	1	7.90E-03	7.90E-03	6.90E-03	6.90E-03	1.0E-01	7.9E-02			4.6E+02	1.7E-05
M-02	INORG	Chromium VI	18540-29-9	T	A	8				6.90E-03	6.90E-03	1.0E-01				4.6E+02	
M-02	INORG	Cobalt	7440-48-4	D	B1	10	7	1.50E-03	1.87E-02	1.30E-03	1.30E-03	4.0E-02	4.7E-01			2.4E+03	7.8E-06
M-02	INORG	Cobalt	7440-48-4	T	B1	32	27	8.00E-04	3.05E-02	7.40E-04	1.30E-03	4.0E-02	7.6E-01			2.4E+03	1.3E-05
M-02	INORG	Copper	7440-50-8	D	D	10	5	4.80E-03	1.68E-02	4.20E-03	4.20E-03	1.4E+00	1.2E-02			7.4E+03	2.3E-06
M-02	INORG	Copper	7440-50-8	T	D	32	5	4.60E-03	2.51E-01	1.70E-03	4.20E-03	1.4E+00	1.8E-01			7.4E+03	3.4E-05
M-02	INORG	Cyanide (total)	57-12-5	T	D	11	7	3.18E-03	5.50E-01	1.70E-03	1.70E-03	2.0E-01	**2.8E+00**			5.7E+01	9.6E-03
M-02	INORG	Lead	7439-92-1	D	B2	10				2.50E-03	2.50E-03	4.0E-03					
M-02	INORG	Lead	7439-92-1	T	B2	32	1	2.20E-02	2.20E-02	1.60E-03	2.50E-03	4.0E-03	**5.5E+00**				
M-02	INORG	Manganese	7439-96-5	D	D	10	10	3.70E-03	1.17E+00			8.6E-01	**1.4E+00**			9.1E+03	1.3E-04
M-02	INORG	Manganese	7439-96-5	T	D	32	31	3.60E-03	1.21E+00	6.80E-04	6.80E-04	8.6E-01	**1.4E+00**			9.1E+03	1.3E-04
M-02	INORG	Mercury	7439-97-6	D	D	10	1	7.70E-05	7.70E-05	6.90E-05	2.00E-04	2.0E-03	3.9E-02	5.6E-02	1.4E-03	5.6E-02	1.4E-03
M-02	INORG	Mercury	7439-97-6	T	D	32	2	7.70E-05	1.00E-04	6.90E-05	2.00E-04	2.0E-03	5.0E-02	5.6E-02	1.8E-03	5.6E-02	1.8E-03
M-02	INORG	Nickel	7440-02-0	D	A	10	10	2.70E-03	1.68E-01			1.0E-01	**1.7E+00**			7.4E+04	2.3E-06
M-02	INORG	Nickel	7440-02-0	T	A	32	31	3.20E-03	1.06E+01	2.90E-03	2.90E-03	1.0E-01	**1.1E+02**			7.4E+04	1.4E-04
M-02	INORG	Selenium	7782-49-2	D	D	10	1	5.70E-03	5.70E-03	4.50E-03	4.50E-03	5.0E-02	1.1E-01			9.7E+02	5.9E-06
M-02	INORG	Selenium	7782-49-2	T	D	32	2	5.00E-03	5.40E-03	4.50E-03	4.70E-03	5.0E-02	1.1E-01			9.7E+02	5.6E-06
M-02	INORG	Silver	7440-22-4	D	D	10				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
M-02	INORG	Silver	7440-22-4	T	D	32	2	7.95E-04	1.00E-03	9.80E-04	1.50E-03	3.4E-02	2.9E-02			1.5E+03	6.7E-07
M-02	INORG	Thallium	7440-28-0	D		10	4	4.80E-05	5.60E-03	1.80E-05	5.00E-03	2.0E-03	**2.8E+00**			1.3E+01	4.3E-04
M-02	INORG	Thallium	7440-28-0	T		32	4	2.00E-05	5.50E-03	1.80E-05	5.00E-03	2.0E-03	**2.8E+00**			1.3E+01	4.2E-04
M-02	INORG	Vanadium	7440-62-2	D		10	4	1.90E-03	5.80E-03	8.20E-04	8.20E-04	4.5E-03	**1.3E+00**			9.7E+02	6.0E-06
M-02	INORG	Vanadium	7440-62-2	T		32	9	1.00E-03	1.16E-02	6.70E-04	8.20E-04	4.5E-03	**2.6E+00**			9.7E+02	1.2E-05
M-02	INORG	Zinc	7440-66-6	D	D	10	3	1.51E-02	8.43E-02	1.20E-02	1.20E-02	2.4E+00	3.5E-02			1.1E+05	7.7E-07
M-02	INORG	Zinc	7440-66-6	T	D	32	4	1.52E-02	5.54E-01	1.20E-02	1.40E-02	2.4E+00	2.3E-01			1.1E+05	5.0E-06
M-04	VOC	Acetone	67-64-1	T	ID	13	3	2.10E-03	1.70E-01	5.10E-04	3.70E-02	7.3E-01	2.3E-01	1.0E+06	1.7E-07	3.1E+04	5.5E-06
M-04	VOC	Benzene	71-43-2	T	A	19	6	3.30E-03	3.60E-03	1.60E-04	4.00E-04	5.0E-03	**2.0E+02**	3.5E+01	2.8E-02	1.1E+01	8.9E-02
M-04	VOC	Bromodichloromethane	75-27-4	T	B2	13	1	3.00E-04	3.00E-04	1.70E-04	1.10E-02	1.0E-01	3.0E-03	3.7E+01	8.1E-06	1.4E+01	2.1E-05
M-04	VOC	Bromoform	75-25-2	T	B2	13				1.80E-04	1.20E-02	1.0E-01		3.1E+03		1.4E+02	
M-04	VOC	Bromomethane	74-83-9	T	D	13				2.00E-04	1.00E-02	1.0E-02		9.0E+00		7.0E+01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-04	VOC	2-Butanone	78-93-3	T	ID	13				4.10E-04	2.00E-02	8.0E-01		2.4E+05		2.4E+05	
M-04	VOC	Carbon Disulfide	75-15-0	T		13	1	2.10E-03	2.10E-03	2.00E-04	8.00E-03	8.0E-01	2.6E-03	5.5E+02	3.8E-06	1.2E+03	1.8E-06
M-04	VOC	Carbon Tetrachloride	56-23-5	T	B2	13				1.20E-04	1.20E-02	5.0E-03		2.4E+00		4.6E+00	
M-04	VOC	Chlorobenzene	108-90-7	T	D	13				1.40E-04	1.20E-02	1.0E-01		4.7E+02		8.6E+01	
M-04	VOC	Chloroethane	75-00-3	T		13				2.60E-04	2.00E-03	4.3E-01		5.7E+03		4.4E+02	
M-04	VOC	Chloroform	67-66-3	T	B2	13	3	8.90E-04	1.30E-03	1.40E-04	1.20E-02	1.0E-01	1.3E-02	1.8E+02	7.2E-06	1.5E+02	8.7E-06
M-04	VOC	Chloromethane	74-87-3	T	D	13				1.30E-04	1.60E-02	2.6E-01		4.5E+01		4.9E+02	
M-04	VOC	Cumene	98-82-8	T	D	13	4	2.70E-04	1.90E-02	1.20E-04	1.20E-02	8.0E-01	2.4E-02	5.6E+01	3.4E-04	5.6E+01	3.4E-04
M-04	VOC	Cyclohexane	110-82-7	T	ID	13	3	1.30E-01	3.00E-01	1.30E-04	3.30E-04						
M-04	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	13				6.20E-04	2.70E-02	2.0E-04		1.2E+00		3.9E-01	
M-04	VOC	Dibromochloromethane	124-48-1	T	C	13				2.60E-04	1.20E-02	1.0E-01		1.1E+02		1.8E+01	
M-04	VOC	1,2-Dibromoethane	106-93-4	T	B2	13				2.20E-04	1.10E-02	5.0E-03		1.5E+01		2.5E-02	
M-04	VOC	1,2-Dichlorobenzene	95-50-1	T	D	13	1	2.10E-04	2.10E-04	1.10E-04	1.30E-02	6.0E-01	3.5E-04	1.6E+02	1.3E-06	1.6E+02	1.3E-06
M-04	VOC	1,3-Dichlorobenzene	541-73-1	T	D	13				1.50E-04	1.30E-02	6.6E-03				2.0E+00	
M-04	VOC	1,4-Dichlorobenzene	106-46-7	T	C	13	1	1.90E-04	1.90E-04	1.70E-04	1.30E-02	7.5E-02	2.5E-03	7.4E+01	2.6E-06	6.4E+00	3.0E-05
M-04	VOC	Dichlorodifluoromethane	75-71-8	T		13				2.60E-04	1.60E-02	1.7E+00		3.0E+02		3.0E+02	
M-04	VOC	1,1-Dichloroethane	75-34-3	T	C	13				1.60E-04	1.00E-02	8.8E-01		2.3E+03		2.4E+03	
M-04	VOC	1,2-Dichloroethane	107-06-2	T	B2	13				2.10E-04	9.30E-03	5.0E-03		5.9E+01		1.9E+01	
M-04	VOC	1,1-Dichloroethene	75-35-4	T	C	13				2.40E-04	1.00E-02	7.0E-03		1.3E+00		1.1E+01	
M-04	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	13				2.20E-04	1.20E-02	7.0E-02		2.1E+02		2.0E+02	
M-04	VOC	trans-1,2-Dichloroethene	156-60-5	T		13				1.50E-04	1.10E-02	1.0E-01		2.0E+02		2.2E+02	
M-04	VOC	1,2-Dichloropropane	78-87-5	T	B2	13				1.70E-04	1.40E-02	5.0E-03		3.6E+01		1.6E+01	
M-04	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	13				2.70E-04	1.20E-02	8.5E-03		2.6E+01		5.5E+00	
M-04	VOC	Ethyl Benzene	100-41-4	T	D	19	7	2.70E-04	1.50E+00	1.20E-04	4.10E-04	7.0E-01	**2.1E+00**	1.7E+02	8.8E-03	1.7E+02	8.8E-03
M-04	VOC	2-Hexanone	591-78-6	T		13				4.60E-04	1.90E-02	1.0E+00		8.7E+03		5.2E+03	
M-04	VOC	Methyl Acetate	79-20-9	T		13				4.10E-04	1.80E-02						
M-04	VOC	Methyl tert-butyl ether	1634-04-4	T		13	1	1.20E-03	1.20E-03	1.30E-04	9.00E-03	2.4E-01	5.0E-03	4.7E+04	2.6E-08	6.1E+02	2.0E-06
M-04	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	13				2.30E-04	8.70E-03	1.8E+00		2.0E+04		1.3E+04	
M-04	VOC	Methylcyclohexane	108-87-2	T		13	3	1.80E-02	6.30E-02	1.50E-04	4.20E-04						
M-04	VOC	Methylene Chloride	75-09-2	T	B2	8	2	3.50E-04	1.40E-03	3.40E-04	1.10E-02	5.0E-03	2.8E-01	1.4E+03	1.0E-06	2.2E+02	6.4E-06
M-04	VOC	Styrene	100-42-5	T		13				1.50E-04	1.20E-02	1.0E-01		3.1E+02		9.7E+00	
M-04	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	13				2.50E-04	1.20E-02	8.5E-03		7.7E+01		4.7E+00	
M-04	VOC	Tetrachloroethene	127-18-4	T	C-B2	13				2.30E-04	1.40E-02	5.0E-03		1.7E+02		1.2E+01	
M-04	VOC	Toluene	108-88-3	T	D	19	6	3.10E-04	5.70E-02	1.70E-04	4.50E-04	1.0E+00	5.7E-02	5.3E+02	1.1E-04	5.3E+02	1.1E-04
M-04	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	13	1	2.40E-04	2.40E-04	1.70E-04	1.30E-02	7.0E-02	3.4E-03	3.0E+02	8.0E-07	1.9E+01	1.3E-05
M-04	VOC	1,1,1-Trichloroethane	71-55-6	T	D	13				1.50E-04	1.30E-02	2.0E-01		1.3E+03		1.3E+03	
M-04	VOC	1,1,2-Trichloroethane	79-00-5	T	C	13				3.00E-04	1.20E-02	5.0E-03		1.1E+02		2.1E+01	
M-04	VOC	Trichloroethene	79-01-6	T	C-B2	13				1.40E-04	1.40E-02	5.0E-03		9.7E+01		2.2E+01	
M-04	VOC	Trichlorofluoromethane	75-69-4	T		13				2.80E-04	1.80E-02	2.6E+00		1.1E+03		1.1E+03	
M-04	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		13				3.20E-04	1.10E-02	1.7E+02		1.7E+02		1.7E+02	
M-04	VOC	Vinyl Chloride	75-01-4	T	A	13				1.50E-04	1.20E-02	2.0E-03		1.3E+01		1.0E+00	
M-04	VOC	Xylenes (total)	1330-20-7	T	ID	19	4	3.00E-01	1.40E+00	3.30E-04	8.20E-04	1.0E+01	1.4E-01	1.9E+02	7.4E-03	1.9E+02	7.4E-03
M-04	INORG	Lead	7439-92-1	D	B2	8				2.50E-03	2.50E-03	4.0E-03					
M-04	INORG	Lead	7439-92-1	T	B2	10				1.60E-03	2.50E-03	4.0E-03					
M-05	P/PCB	PCBs (total)	1336-36-3	D	B2	2				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
M-05	P/PCB	PCBs (total)	1336-36-3	T	B2	9	4	4.19E-04	1.64E-03	8.20E-05	8.20E-05	5.0E-04	**3.3E+00**	4.5E-02	3.6E-02	3.3E-03	5.0E-01
M-05	INORG	Antimony	7440-36-0	D		4	1	4.30E-03	4.30E-03	2.20E-03	2.20E-03	6.0E-03	7.2E-01			6.8E+01	6.3E-05
M-05	INORG	Antimony	7440-36-0	T		4	1	3.50E-03	3.50E-03	2.20E-03	2.20E-03	6.0E-03	5.8E-01			6.8E+01	5.1E-05
M-05	INORG	Arsenic	7440-38-2	D	A	4	2	2.49E-02	2.67E-02	3.90E-03	3.90E-03	5.0E-02	5.3E-01			4.3E+00	6.2E-03
M-05	INORG	Arsenic	7440-38-2	T	A	4	3	4.10E-02	3.73E-02	3.90E-03	3.90E-03	5.0E-02	5.5E-01			4.3E+00	6.3E-03
M-05	INORG	Barium	7440-39-3	D	D	4	4	1.28E+00	4.72E+00			2.0E+00	**2.4E+00**			1.4E+04	3.4E-04
M-05	INORG	Barium	7440-39-3	T	D	9	9	2.05E-01	4.80E+00			2.0E+00	**2.4E+00**			1.4E+04	3.4E-04
M-05	INORG	Beryllium	7440-41-7	D	B1	4				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
M-05	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
M-05	INORG	Cadmium	7440-43-9	D	B1	4	3	3.00E-04	6.60E-04	2.80E-04	2.80E-04	5.0E-03	1.3E-01			1.9E+02	3.5E-06
M-05	INORG	Cadmium	7440-43-9	T	B1	4	3	3.00E-04	7.10E-04	2.80E-04	2.80E-04	5.0E-03	1.4E-01			1.9E+02	3.7E-06

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-05	INORG	Chromium (total)	7440-47-3	D		4	3	1.80E-03	2.20E-03	1.40E-03	1.40E-03	1.0E-01	2.2E-02			4.6E+02	4.8E-06
M-05	INORG	Chromium (total)	7440-47-3	T		4	3	2.50E-03	2.05E-02	1.40E-03	1.40E-03	1.0E-01	2.1E-01			4.6E+02	4.5E-05
M-05	INORG	Cobalt	7440-48-4	D	B1	4	1	8.00E-03	8.00E-03	1.30E-03	1.30E-03	4.0E-02	2.0E-01			2.4E+03	3.3E-06
M-05	INORG	Cobalt	7440-48-4	T	B1	4	1	7.90E-03	7.90E-03	1.30E-03	1.30E-03	4.0E-02	2.0E-01			2.4E+03	3.3E-06
M-05	INORG	Copper	7440-50-8	D	D	4				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
M-05	INORG	Copper	7440-50-8	T	D	4	1	5.20E-03	5.20E-03	4.20E-03	4.20E-03	1.4E+00	3.7E-03			7.4E+03	7.0E-07
M-05	INORG	Lead	7439-92-1	D	B2	4				2.50E-03	2.50E-03	4.0E-03					
M-05	INORG	Lead	7439-92-1	T	B2	4				2.50E-03	2.50E-03	4.0E-03					
M-05	INORG	Manganese	7439-96-5	D	D	4	4	9.53E-01	3.57E+00			8.6E-01	**4.2E+00**			9.1E+03	3.9E-04
M-05	INORG	Manganese	7439-96-5	T	D	9	9	1.25E-01	3.63E+00			8.6E-01	**4.2E+00**			9.1E+03	4.0E-04
M-05	INORG	Mercury	7439-97-6	D	D	4				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
M-05	INORG	Mercury	7439-97-6	T	D	4				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
M-05	INORG	Nickel	7440-02-0	D	A	4	2	1.06E-02	1.50E-02	2.20E-03	2.20E-03	1.0E-01	1.6E-01			7.4E+04	2.2E-07
M-05	INORG	Nickel	7440-02-0	T	A	4	4	1.69E-02	1.75E-02	2.20E-03	2.20E-03	1.0E-01	1.8E-01			7.4E+04	2.4E-07
M-05	INORG	Selenium	7782-49-2	D	D	4				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
M-05	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
M-05	INORG	Silver	7440-22-4	D	D	4				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
M-05	INORG	Silver	7440-22-4	T	D	4				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
M-05	INORG	Thallium	7440-28-0	D		4	2	5.00E-03	5.80E-03	1.80E-05	1.80E-05	2.0E-03	**3.0E+00**			1.3E+01	4.5E-04
M-05	INORG	Thallium	7440-28-0	T		4	1	3.00E-05	3.00E-05	1.80E-05	5.00E-03	2.0E-03	1.5E-02			1.3E+01	2.3E-06
M-05	INORG	Vanadium	7440-62-2	D		4	2	8.00E-03	9.00E-02	8.20E-04	8.20E-04	4.5E-03	**2.2E+00**			9.7E+02	1.0E-05
M-05	INORG	Vanadium	7440-62-2	T		4	2	7.80E-03	1.04E-02	8.20E-04	8.20E-04	4.5E-03	**2.3E+00**			9.7E+02	1.1E-05
M-05	INORG	Zinc	7440-66-6	D	D	4	1	1.33E-02	1.33E-02	1.20E-02	1.20E-02	2.4E+00	5.5E-03			1.1E+05	1.2E-07
M-05	INORG	Zinc	7440-66-6	T	D	4				1.20E-02	1.20E-02	2.4E+00				1.1E+05	
M-05	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	D	B2	2				5.02E-09	6.62E-09	3.0E-08				1.0E-08	
M-05	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	2				5.85E-09	9.14E-09	3.0E-08				1.0E-08	
M-07	VOC	Acetone	67-64-1	T	ID	8	4	3.50E-03	4.20E+01	5.10E-04	5.10E-03	7.3E-01	**5.8E+01**	1.0E+06	4.2E-05	3.1E+04	1.4E-03
M-07	VOC	Benzene	71-43-2	T	A	8	2	2.40E-04	4.10E-04	1.60E-04	1.30E-01	5.0E-03	8.2E-02	3.5E+01	1.2E-05	1.1E+01	3.7E-05
M-07	VOC	Bromodichloromethane	75-27-4	T	B2	8				1.70E-04	1.40E-01	1.0E-01		3.7E+01		1.4E+01	
M-07	VOC	Bromoform	75-25-2	T	B2	8				1.80E-04	1.50E-01	1.0E-01		3.1E+03		1.4E+02	
M-07	VOC	Bromomethane	74-83-9	T	D	8				2.00E-04	1.70E-01	1.0E-02		9.0E+00		7.0E+01	
M-07	VOC	2-Butanone	78-93-3	T	ID	8	1	4.70E-03	4.70E-03	4.10E-04	3.40E-01	1.3E+01	3.6E-04	2.4E+05	2.0E-08	2.4E+05	2.0E-08
M-07	VOC	Carbon Disulfide	75-15-0	T		8				2.00E-04	1.70E-01	8.0E-01		5.5E+02		1.2E+03	
M-07	VOC	Carbon Tetrachloride	56-23-5	T	B2	8				1.20E-04	1.00E-01	5.0E-03		2.4E+00		4.6E+00	
M-07	VOC	Chlorobenzene	108-90-7	T	D	8				1.40E-04	1.20E-01	1.0E-01		4.7E+02		8.6E+01	
M-07	VOC	Chloroethane	75-00-3	T		8				2.60E-04	2.20E-01	4.3E-01		5.7E+03		4.4E+02	
M-07	VOC	Chloroform	67-66-3	T	B2	8				1.40E-04	1.20E-01	1.0E-01		1.8E+02		1.5E+02	
M-07	VOC	Chloromethane	74-87-3	T	D	8	1	3.70E-04	3.70E-04	1.30E-04	1.10E-01	2.6E-01	1.4E-03	4.5E+01	8.2E-06	4.9E+02	7.6E-07
M-07	VOC	Cumene	98-82-8	T	D	8				1.20E-04	1.00E-01	8.0E-01		5.6E+01		5.6E+01	
M-07	VOC	Cyclohexane	110-82-7	T	ID	8	1	2.50E-04	2.50E-04	1.30E-04	1.10E-01						
M-07	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				6.20E-04	5.20E-01	2.0E-04		1.2E+00		3.9E-01	
M-07	VOC	Dibromochloromethane	124-48-1	T	C	8				2.60E-04	2.20E-01	1.0E-01		1.1E+02		1.8E+01	
M-07	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				2.20E-04	1.80E-01	1.0E-03		1.5E+01		2.5E-02	
M-07	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				1.10E-04	9.20E-02	6.0E-01		1.6E+02		1.6E+02	
M-07	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				1.50E-04	1.20E-01	6.6E-03				2.0E+00	
M-07	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				1.70E-04	1.40E-01	7.5E-02		7.4E+01		6.4E+00	
M-07	VOC	Dichlorodifluoromethane	75-71-8	T		8				2.60E-04	2.20E-01	1.7E+00		3.0E+02		3.0E+02	
M-07	VOC	1,1-Dichloroethane	75-34-3	T	C	8				1.60E-04	1.30E-01	8.8E-01		2.3E+03		2.4E+03	
M-07	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.10E-04	1.70E-01	5.0E-03		5.9E+01		1.9E+01	
M-07	VOC	1,1-Dichloroethene	75-35-4	T	C	8				1.40E-04	1.00E-01	7.0E-03		1.3E+00		1.1E+01	
M-07	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8				2.20E-04	1.80E-01	7.0E-02		2.1E+02		2.0E+02	
M-07	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				1.50E-04	1.20E-01	1.0E-01		2.0E+02		2.2E+02	
M-07	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				1.70E-04	1.40E-01	5.0E-03		3.6E+01		1.6E+01	
M-07	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				2.70E-04	2.20E-01	8.5E-03		2.6E+01		5.5E+00	
M-07	VOC	Ethyl Benzene	100-41-4	T	D	8	1	2.30E-04	2.30E-04	1.20E-04	1.00E-01	7.0E-01	3.3E-04	1.7E+02	1.4E-06	1.7E+02	1.4E-06
M-07	VOC	2-Hexanone	591-78-6	T		8				4.60E-04	3.80E-01	1.0E+00		8.7E+03		5.2E+03	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-07	VOC	Methyl Acetate	79-20-9	T		8				4.10E-04	3.40E-01						
M-07	VOC	Methyl tert-butyl ether	1634-04-4	T		8				1.30E-04	1.10E-01	2.4E-01		4.7E+04		6.1E+02	
M-07	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8				2.30E-04	1.90E-01	1.8E+00		2.0E+04		1.3E+04	
M-07	VOC	Methylcyclohexane	108-87-2	T		8	1	4.60E-04	4.60E-04	1.50E-04	1.20E-01						
M-07	VOC	Methylene Chloride	75-09-2	T	B2	8				3.40E-04	2.80E-01	5.0E-03		1.4E+03		2.2E+02	
M-07	VOC	Styrene	100-42-5	T		8				1.50E-04	1.20E-01	1.0E-01		3.1E+02		9.7E+00	
M-07	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				2.50E-04	2.10E-01	8.5E-03		7.7E+01		4.7E+00	
M-07	VOC	Tetrachloroethene	127-18-4	T	C-B2	8	1	3.60E-03	3.60E-03	2.30E-04	1.90E-01	5.0E-03	7.2E-01	1.7E+02	2.1E-05	1.2E+01	3.0E-04
M-07	VOC	Toluene	108-88-3	T	D	8	2	3.50E-04	1.80E-03	1.80E-04	1.50E-01	1.0E+00	1.8E-03	5.3E+02	3.4E-06	5.3E+02	3.4E-06
M-07	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				1.70E-04	1.40E-01	7.0E-02		3.0E+02		1.9E+01	
M-07	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8				1.50E-04	1.20E-01	2.0E-01		1.3E+03		1.3E+03	
M-07	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.00E-04	2.50E-01	5.0E-03		1.1E+02		2.1E+01	
M-07	VOC	Trichloroethene	79-01-6	T	C-B2	8				1.40E-04	1.20E-01	5.0E-03		9.7E+01		2.2E+01	
M-07	VOC	Trichlorofluoromethane	75-69-4	T		8				2.80E-04	2.30E-01	2.6E+00		1.1E+03		1.1E+03	
M-07	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				3.20E-04	2.70E-01	1.7E+02		1.7E+02		1.7E+02	
M-07	VOC	Vinyl Chloride	75-01-4	T	A	8				1.50E-04	1.20E-01	2.0E-03		1.3E+01		1.0E+00	
M-07	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	1.20E-03	1.20E-03	3.30E-04	2.70E-01	1.0E+01	1.2E-04	1.9E+02	6.3E-06	1.9E+02	6.3E-06
M-07	SVOC	Acenaphthene	83-32-9	T		8				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
M-07	SVOC	Acenaphthylene	208-96-8	T	D	8				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
M-07	SVOC	Acetophenone	98-86-2	T	D	8				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
M-07	SVOC	Anthracene	120-12-7	T	D	8				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
M-07	SVOC	Atrazine	1912-24-9	T		8				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
M-07	SVOC	Benzaldehyde	100-52-7	T		8				2.80E-03	1.00E-02						
M-07	SVOC	Benzo(a)anthracene	56-55-3	T	B2	8				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
M-07	SVOC	Benzo(a)pyrene	50-32-8	T	B2	8				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
M-07	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	8				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
M-07	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	8				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
M-07	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	8				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
M-07	SVOC	Biphenyl	92-52-4	T	D	8				2.60E-03	1.00E-02						
M-07	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	8				8.70E-04	5.00E-03						
M-07	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	8				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
M-07	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	8				2.70E-03	5.00E-03	6.0E-03				3.2E-01	
M-07	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	8				8.80E-04	5.00E-03						
M-07	SVOC	Butylbenzylphthalate	85-68-7	T	C	8				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
M-07	SVOC	Caprolactam	105-60-2	T		8	1	1.20E-01	1.20E-01	2.50E-03	1.00E-02	5.8E+00	2.1E-02			3.9E+05	3.1E-07
M-07	SVOC	Carbazole	86-74-8	T	B2	8				8.20E-04	1.00E-02	8.5E-02				7.4E+00	
M-07	SVOC	4-Chloro-3-methylphenol	59-50-7	T		8				9.90E-04	5.00E-03	1.5E-01				7.9E+01	
M-07	SVOC	4-Chloroaniline	106-47-8	T		8				6.10E-04	1.00E-02						
M-07	SVOC	2-Chloronaphthalene	91-58-7	T		8				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
M-07	SVOC	2-Chlorophenol	95-57-8	T		8				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
M-07	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		8				7.90E-04	5.00E-03						
M-07	SVOC	Chrysene	218-01-9	T	B2	8				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
M-07	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	8				7.90E-04	5.00E-03	2.0E-03				2.0E-03	
M-07	SVOC	Dibenzofuran	132-64-9	T	D	8				1.10E-03	5.00E-03						
M-07	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	8				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
M-07	SVOC	2,4-Dichlorophenol	120-83-2	T		8				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
M-07	SVOC	Diethylphthalate	84-66-2	T	D	8				6.50E-04	5.00E-03	5.5E+00				1.1E+03	
M-07	SVOC	2,4-Dimethylphenol	105-67-9	T		8				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
M-07	SVOC	Dimethylphthalate	131-11-3	T	D	8				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
M-07	SVOC	Di-n-butylphthalate	84-74-2	T	D	8				8.70E-04	5.00E-03	8.8E-01				1.1E+01	
M-07	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		8				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
M-07	SVOC	2,4-Dinitrophenol	51-28-5	T		8				3.00E-03	2.00E-02						
M-07	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	8				9.00E-04	5.00E-03	7.7E-03				8.6E+00	
M-07	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	8				5.70E-04	5.00E-03						
M-07	SVOC	Di-n-octylphthalate	117-84-0	T		8				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
M-07	SVOC	Fluoranthene	206-44-0	T	D	8				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-07	SVOC	Fluorene	86-73-7	T	D	8				1.00E-03	5.00E-03	2.9E-01		2.0E+00		2.0E+00	
M-07	SVOC	Hexachlorobenzene	118-74-1	T	B2	8				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
M-07	SVOC	Hexachlorobutadiene	87-68-3	T	C	8				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
M-07	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	8				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
M-07	SVOC	Hexachloroethane	67-72-1	T	C	8				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
M-07	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	8				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
M-07	SVOC	Isophorone	78-59-1	T	C	8				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
M-07	SVOC	2-Methylnaphthalene	91-57-6	T	ID	8				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
M-07	SVOC	Methylphenol (total)	1319-77-3	T		8				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
M-07	SVOC	Naphthalene	91-20-3	T	C	8				7.50E-04	5.00E-03	5.2E-03		3.1E+01		3.1E+01	
M-07	SVOC	2-Nitroaniline	88-74-4	T		8				7.90E-04	2.00E-02						
M-07	SVOC	3-Nitroaniline	99-09-2	T	C	8				1.10E-04	2.00E-02						
M-07	SVOC	4-Nitroaniline	100-01-6	T	C	8				1.30E-03	2.00E-02						
M-07	SVOC	Nitrobenzene	98-95-3	T	D	8				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
M-07	SVOC	2-Nitrophenol	88-75-5	T		8				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
M-07	SVOC	4-Nitrophenol	100-02-7	T		8				1.90E-03	2.00E-02						
M-07	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	8				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
M-07	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	8				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
M-07	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	8				7.80E-04	5.00E-03						
M-07	SVOC	Pentachlorophenol	87-86-5	T	B2	8				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
M-07	SVOC	Phenanthrene	85-01-8	T	D	8				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
M-07	SVOC	Phenol	108-95-2	T	ID	8				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
M-07	SVOC	Pyrene	129-00-0	T	D	8				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
M-07	SVOC	2,4,5-Trichlorophenol	95-95-4	T		8				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
M-07	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	8				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
M-07	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-07	P/PCB	PCBs (total)	1336-36-3	T	B2	8				8.20E-05	8.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-07	INORG	Antimony	7440-36-0	D		8				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
M-07	INORG	Antimony	7440-36-0	T		8	1	2.70E-03	2.70E-03	2.20E-03	2.50E-02	6.0E-03	4.5E-01			6.8E+01	4.0E-05
M-07	INORG	Arsenic	7440-38-2	D	A	8	2	4.20E-03	6.10E-03	3.90E-03	1.00E-02	5.0E-02	1.2E-01			4.3E+00	1.4E-03
M-07	INORG	Arsenic	7440-38-2	T	A	8	4	4.00E-03	1.46E-02	3.90E-03	1.00E-02	5.0E-02	2.9E-01			4.3E+00	3.4E-03
M-07	INORG	Barium	7440-39-3	D	D	8	8	1.47E-01	3.15E-01			2.0E+00	1.6E-01			1.4E+04	2.3E-05
M-07	INORG	Barium	7440-39-3	T	D	8	8	1.47E-01	3.86E-01			2.0E+00	1.9E-01			1.4E+04	2.8E-05
M-07	INORG	Beryllium	7440-41-7	D	B1	8				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
M-07	INORG	Beryllium	7440-41-7	T	B1	8	1	7.20E-04	7.20E-04	5.40E-04	1.00E-03	4.0E-03	1.8E-01			2.9E+02	2.5E-06
M-07	INORG	Cadmium	7440-43-9	D	B1	8	5	4.00E-04	6.80E-04	2.80E-04	2.80E-04	5.0E-03	1.4E-01			1.9E+02	3.6E-06
M-07	INORG	Cadmium	7440-43-9	T	B1	8	7	3.50E-04	1.40E-03	2.80E-04	2.80E-04	5.0E-03	2.8E-01			1.9E+02	7.4E-06
M-07	INORG	Chromium (total)	7440-47-3	D		8	1	1.40E-03	1.40E-03	1.40E-03	1.00E-02	1.0E-01	1.4E-02			4.6E+02	3.0E-06
M-07	INORG	Chromium (total)	7440-47-3	T		8	3	8.50E-03	1.39E-01	1.40E-03	1.00E-02	1.0E-01	**1.4E+00**			4.6E+02	3.0E-04
M-07	INORG	Cobalt	7440-48-4	D	B1	8	4	3.70E-03	1.36E-02	1.30E-03	2.00E-02	4.0E-02	3.4E-01			2.4E+03	5.7E-06
M-07	INORG	Cobalt	7440-48-4	T	B1	8	5	1.40E-03	2.28E-02	1.30E-03	2.00E-02	4.0E-02	5.7E-01			2.4E+03	9.5E-06
M-07	INORG	Copper	7440-50-8	D	D	8	1	5.60E-03	5.60E-03	4.20E-03	5.00E-03	1.4E+00	4.0E-03			7.4E+03	7.6E-07
M-07	INORG	Copper	7440-50-8	T	D	8	3	1.20E-02	5.11E-02	4.20E-03	5.00E-03	1.4E+00	3.7E-02			7.4E+03	6.9E-06
M-07	INORG	Lead	7439-92-1	D	B2	8				2.50E-03	3.00E-03	4.0E-03					
M-07	INORG	Lead	7439-92-1	T	B2	8	2	1.22E-02	2.38E-02	2.50E-03	3.00E-03	4.0E-03	**6.0E+00**				
M-07	INORG	Manganese	7439-96-5	D	D	8	8	8.62E-02	1.72E+00			8.6E-01	**2.0E+00**			9.1E+03	1.9E-04
M-07	INORG	Manganese	7439-96-5	T	D	8	8	8.47E-02	1.53E+00			8.6E-01	**1.8E+00**			9.1E+03	1.7E-04
M-07	INORG	Mercury	7439-97-6	D	D	8	1	9.40E-05	9.40E-05	6.90E-05	2.00E-04	2.0E-03	4.7E-02	5.6E-02	1.7E-03	5.6E-02	1.7E-03
M-07	INORG	Mercury	7439-97-6	T	D	8	2	6.90E-05	3.40E-04	6.90E-05	2.00E-04	2.0E-03	1.7E-01	5.6E-02	6.1E-03	5.6E-02	6.1E-03
M-07	INORG	Nickel	7440-02-0	D	A	8	7	4.00E-03	7.01E-02	3.20E-03	2.20E-03	1.0E-01	7.0E-01			7.4E+04	9.5E-07
M-07	INORG	Nickel	7440-02-0	T	A	8	7	3.40E-03	9.41E-02	2.20E-03	2.20E-03	1.0E-01	9.4E-01			7.4E+04	1.3E-06
M-07	INORG	Selenium	7782-49-2	D	D	8				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
M-07	INORG	Selenium	7782-49-2	T	D	8				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
M-07	INORG	Silver	7440-22-4	D	D	8				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
M-07	INORG	Silver	7440-22-4	T	D	8				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
M-07	INORG	Thallium	7440-28-0	D		8	8	2.10E-03	1.43E-02			2.0E-03	**7.2E+00**			1.3E+01	1.1E-03

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-07	INORG	Thallium	7440-28-0	T		8	6	6.40E-05	1.56E-02	1.80E-05	5.00E-03	2.0E-03	**7.8E+00**			1.3E+01	1.2E-03
M-07	INORG	Vanadium	7440-62-2	D		8				8.20E-04	1.00E-02	4.5E-03				9.7E+02	
M-07	INORG	Vanadium	7440-62-2	T		8	3	1.17E-02	5.90E-02	8.20E-04	1.00E-02	4.5E-03	**1.3E+01**			9.7E+02	6.1E-05
M-07	INORG	Zinc	7440-66-6	D	D	8	5	1.57E-02	1.46E-01	1.20E-02	2.00E-02	2.4E+00	6.1E-02			1.1E+05	1.3E-06
M-07	INORG	Zinc	7440-66-6	T	D	8	4	3.46E-02	1.46E-01	1.20E-02	2.00E-02	2.4E+00	6.1E-02			1.1E+05	1.3E-06
M-09	VOC	Acetone	67-64-1	T	ID	2	1	2.00E-02	2.00E-02	1.10E-03	1.10E-03	7.3E-01	2.7E-02	1.0E+06	2.0E-08	3.1E+04	6.5E-07
M-09	VOC	Benzene	71-43-2	T	A	2				1.60E-04	3.70E-04	5.0E-03		3.5E+01		1.1E+01	
M-09	VOC	Bromodichloromethane	75-27-4	T	B2	2	1	3.90E-04	3.90E-04	3.20E-04	3.70E-04	1.0E-01	3.9E-03	3.7E+01	1.1E-05	1.4E+01	2.8E-05
M-09	VOC	Bromoform	75-25-2	T	B2	2				1.80E-04	3.70E-04	1.0E-01		3.1E+03		1.4E+02	
M-09	VOC	Bromomethane	74-83-9	T	D	2				2.00E-04	3.00E-04	1.0E-02		9.0E+00		7.0E+01	
M-09	VOC	2-Butanone	78-93-3	T	ID	2	1	1.90E-03	1.90E-03	5.90E-04	5.90E-04	1.3E+01	1.5E-04	2.4E+05	7.9E-09	2.4E+05	7.9E-09
M-09	VOC	Carbon Disulfide	75-15-0	T		2	2	2.50E-04	4.10E-04			8.0E-01	5.1E-04	5.5E+02	7.5E-07	1.2E+03	3.4E-07
M-09	VOC	Carbon Tetrachloride	56-23-5	T	B2	2				1.20E-04	3.70E-04	5.0E-03		2.4E+00		4.6E+00	
M-09	VOC	Chlorobenzene	108-90-7	T	D	2				1.40E-04	3.80E-04	1.0E-01		4.7E+02		8.6E+01	
M-09	VOC	Chloroethane	75-00-3	T		2				2.60E-04	2.90E-04	4.3E-01		5.7E+03		4.4E+02	
M-09	VOC	Chloroform	67-66-3	T	B2	2	1	3.50E-04	3.50E-04	3.50E-04	3.50E-04	1.0E-01	2.4E-02	1.8E+02	1.3E-05	1.5E+02	1.6E-05
M-09	VOC	Chloromethane	74-87-3	T	D	2				1.30E-04	4.90E-04	2.6E-01		4.5E+01		4.9E+02	
M-09	VOC	Cumene	98-82-8	T	D	2				1.20E-04	3.90E-04	8.0E-01		5.6E+01		5.6E+01	
M-09	VOC	Cyclohexane	110-82-7	T	ID	2				1.30E-04	3.30E-04						
M-09	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	2				6.20E-04	8.20E-04	2.0E-04		1.2E+00		3.9E-01	
M-09	VOC	Dibromochloromethane	124-48-1	T	C	2				2.60E-04	3.70E-04	1.0E-01		1.1E+02		1.8E+01	
M-09	VOC	1,2-Dibromoethane	106-93-4	T	B2	2				2.20E-04	3.40E-04	1.0E-03		1.5E+01		2.5E-02	
M-09	VOC	1,2-Dichlorobenzene	95-50-1	T	D	2				1.10E-04	3.80E-04	6.0E-01		1.6E+02		1.6E+02	
M-09	VOC	1,3-Dichlorobenzene	541-73-1	T	D	2				1.50E-04	3.80E-04	6.6E-03				2.0E+00	
M-09	VOC	1,4-Dichlorobenzene	106-46-7	T	C	2				1.70E-04	3.80E-04	7.5E-02		7.4E+01		6.4E+00	
M-09	VOC	Dichlorodifluoromethane	75-71-8	T		2				2.60E-04	4.90E-04	1.7E+00		3.0E+02		3.0E+02	
M-09	VOC	1,1-Dichloroethane	75-34-3	T	C	2				1.60E-04	3.00E-04	8.8E-01		2.3E+03		2.4E+03	
M-09	VOC	1,2-Dichloroethane	107-06-2	T	B2	2				2.10E-04	2.80E-04	5.0E-03		5.9E+01		1.9E+01	
M-09	VOC	1,1-Dichloroethene	75-35-4	T	C	2				2.40E-04	3.10E-04	7.0E-03		1.3E+00		1.1E+01	
M-09	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	2				2.20E-04	3.50E-04	7.0E-02		2.1E+02		2.0E+02	
M-09	VOC	trans-1,2-Dichloroethene	156-60-5	T		2				1.50E-04	3.30E-04	1.0E-01		2.0E+02		2.2E+02	
M-09	VOC	1,2-Dichloropropane	78-87-5	T	B2	2				1.70E-04	4.10E-04	5.0E-03		3.6E+01		1.6E+01	
M-09	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	1				3.50E-04	3.50E-04	8.5E-03		2.6E+01		5.5E+00	
M-09	VOC	Ethyl Benzene	100-41-4	T	D	2				1.20E-04	4.10E-04	7.0E-01		1.7E+02		1.7E+02	
M-09	VOC	2-Hexanone	591-78-6	T		2				4.60E-04	5.80E-04	1.0E+00		8.7E+03		5.2E+03	
M-09	VOC	Methyl Acetate	79-20-9	T		2				4.10E-04	5.40E-04						
M-09	VOC	Methyl tert-butyl ether	1634-04-4	T		2	1	8.10E-04	8.10E-04	2.70E-04	2.70E-04	2.4E-01	3.4E-03	4.7E+04	1.7E-08	6.1E+02	1.3E-06
M-09	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	1				2.60E-04	2.60E-04	1.8E+00		2.0E+04		1.3E+04	
M-09	VOC	Methylcyclohexane	108-87-2	T		2				1.50E-04	4.20E-04						
M-09	VOC	Methylene Chloride	75-09-2	T	B2	1				3.40E-04	3.40E-04	5.0E-03		1.4E+03		2.2E+02	
M-09	VOC	Styrene	100-42-5	T		2				1.50E-04	3.50E-04	1.0E-01		3.1E+02		9.7E+00	
M-09	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	2				2.50E-04	3.60E-04	8.5E-03		7.7E+01		4.7E+00	
M-09	VOC	Tetrachloroethene	127-18-4	T	C-B2	1				4.20E-04	4.20E-04	5.0E-03		1.7E+02		1.2E+01	
M-09	VOC	Toluene	108-88-3	T	D	2				1.80E-04	3.90E-04	1.0E+00		5.3E+02		5.3E+02	
M-09	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	2				1.70E-04	4.00E-04	7.0E-02		3.0E+02		1.9E+01	
M-09	VOC	1,1,1-Trichloroethane	71-55-6	T	D	2				1.50E-04	3.90E-04	2.0E-01		1.3E+03		1.3E+03	
M-09	VOC	1,1,2-Trichloroethane	79-00-5	T	C	2				3.00E-04	3.60E-04	5.0E-03		1.1E+02		2.1E+01	
M-09	VOC	Trichloroethene	79-01-6	T	C-B2	2				1.40E-04	4.20E-04	5.0E-03		9.7E+01		2.2E+01	
M-09	VOC	Trichlorofluoromethane	75-69-4	T		2				2.80E-04	5.40E-04	2.6E+00		1.1E+03		1.1E+03	
M-09	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		2				3.20E-04	4.20E-04	1.7E+02		1.7E+02		1.7E+02	
M-09	VOC	Vinyl Chloride	75-01-4	T	A	2				1.50E-04	3.60E-04	2.0E-03		1.3E+01		1.0E+00	
M-09	VOC	Xylenes (total)	1330-20-7	T	ID	2				3.30E-04	4.40E-04	1.0E+01		1.9E+02		1.9E+02	
M-09	SVOC	Acenaphthene	83-32-9	T		2				4.00E-04	8.00E-04	1.3E+00		4.2E+00		4.2E+00	
M-09	SVOC	Acenaphthylene	208-96-8	T	D	2				7.10E-04	7.10E-04	5.2E-02		3.9E+00		3.9E+00	
M-09	SVOC	Acetophenone	98-86-2	T	D	2				2.60E-03	2.60E-03	1.5E+00		6.1E+03		6.1E+03	
M-09	SVOC	Anthracene	120-12-7	T	D	2				6.80E-04	6.80E-04	4.3E-02		4.3E-02		4.3E-02	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-09	SVOC	Atrazine	1912-24-9	T		2				2.50E-03	2.50E-03	3.0E-03				5.4E+00	
M-09	SVOC	Benzaldehyde	100-52-7	T		2				2.80E-03	2.80E-03						
M-09	SVOC	Benzo(a)anthracene	56-55-3	T	B2	2				7.00E-04	7.00E-04	2.1E-03				9.4E-03	
M-09	SVOC	Benzo(a)pyrene	50-32-8	T	B2	2				7.30E-04	7.30E-04	5.0E-03				2.0E-03	
M-09	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	2				9.40E-04	9.40E-04	2.0E-03				2.0E-03	
M-09	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	2				8.50E-04	8.50E-04	5.0E-03				5.0E-03	
M-09	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	2				8.40E-04	8.40E-04	5.0E-03				5.0E-03	
M-09	SVOC	Biphenyl	92-52-4	T	D	2				2.60E-03	2.60E-03						
M-09	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	2				8.70E-04	8.70E-04						
M-09	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	2				9.70E-04	9.70E-04	2.0E-03		2.1E+02		5.7E+00	
M-09	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	2				2.70E-03	2.70E-03	6.0E-03				3.2E-01	
M-09	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	2				8.80E-04	8.80E-04						
M-09	SVOC	Butylbenzylphthalate	85-68-7	T	C	2				8.80E-04	8.80E-04	1.2E+00				2.7E+00	
M-09	SVOC	Caprolactam	105-60-2	T		2				2.50E-03	2.50E-03	5.8E+00				3.9E+05	
M-09	SVOC	Carbazole	86-74-8	T	B2	2				8.20E-04	8.20E-04	8.5E-02				7.4E+00	
M-09	SVOC	4-Chloro-3-methylphenol	59-50-7	T		2				9.90E-04	9.90E-04	1.5E-01				7.9E+01	
M-09	SVOC	4-Chloroaniline	106-47-8	T		2				6.10E-04	6.10E-04						
M-09	SVOC	2-Chloronaphthalene	91-58-7	T		2				8.50E-04	8.50E-04	1.8E+00				6.7E+00	
M-09	SVOC	2-Chlorophenol	95-57-8	T		2				1.00E-03	1.00E-03	4.5E-02				9.4E+01	
M-09	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		2				7.90E-04	7.90E-04						
M-09	SVOC	Chrysene	218-01-9	T	B2	2				7.50E-04	7.50E-04	5.0E-03				5.0E-03	
M-09	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	2				7.90E-04	7.90E-04	2.0E-03				2.0E-03	
M-09	SVOC	Dibenzofuran	132-64-9	T	D	2				1.10E-03	1.10E-03						
M-09	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	2				9.30E-04	9.30E-04	1.1E-03				1.8E-01	
M-09	SVOC	2,4-Dichlorophenol	120-83-2	T		2				8.50E-04	8.50E-04	7.3E-02				4.8E+01	
M-09	SVOC	Diethylphthalate	84-66-2	T	D	2				6.50E-04	6.50E-04	5.5E+00				1.1E+03	
M-09	SVOC	2,4-Dimethylphenol	105-67-9	T		2				8.50E-04	8.50E-04	3.7E-01				5.2E+02	
M-09	SVOC	Dimethylphthalate	131-11-3	T	D	2				7.60E-04	7.60E-04	7.3E+01				4.2E+03	
M-09	SVOC	Di-n-butylphthalate	84-74-2	T	D	2				6.70E-04	6.70E-04	8.8E-01				1.1E+01	
M-09	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		2				1.30E-03	1.30E-03	2.0E-02				9.5E+00	
M-09	SVOC	2,4-Dinitrophenol	51-28-5	T		2				3.00E-03	3.00E-03						
M-09	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	2				7.90E-04	7.90E-04	7.7E-03				8.6E+00	
M-09	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	2				5.70E-04	5.70E-04						
M-09	SVOC	Di-n-octylphthalate	117-84-0	T		2				1.10E-03	1.10E-03	1.3E-01				4.0E-01	
M-09	SVOC	Fluoranthene	206-44-0	T	D	2				8.10E-04	8.10E-04	2.1E-01		2.1E-01		2.1E-01	
M-09	SVOC	Fluorene	86-73-7	T	D	2				1.00E-03	1.00E-03	8.8E-01		2.0E+00		2.0E+00	
M-09	SVOC	Hexachlorobenzene	118-74-1	T	B2	2				7.40E-04	7.40E-04	1.0E-03		3.0E+00		4.6E-03	
M-09	SVOC	Hexachlorobutadiene	87-68-3	T	C	2				7.30E-04	7.30E-04	1.5E-02		3.2E+00		4.0E-01	
M-09	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	1				1.10E-03	1.10E-03	5.0E-02		4.2E-01		1.6E+00	
M-09	SVOC	Hexachloroethane	67-72-1	T	C	2				7.40E-04	7.40E-04	7.3E-03		5.0E+01		1.9E+00	
M-09	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	2				6.30E-04	6.30E-04	2.0E-03				2.0E-03	
M-09	SVOC	Isophorone	78-59-1	T	C	2				6.30E-04	6.30E-04	7.7E-01				9.9E+02	
M-09	SVOC	2-Methylnaphthalene	91-57-6	T	ID	2				6.40E-04	6.40E-04	2.6E-01				2.5E+01	
M-09	SVOC	Methylphenol (total)	1319-77-3	T		2				1.30E-03	1.30E-03	3.7E-01				8.1E+02	
M-09	SVOC	Naphthalene	91-20-3	T	C	2				7.50E-04	7.50E-04	5.2E-01		3.1E+01		3.1E+01	
M-09	SVOC	2-Nitroaniline	88-74-4	T		2				7.00E-04	7.00E-04						
M-09	SVOC	3-Nitroaniline	99-09-2	T	C	2				7.10E-04	7.10E-04						
M-09	SVOC	4-Nitroaniline	100-01-6	T	C	2				1.30E-03	1.30E-03						
M-09	SVOC	Nitrobenzene	98-95-3	T	D	2				8.10E-04	8.10E-04	3.4E-03		5.5E+02		1.1E+01	
M-09	SVOC	2-Nitrophenol	88-75-5	T		2				1.10E-03	1.10E-03	2.0E-02				7.9E+01	
M-09	SVOC	4-Nitrophenol	100-02-7	T		2				1.90E-03	1.90E-03						
M-09	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	2				1.40E-03	1.40E-03	2.7E-01				3.5E+01	
M-09	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	2				6.70E-04	6.70E-04	5.0E-03				3.6E-01	
M-09	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	2				7.80E-04	7.80E-04						
M-09	SVOC	Pentachlorophenol	87-86-5	T	B2	2				2.40E-03	2.40E-03	1.0E-03				2.0E-01	
M-09	SVOC	Phenanthrene	85-01-8	T	D	2				8.20E-04	8.20E-04	5.2E-02		1.0E+00		1.0E+00	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-09	SVOC	Phenol	108-95-2	T	ID	2				2.60E-03	2.60E-03	2.2E+00				2.9E+04	
M-09	SVOC	Pyrene	129-00-0	T	D	2				1.10E-03	1.10E-03	1.4E-01		1.4E-01		1.4E-01	
M-09	SVOC	2,4,5-Trichlorophenol	95-95-4	T		2				1.20E-03	1.20E-03	7.3E-01				1.7E+02	
M-09	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	2				1.70E-03	1.70E-03	1.2E-01				1.0E+01	
M-09	P/PCB	PCBs (total)	1336-36-3	T	B2	2				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
M-09	INORG	Antimony	7440-36-0	D		1				2.20E-03	2.20E-03	6.0E-03				6.8E+01	
M-09	INORG	Antimony	7440-36-0	T		2	1	3.30E-03	3.30E-03	3.40E-03	3.40E-03	6.0E-03	5.5E-01			6.8E+01	4.9E-05
M-09	INORG	Arsenic	7440-38-2	D	A	1	1	5.70E-03	5.70E-03			5.0E-02	1.1E-01			4.3E+00	1.3E-03
M-09	INORG	Arsenic	7440-38-2	T	A	2	1	4.20E-03	4.20E-03	2.10E-03	2.10E-03	5.0E-02	8.4E-02			4.3E+00	9.8E-04
M-09	INORG	Barium	7440-39-3	D	D	1	1	5.48E-01	5.48E-01			2.0E+00	2.7E-01			1.4E+04	3.9E-05
M-09	INORG	Barium	7440-39-3	T	D	2	2	5.04E-01	5.69E-01			2.0E+00	2.8E-01			1.4E+04	4.1E-05
M-09	INORG	Beryllium	7440-41-7	D	B1	1				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
M-09	INORG	Beryllium	7440-41-7	T	B1	2				5.40E-04	6.00E-04	4.0E-03				2.9E+02	
M-09	INORG	Cadmium	7440-43-9	D	B1	1				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
M-09	INORG	Cadmium	7440-43-9	T	B1	2	2	2.90E-04	2.90E-04	2.80E-04	2.80E-04	5.0E-03	5.8E-02			1.9E+02	1.5E-06
M-09	INORG	Chromium (total)	7440-47-3	D		1	1	3.00E-03	3.00E-03			1.0E-01	2.8E-02			4.6E+02	6.1E-06
M-09	INORG	Chromium (total)	7440-47-3	T		2	2	3.00E-03	3.00E-03	1.50E-03	1.50E-03	1.0E-01	3.0E-02			4.6E+02	6.5E-06
M-09	INORG	Cobalt	7440-48-4	D	B1	1	1	2.20E-03	2.20E-03			4.0E-02	5.5E-02			2.4E+03	9.2E-07
M-09	INORG	Cobalt	7440-48-4	T	B1	2	2	2.20E-03	2.40E-03			4.0E-02	6.0E-02			2.4E+03	1.0E-06
M-09	INORG	Copper	7440-50-8	D	D	1				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
M-09	INORG	Copper	7440-50-8	T	D	2				1.70E-03	4.20E-03	1.4E+00				7.4E+03	
M-09	INORG	Lead	7439-92-1	D	B2	1				2.50E-03	2.50E-03	4.0E-03					
M-09	INORG	Lead	7439-92-1	T	B2	2				1.60E-03	2.50E-03	4.0E-03					
M-09	INORG	Manganese	7439-96-5	D	D	1				9.00E-04	9.00E-04	8.6E-01				9.1E+03	
M-09	INORG	Manganese	7439-96-5	T	D	2	1	4.30E-03	4.30E-03	9.00E-04	9.00E-04	8.6E-01	5.0E-03			9.1E+03	4.7E-07
M-09	INORG	Mercury	7439-97-6	D	D	1				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
M-09	INORG	Mercury	7439-97-6	T	D	2				6.90E-05	8.70E-05	2.0E-03		5.6E-02		5.6E-02	
M-09	INORG	Nickel	7440-02-0	D	A	1	1	4.10E-03	4.10E-03			1.0E-01	4.1E-02			7.4E+04	5.5E-08
M-09	INORG	Nickel	7440-02-0	T	A	2	2	3.50E-03	7.30E-03			1.0E-01	7.3E-02			7.4E+04	9.9E-08
M-09	INORG	Selenium	7782-49-2	D	D	1				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
M-09	INORG	Selenium	7782-49-2	T	D	2				4.50E-03	4.70E-03	5.0E-02				9.7E+02	
M-09	INORG	Silver	7440-22-4	D	D	1				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
M-09	INORG	Silver	7440-22-4	T	D	2				9.80E-04	1.50E-03	3.4E-02				1.5E+03	
M-09	INORG	Thallium	7440-28-0	D		1	1	5.10E-05	5.10E-05			2.0E-03	2.6E-02			1.3E+01	3.9E-06
M-09	INORG	Thallium	7440-28-0	T		2	1	7.20E-05	7.20E-05	3.30E-05	3.30E-05	2.0E-03	3.6E-02			1.3E+01	5.5E-06
M-09	INORG	Vanadium	7440-62-2	D		1	1	3.70E-03	3.70E-03			4.5E-03	8.2E-01			9.7E+02	3.8E-06
M-09	INORG	Vanadium	7440-62-2	T		2	2	1.00E-03	4.10E-03			4.5E-03	9.1E-01			9.7E+02	4.2E-06
M-09	INORG	Zinc	7440-66-6	D	D	1	1	1.39E-02	1.39E-02			2.4E+00	5.8E-03			1.1E+05	1.3E-07
M-09	INORG	Zinc	7440-66-6	T	D	2	1	8.23E-02	8.23E-02	1.20E-02	1.20E-02	2.4E+00	3.4E-02			1.1E+05	7.5E-07
M-16	VOC	Acetone	67-64-1	T	ID	4	1	6.95E-03	6.95E-03	5.10E-04	1.00E-02	7.3E-01	9.5E-03	1.0E+06	7.0E-09	3.1E+04	2.2E-07
M-16	VOC	Benzene	71-43-2	T	A	4				1.60E-04	1.00E-03	5.0E-03		3.5E+01		1.1E+01	
M-16	VOC	Bromodichloromethane	75-27-4	T	B2	4	1	2.15E-04	2.15E-04	1.70E-04	1.00E-03	1.0E-01	2.2E-03	3.7E+01	5.8E-06	1.4E+01	1.5E-05
M-16	VOC	Bromoform	75-25-2	T	B2	4				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
M-16	VOC	Bromomethane	74-83-9	T	D	3				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
M-16	VOC	2-Butanone	78-93-3	T	ID	4				4.10E-04	1.00E-02	1.3E+01		2.4E+05		2.4E+05	
M-16	VOC	Carbon Disulfide	75-15-0	T		4				2.00E-04	1.00E-03	8.0E-01		5.5E+02		1.2E+03	
M-16	VOC	Carbon Tetrachloride	56-23-5	T	B2	4				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
M-16	VOC	Chlorobenzene	108-90-7	T	D	4				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
M-16	VOC	Chloroethane	75-00-3	T		4				2.60E-04	1.00E-03	4.3E-01		5.7E+03		4.4E+02	
M-16	VOC	Chloroform	67-66-3	T	B2	4	2	2.00E-04	6.55E-04	1.40E-04	1.50E-04	1.0E-01	6.6E-03	1.8E+02	3.6E-06	1.5E+02	4.4E-06
M-16	VOC	Chloromethane	74-87-3	T	D	4				1.30E-04	1.00E-03	2.6E-01		4.5E+01		4.9E+02	
M-16	VOC	Cumene	98-82-8	T	D	4				1.20E-04	1.00E-03	8.0E-01		5.6E+01		5.6E+01	
M-16	VOC	Cyclohexane	110-82-7	T	ID	4				1.30E-04	1.00E-03						
M-16	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	4				6.20E-04	2.00E-03	2.0E-04		1.2E+00		3.9E-01	
M-16	VOC	Dibromochloromethane	124-48-1	T	C	4				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
M-16	VOC	1,2-Dibromoethane	106-93-4	T	B2	4				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-16	VOC	1,2-Dichlorobenzene	95-50-1	T	D	4				1.10E-04	1.00E-03	6.0E-01		1.6E+02		1.6E+02	
M-16	VOC	1,3-Dichlorobenzene	541-73-1	T	D	4				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
M-16	VOC	1,4-Dichlorobenzene	106-46-7	T	C	4				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
M-16	VOC	Dichlorodifluoromethane	75-71-8	T		4				2.60E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	
M-16	VOC	1,1-Dichloroethane	75-34-3	T	C	4				1.60E-04	1.00E-03	8.8E-01		2.3E+03		2.4E+03	
M-16	VOC	1,2-Dichloroethane	107-06-2	T	B2	4				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
M-16	VOC	1,1-Dichloroethene	75-35-4	T	C	4				2.40E-04	1.00E-03	7.0E-03		1.3E+00		1.1E+01	
M-16	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4				2.20E-04	5.00E-04	7.0E-02		2.1E+02		2.0E+02	
M-16	VOC	trans-1,2-Dichloroethene	156-60-5	T		4				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
M-16	VOC	1,2-Dichloropropane	78-87-5	T	B2	4				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
M-16	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	4				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
M-16	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
M-16	VOC	2-Hexanone	591-78-6	T		4				4.60E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	
M-16	VOC	Methyl Acetate	79-20-9	T		4				4.10E-04	1.00E-02						
M-16	VOC	Methyl tert-butyl ether	1634-04-4	T		4	1	7.15E-03	7.15E-03	1.30E-04	5.00E-03	2.4E-01	3.0E-02	4.7E+04	1.5E-07	6.1E+02	1.2E-05
M-16	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	4				2.30E-04	1.00E-02	1.8E+00		2.0E+04		1.3E+04	
M-16	VOC	Methylcyclohexane	108-87-2	T		4				1.50E-04	1.00E-03						
M-16	VOC	Methylene Chloride	75-09-2	T	B2	4				2.90E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
M-16	VOC	Styrene	100-42-5	T		4				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
M-16	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	4				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
M-16	VOC	Tetrachloroethene	127-18-4	T	C-B2	4				2.30E-04	1.00E-03	5.0E-03		1.7E+02		1.2E+01	
M-16	VOC	Toluene	108-88-3	T	D	4	1	1.90E-04	1.90E-04	1.80E-04	1.00E-03	1.0E+00	1.9E-04	5.3E+02	3.6E-07	5.3E+02	3.6E-07
M-16	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	4				1.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
M-16	VOC	1,1,1-Trichloroethane	71-55-6	T	D	4	2	2.90E-03	3.00E-03	1.50E-04	1.00E-03	2.0E-01	1.5E-02	1.3E+03	2.3E-06	1.3E+03	2.3E-06
M-16	VOC	1,1,2-Trichloroethane	79-00-5	T	C	4				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
M-16	VOC	Trichloroethene	79-01-6	T	C-B2	4				1.40E-04	1.00E-03	5.0E-03		9.7E+01		2.2E+01	
M-16	VOC	Trichlorofluoromethane	75-69-4	T		4				2.80E-04	1.00E-03	2.6E+00		1.1E+03		1.1E+03	
M-16	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		4				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
M-16	VOC	Vinyl Chloride	75-01-4	T	A	5	3	1.40E-02	2.30E-02	1.50E-04	3.60E-04	2.0E-03	**1.2E+01**	1.3E+01	1.8E-03	1.0E+00	2.3E-02
M-16	VOC	Xylenes (total)	1330-20-7	T	ID	4				3.30E-04	1.00E-03	1.0E+01		1.9E+02		1.9E+02	
M-16	SVOC	Acenaphthene	83-32-9	T		4				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
M-16	SVOC	Acenaphthylene	208-96-8	T	D	4				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
M-16	SVOC	Acetophenone	98-86-2	T	D	4				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
M-16	SVOC	Anthracene	120-12-7	T	D	4				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
M-16	SVOC	Atrazine	1912-24-9	T		4				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
M-16	SVOC	Benzaldehyde	100-52-7	T		4				2.80E-03	1.00E-02						
M-16	SVOC	Benzo(a)anthracene	56-55-3	T	B2	4				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
M-16	SVOC	Benzo(a)pyrene	50-32-8	T	B2	4				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
M-16	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	4				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
M-16	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	4				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
M-16	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	4				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
M-16	SVOC	Biphenyl	92-52-4	T	D	4				2.60E-03	1.00E-02						
M-16	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	4				8.70E-04	5.00E-03						
M-16	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	4				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
M-16	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	4	3	2.03E-03	5.50E-03	2.70E-03	2.70E-03	6.0E-03	9.2E-01			3.2E-01	1.7E-02
M-16	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	4				8.80E-04	5.00E-03						
M-16	SVOC	Butylbenzylphthalate	85-68-7	T	C	4				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
M-16	SVOC	Caprolactam	105-60-2	T		4				2.50E-03	1.00E-02	5.8E+00				3.9E+05	
M-16	SVOC	Carbazole	86-74-8	T	B2	4				8.20E-04	1.00E-02	8.5E-02				7.4E+00	
M-16	SVOC	4-Chloro-3-methylphenol	59-50-7	T		4				1.00E-03	5.00E-03	1.5E-01				7.9E+01	
M-16	SVOC	4-Chloroaniline	106-47-8	T		4				6.10E-04	1.00E-02						
M-16	SVOC	2-Chloronaphthalene	91-58-7	T		4				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
M-16	SVOC	2-Chlorophenol	95-57-8	T		4				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
M-16	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		4				7.90E-04	5.00E-03						
M-16	SVOC	Chrysene	218-01-9	T	B2	4				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
M-16	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	4				7.90E-04	5.00E-03	2.0E-03				2.0E-03	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-16	SVOC	Dibenzofuran	132-64-9	T	D	4				1.10E-03	5.00E-03						
M-16	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	4				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
M-16	SVOC	2,4-Dichlorophenol	120-83-2	T		4				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
M-16	SVOC	Diethylphthalate	84-66-2	T	D	4				6.50E-04	5.00E-03	5.5E+00				1.1E+03	
M-16	SVOC	2,4-Dimethylphenol	105-67-9	T		4				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
M-16	SVOC	Dimethylphthalate	131-11-3	T	D	4				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
M-16	SVOC	Di-n-butylphthalate	84-74-2	T	D	4				9.70E-04	5.00E-03	8.8E-01				1.1E+01	
M-16	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		4				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
M-16	SVOC	2,4-Dinitrophenol	51-28-5	T		4				3.00E-03	2.00E-02						
M-16	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	4				7.90E-04	5.00E-03	7.3E-02				8.6E+00	
M-16	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	4				7.50E-04	5.00E-03						
M-16	SVOC	Di-n-octylphthalate	117-84-0	T		4				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
M-16	SVOC	Fluoranthene	206-44-0	T	D	4				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
M-16	SVOC	Fluorene	86-73-7	T	D	4				1.00E-03	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
M-16	SVOC	Hexachlorobenzene	118-74-1	T	B2	4				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
M-16	SVOC	Hexachlorobutadiene	87-68-3	T	C	4				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
M-16	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	4				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
M-16	SVOC	Hexachloroethane	67-72-1	T	C	4				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
M-16	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	4				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
M-16	SVOC	Isophorone	78-59-1	T	C	4				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
M-16	SVOC	2-Methylnaphthalene	91-57-6	T	ID	4				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
M-16	SVOC	Methylphenol (total)	1319-77-3	T		4				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
M-16	SVOC	Naphthalene	91-20-3	T	C	4				7.50E-04	5.00E-03	5.2E-01		3.1E+01		3.1E+01	
M-16	SVOC	2-Nitroaniline	88-74-4	T		4				7.00E-04	2.00E-02						
M-16	SVOC	3-Nitroaniline	99-09-2	T	C	4				7.10E-04	2.00E-02						
M-16	SVOC	4-Nitroaniline	100-01-6	T	C	4				1.30E-03	2.00E-02						
M-16	SVOC	Nitrobenzene	98-95-3	T	D	4				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
M-16	SVOC	2-Nitrophenol	88-75-5	T		4				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
M-16	SVOC	4-Nitrophenol	100-02-7	T		4				1.90E-03	2.00E-02						
M-16	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	4				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
M-16	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	4				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
M-16	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	4				7.80E-04	5.00E-03						
M-16	SVOC	Pentachlorophenol	87-86-5	T	B2	4				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
M-16	SVOC	Phenanthrene	85-01-8	T	D	4				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
M-16	SVOC	Phenol	108-95-2	T	ID	4				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
M-16	SVOC	Pyrene	129-00-0	T	D	4				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
M-16	SVOC	2,4,5-Trichlorophenol	95-95-4	T		4				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
M-16	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	4				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
M-16	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-16	P/PCB	PCBs (total)	1336-36-3	T	B2	4				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
M-16	INORG	Antimony	7440-36-0	D		3				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
M-16	INORG	Antimony	7440-36-0	T		4				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
M-16	INORG	Arsenic	7440-38-2	D	A	3	1	8.30E-03	8.30E-03	3.90E-03	1.00E-02	5.0E-02	1.7E-01			4.3E+00	1.9E-03
M-16	INORG	Arsenic	7440-38-2	T	A	4	1	8.80E-03	8.80E-03	2.10E-03	1.00E-02	5.0E-02	1.8E-01			4.3E+00	2.0E-03
M-16	INORG	Barium	7440-39-3	D	D	3	3	4.58E-02	2.12E-01			2.0E+00	1.1E-01			1.4E+04	1.5E-05
M-16	INORG	Barium	7440-39-3	T	D	4	4	3.60E-02	2.15E-01			2.0E+00	1.1E-01			1.4E+04	1.5E-05
M-16	INORG	Beryllium	7440-41-7	D	B1	3				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
M-16	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
M-16	INORG	Cadmium	7440-43-9	D	B1	3				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
M-16	INORG	Cadmium	7440-43-9	T	B1	4				3.80E-04	5.00E-03	5.0E-03				1.9E+02	
M-16	INORG	Chromium (total)	7440-47-3	D		3				1.40E-03	1.00E-02	1.0E-01				4.6E+02	
M-16	INORG	Chromium (total)	7440-47-3	T		4	2	1.40E-03	1.60E-03	1.40E-03	1.00E-02	1.0E-01	1.6E-02			4.6E+02	3.5E-06
M-16	INORG	Cobalt	7440-48-4	D	B1	3	1	2.60E-03	2.60E-03	1.80E-03	2.00E-02	4.0E-02	6.5E-02			2.4E+03	1.1E-06
M-16	INORG	Cobalt	7440-48-4	T	B1	4	2	9.75E-04	2.65E-03	7.40E-04	2.00E-02	4.0E-02	6.6E-02			2.4E+03	1.1E-06
M-16	INORG	Copper	7440-50-8	D	D	3				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
M-16	INORG	Copper	7440-50-8	T	D	4				1.70E-03	5.00E-03	1.4E+00				7.4E+03	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-16	INORG	Lead	7439-92-1	D	B2	3				2.50E-03	3.00E-03	1.0E-03					
M-16	INORG	Lead	7439-92-1	T	B2	4				1.60E-03	3.00E-03	1.0E-03					
M-16	INORG	Manganese	7439-96-5	D	D	3	3	9.66E-02	1.05E+00			8.6E-01	**1.2E+00**			9.1E+03	1.2E-04
M-16	INORG	Manganese	7439-96-5	T	D	4	3	9.65E-02	1.09E+00	6.80E-04	6.80E-04	8.6E-01	**1.3E+00**			9.1E+03	1.2E-04
M-16	INORG	Mercury	7439-97-6	D	D	3				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
M-16	INORG	Mercury	7439-97-6	T	D	4				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
M-16	INORG	Nickel	7440-02-0	D	A	3	1	3.10E-03	3.10E-03	2.20E-03	2.00E-02	1.0E-01	3.1E-02			7.4E+04	4.2E-08
M-16	INORG	Nickel	7440-02-0	T	A	4	1	4.70E-03	4.70E-03	2.20E-03	2.00E-02	1.0E-01	4.7E-02			7.4E+04	6.4E-08
M-16	INORG	Selenium	7782-49-2	D	D	3				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
M-16	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
M-16	INORG	Silver	7440-22-4	D	D	3				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
M-16	INORG	Silver	7440-22-4	T	D	4				9.80E-04	5.00E-03	3.4E-02				1.5E+03	
M-16	INORG	Thallium	7440-28-0	D		3				1.80E-05	1.00E-02	2.0E-03				1.3E+01	
M-16	INORG	Thallium	7440-28-0	T		4				1.80E-05	1.00E-02	2.0E-03				1.3E+01	
M-16	INORG	Vanadium	7440-62-2	D		3				8.20E-04	1.00E-02	4.5E-03				9.7E+02	
M-16	INORG	Vanadium	7440-62-2	T		4				6.70E-04	1.00E-02	4.5E-03				9.7E+02	
M-16	INORG	Zinc	7440-66-6	D	D	3	1	1.04E-02	1.56E-02	2.00E-02	2.00E-02	2.4E+00	6.5E-03			1.1E+05	1.4E-07
M-16	INORG	Zinc	7440-66-6	T	D	4	1	1.35E-02	1.35E-02	1.20E-02	2.00E-02	2.4E+00	5.6E-03			1.1E+05	1.2E-07
M-25	VOC	Acetone	67-64-1	T	ID	1				6.60E-04	6.60E-04	7.3E-01		1.0E+06		3.1E+04	
M-25	VOC	Benzene	71-43-2	T	A	1				2.00E-04	2.00E-04	5.0E-03		3.5E+01		1.1E+01	
M-25	VOC	Bromodichloromethane	75-27-4	T	B2	1				2.00E-04	2.00E-04	1.0E-01		3.7E+01		1.4E+01	
M-25	VOC	Bromoform	75-25-2	T	B2	1				3.20E-04	3.20E-04	1.0E-01		3.1E+03		1.4E+02	
M-25	VOC	Bromomethane	74-83-9	T	D	1				1.60E-04	1.60E-04	1.0E-02		9.0E+00		7.0E+01	
M-25	VOC	2-Butanone	78-93-3	T	ID	1				3.60E-04	3.60E-04	1.3E+01		2.4E+05		2.4E+05	
M-25	VOC	Carbon Disulfide	75-15-0	T		1	1	2.03E-04	2.03E-04			8.0E-01	2.5E-04	5.5E+02	3.7E-07	1.2E+03	1.7E-07
M-25	VOC	Carbon Tetrachloride	56-23-5	T	B2	1				1.80E-04	1.80E-04	5.0E-03		2.4E+00		4.6E+00	
M-25	VOC	Chlorobenzene	108-90-7	T	D	1				1.60E-04	1.60E-04	1.0E-01		4.7E+02		8.6E+01	
M-25	VOC	Chloroethane	75-00-3	T		1				2.20E-04	2.20E-04	4.3E-01		5.7E+03		4.4E+02	
M-25	VOC	Chloroform	67-66-3	T	B2	1				2.10E-04	2.10E-04	1.0E-01		1.8E+02		1.5E+02	
M-25	VOC	Chloromethane	74-87-3	T	D	1				2.60E-04	2.60E-04	2.6E-01		4.5E+01		4.9E+02	
M-25	VOC	Cumene	98-82-8	T	D	1				1.50E-04	1.50E-04	8.0E-01		5.6E+01		5.6E+01	
M-25	VOC	Cyclohexane	110-82-7	T	ID	1				3.40E-04	3.40E-04						
M-25	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	1				5.30E-04	5.30E-04	2.0E-04		1.2E+00		3.9E-01	
M-25	VOC	Dibromochloromethane	124-48-1	T	C	1				2.50E-04	2.50E-04	1.0E-01		1.1E+02		1.8E+01	
M-25	VOC	1,2-Dibromoethane	106-93-4	T	B2	1				2.20E-04	2.20E-04	1.0E-03		1.5E+01		2.5E-02	
M-25	VOC	1,2-Dichlorobenzene	95-50-1	T	D	1				1.50E-04	1.50E-04	6.0E-01		1.6E+02		1.6E+02	
M-25	VOC	1,3-Dichlorobenzene	541-73-1	T	D	1				2.00E-04	2.00E-04	6.6E-03				2.0E+00	
M-25	VOC	1,4-Dichlorobenzene	106-46-7	T	C	1				1.60E-04	1.60E-04	7.5E-02		7.4E+01		6.4E+00	
M-25	VOC	Dichlorodifluoromethane	75-71-8	T		1				2.30E-04	2.30E-04	1.7E+00		3.0E+02		3.0E+02	
M-25	VOC	1,1-Dichloroethane	75-34-3	T	C	1				2.60E-04	2.60E-04	8.8E-01		2.3E+03		2.4E+03	
M-25	VOC	1,2-Dichloroethane	107-06-2	T	B2	1				2.20E-04	2.20E-04	5.0E-03		5.9E+01		1.9E+01	
M-25	VOC	1,1-Dichloroethene	75-35-4	T	C	1				2.20E-04	2.20E-04	7.0E-03		1.3E+00		1.1E+01	
M-25	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	1				2.50E-04	2.50E-04	7.0E-02		2.1E+02		2.0E+02	
M-25	VOC	trans-1,2-Dichloroethene	156-60-5	T		1				2.40E-04	2.40E-04	1.0E-01		2.0E+02		2.2E+02	
M-25	VOC	1,2-Dichloropropane	78-87-5	T	B2	1				1.80E-04	1.80E-04	5.0E-03		3.6E+01		1.6E+01	
M-25	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	1				1.70E-04	1.70E-04	8.5E-03		2.6E+01		5.5E+00	
M-25	VOC	Methyl Acetate	79-20-9	T		1				6.80E-04	6.80E-04						
M-25	VOC	Methyl tert-butyl ether	1634-04-4	T		1				2.10E-04	2.10E-04	2.4E-01		4.7E+04		6.1E+02	
M-25	VOC	Methylcyclohexane	108-87-2	T		1				2.40E-04	2.40E-04						
M-25	VOC	Methylene Chloride	75-09-2	T	B2	1				1.80E-04	1.80E-04	5.0E-03		1.4E+03		2.2E+02	
M-25	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	1				2.30E-04	2.30E-04	8.5E-03		7.7E+01		4.7E+00	
M-25	VOC	Tetrachloroethene	127-18-4	T	C-B2	1				1.20E-04	1.20E-04	5.0E-03		1.7E+02		1.2E+01	
M-25	VOC	Toluene	108-88-3	T	D	1				1.70E-04	1.70E-04	1.0E+00		5.3E+02		5.3E+02	
M-25	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	1				1.50E-04	1.50E-04	7.0E-02		3.0E+02		1.9E+01	
M-25	VOC	1,1,1-Trichloroethane	71-55-6	T	D	1				1.80E-04	1.80E-04	2.0E-01		1.3E+03		1.3E+03	
M-25	VOC	1,1,2-Trichloroethane	79-00-5	T	C	1				2.10E-04	2.10E-04	5.0E-03		1.1E+02		2.1E+01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-25	VOC	Trichloroethene	79-01-6	T	C-B2	1				2.20E-04	2.20E-04	5.0E-03		9.7E+01		2.2E+01	
M-25	VOC	Trichlorofluoromethane	75-69-4	T		1				2.50E-04	2.50E-04	2.6E+00		1.1E+03		1.1E+03	
M-25	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		1				2.30E-04	2.30E-04	1.7E+02		1.7E+02		1.7E+02	
M-25	SVOC	Acenaphthene	83-32-9	T		1				6.90E-04	6.90E-04	1.3E+00		4.2E+00		4.2E+00	
M-25	SVOC	Acenaphthylene	208-96-8	T	D	1				4.10E-04	4.10E-04	5.2E-02		3.9E+00		3.9E+00	
M-25	SVOC	Acetophenone	98-86-2	T	D	1				6.50E-04	6.50E-04	1.5E+00		6.1E+03		6.1E+03	
M-25	SVOC	Anthracene	120-12-7	T	D	1				5.90E-04	5.90E-04	4.3E-02		4.3E-02		4.3E-02	
M-25	SVOC	Atrazine	1912-24-9	T		1				3.50E-04	3.50E-04	3.0E-03				5.4E+00	
M-25	SVOC	Benzaldehyde	100-52-7	T		1				5.90E-04	5.90E-04						
M-25	SVOC	Benzo(a)anthracene	56-55-3	T	B2	1				6.80E-04	6.80E-04	9.2E-03				9.4E-03	
M-25	SVOC	Benzo(a)pyrene	50-32-8	T	B2	1				5.30E-04	5.30E-04	2.0E-03				2.0E-03	
M-25	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	1				7.10E-04	7.10E-04	2.0E-03				2.0E-03	
M-25	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	1				7.00E-04	7.00E-04	5.0E-03				5.0E-03	
M-25	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	1				6.40E-04	6.40E-04	5.0E-03				5.0E-03	
M-25	SVOC	Biphenyl	92-52-4	T	D	1				6.50E-04	6.50E-04						
M-25	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	1				1.00E-03	1.00E-03						
M-25	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	1				1.70E-03	1.70E-03	2.0E-03		2.1E+02		5.7E+00	
M-25	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	1				2.00E-04	2.00E-04	6.0E-03				3.2E-01	
M-25	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	1				7.80E-04	7.80E-04						
M-25	SVOC	Butylbenzylphthalate	85-68-7	T	C	1				2.30E-04	2.30E-04	1.2E+00				2.7E+00	
M-25	SVOC	Caprolactam	105-60-2	T		1	1	8.13E-04	8.13E-04			5.8E+00	1.4E-04			3.9E+05	2.1E-09
M-25	SVOC	Carbazole	86-74-8	T	B2	1				6.10E-04	6.10E-04	8.5E-02				7.4E+00	
M-25	SVOC	4-Chloro-3-methylphenol	59-50-7	T		1				5.50E-04	5.50E-04	1.5E-01				7.9E+01	
M-25	SVOC	4-Chloroaniline	106-47-8	T		1				9.00E-04	9.00E-04						
M-25	SVOC	2-Chloronaphthalene	91-58-7	T		1				7.30E-04	7.30E-04	1.8E+00				6.7E+00	
M-25	SVOC	2-Chlorophenol	95-57-8	T		1				1.30E-03	1.30E-03	4.5E-02				9.4E+01	
M-25	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		1				6.60E-04	6.60E-04						
M-25	SVOC	Chrysene	218-01-9	T	B2	1				6.70E-04	6.70E-04	5.0E-03				5.0E-03	
M-25	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	1				6.80E-04	6.80E-04	2.0E-03				2.0E-03	
M-25	SVOC	Dibenzofuran	132-64-9	T	D	1				6.60E-04	6.60E-04						
M-25	SVOC	2,4-Dichlorophenol	120-83-2	T		1				7.00E-04	7.00E-04	7.3E-02				4.8E+01	
M-25	SVOC	Diethylphthalate	84-66-2	T	D	1				2.50E-04	2.50E-04	5.5E+00				1.1E+03	
M-25	SVOC	2,4-Dimethylphenol	105-67-9	T		1				1.00E-03	1.00E-03	3.7E-01				5.2E+02	
M-25	SVOC	Dimethylphthalate	131-11-3	T	D	1				2.00E-04	2.00E-04	7.3E+01				4.2E+03	
M-25	SVOC	Di-n-butylphthalate	84-74-2	T	D	1				3.70E-04	3.70E-04	8.8E-01				1.1E+01	
M-25	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		1				2.10E-03	2.10E-03	2.0E-02				9.5E+00	
M-25	SVOC	2,4-Dinitrophenol	51-28-5	T		1				3.30E-03	3.30E-03						
M-25	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	1				4.60E-04	4.60E-04	7.7E-03				8.6E+00	
M-25	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	1				7.10E-04	7.10E-04						
M-25	SVOC	Di-n-octylphthalate	117-84-0	T		1				6.90E-04	6.90E-04	1.3E-01				4.0E-01	
M-25	SVOC	Fluoranthene	206-44-0	T	D	1				7.10E-04	7.10E-04	2.1E-01		2.1E-01		2.1E-01	
M-25	SVOC	Fluorene	86-73-7	T	D	1				7.50E-04	7.50E-04	8.8E-01		2.0E+00		2.0E+00	
M-25	SVOC	Hexachlorobenzene	118-74-1	T	B2	1				7.70E-04	7.70E-04	1.0E-03		3.0E+00		4.6E-03	
M-25	SVOC	Hexachlorobutadiene	87-68-3	T	C	1				1.50E-03	1.50E-03	1.5E-02		3.2E+00		4.0E-01	
M-25	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	1				1.10E-03	1.10E-03	5.0E-02		4.2E-01		1.6E+00	
M-25	SVOC	Hexachloroethane	67-72-1	T	C	1				1.60E-03	1.60E-03	7.3E-03		5.0E+01		1.9E+00	
M-25	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	1				6.90E-04	6.90E-04	2.0E-03				2.0E-03	
M-25	SVOC	Isophorone	78-59-1	T	C	1				8.60E-04	8.60E-04	7.7E-01				9.9E+02	
M-25	SVOC	2-Methylnaphthalene	91-57-6	T	ID	1				9.30E-04	9.30E-04	2.6E-01				2.5E+01	
M-25	SVOC	Methylphenol (total)	1319-77-3	T		1				8.00E-04	8.00E-04	3.7E-01				8.1E+02	
M-25	SVOC	Naphthalene	91-20-3	T	C	1				1.30E-03	1.30E-03	5.2E-01		3.1E+01		3.1E+01	
M-25	SVOC	2-Nitroaniline	88-74-4	T		1				4.90E-04	4.90E-04						
M-25	SVOC	3-Nitroaniline	99-09-2	T	C	1				4.80E-04	4.80E-04						
M-25	SVOC	4-Nitroaniline	100-01-6	T	C	1				5.90E-04	5.90E-04						
M-25	SVOC	Nitrobenzene	98-95-3	T	D	1				1.30E-03	1.30E-03	3.4E-03		5.5E+02		1.1E+01	
M-25	SVOC	2-Nitrophenol	88-75-5	T		1				9.50E-04	9.50E-04	2.0E-02				7.9E+01	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
M-25	SVOC	4-Nitrophenol	100-02-7	T		1				3.50E-03	3.50E-03						
M-25	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	1				6.40E-04	6.40E-04	2.7E-01				3.5E+01	
M-25	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	1				1.10E-03	1.10E-03	5.0E-03				3.6E-01	
M-25	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	1				1.80E-03	1.80E-03						
M-25	SVOC	Pentachlorophenol	87-86-5	T	B2	1				2.60E-03	2.60E-03	1.0E-03				2.0E-01	
M-25	SVOC	Phenanthrene	85-01-8	T	D	1				6.80E-04	6.80E-04	5.2E-02		1.0E+00		1.0E+00	
M-25	SVOC	Phenol	108-95-2	T	ID	1				1.30E-03	1.30E-03	4.4E+00				2.9E+04	
M-25	SVOC	Pyrene	129-00-0	T	D	1				6.30E-04	6.30E-04	1.4E-01		1.4E-01		1.4E-01	
M-25	SVOC	2,4,5-Trichlorophenol	95-95-4	T		1				8.60E-04	8.60E-04	7.3E-01				1.7E+02	
M-25	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	1				7.10E-04	7.10E-04	1.2E-02				1.0E+01	
M-25	P/PCB	PCBs (total)	1336-36-3	T	B2	1				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
M-25	INORG	Antimony	7440-36-0	T		1				3.10E-03	3.10E-03	6.0E-03				6.8E+01	
M-25	INORG	Arsenic	7440-38-2	T	A	1	1	4.80E-03	4.80E-03			5.0E-02	9.6E-02			4.3E+00	1.1E-03
M-25	INORG	Barium	7440-39-3	T	D	1	1	8.95E-02	8.95E-02			2.0E+00	4.5E-02			1.4E+04	6.4E-06
M-25	INORG	Beryllium	7440-41-7	T	B1					4.70E-04	4.70E-04	4.0E-03				2.9E+02	
M-25	INORG	Cadmium	7440-43-9	T	B1					3.60E-04	3.60E-04	5.0E-03				1.9E+02	
M-25	INORG	Chromium (total)	7440-47-3	T		1	1	1.05E-03	1.05E-03			1.0E-01	1.1E-02			4.6E+02	2.3E-06
M-25	INORG	Cobalt	7440-48-4	T	B1	1	1	3.20E-02	3.20E-02			4.0E-02	8.0E-02			2.4E+03	1.3E-06
M-25	INORG	Copper	7440-50-8	T	D	1				1.80E-03	1.80E-03	1.4E+00				7.4E+03	
M-25	INORG	Lead	7439-92-1	T	B2	1				2.30E-03	2.30E-03	4.0E-03					
M-25	INORG	Manganese	7439-96-5	T	D	1	1	5.54E-01	5.54E-01			8.6E-01	6.4E-01			9.1E+03	6.1E-05
M-25	INORG	Mercury	7439-97-6	T	D	1				6.70E-05	6.70E-05	2.0E-03		5.6E-02		5.6E-02	
M-25	INORG	Nickel	7440-02-0	T	A	1	1	7.50E-03	7.50E-03			1.0E-01	7.5E-02			7.4E+04	1.0E-07
M-25	INORG	Selenium	7782-49-2	T	D	1				3.90E-03	3.90E-03	5.0E-02				9.7E+02	
M-25	INORG	Silver	7440-22-4	T	D	1				1.10E-03	1.10E-03	3.4E-02				1.5E+03	
M-25	INORG	Thallium	7440-28-0	T		1	1	1.01E-04	1.01E-04			2.0E-03	5.1E-02			1.3E+01	7.8E-06
M-25	INORG	Vanadium	7440-62-2	T		1				9.60E-04	9.60E-04	4.5E-03				9.7E+02	
M-25	INORG	Zinc	7440-66-6	T	D	1				1.30E-02	1.30E-02	2.4E+00				1.1E+05	
P-06	VOC	Acetone	67-64-1	T	ID	14	2	1.20E-02	2.10E-02	5.10E-04	8.50E-02	7.3E-01	2.9E-02	1.0E+06	2.1E-08	3.1E+04	6.8E-07
P-06	VOC	Benzene	71-43-2	T	A	19	14	3.10E-04	1.20E+00	1.60E-04	3.70E-04	5.0E-03	**2.4E+02**	3.5E+01	3.4E-02	1.1E+01	1.1E-01
P-06	VOC	Bromodichloromethane	75-27-4	T	B2	14	1	3.40E-04	3.40E-04	1.70E-04	2.80E-02	1.0E-01	3.4E-03	3.7E+01	9.2E-06	1.4E+01	2.4E-05
P-06	VOC	Bromoform	75-25-2	T	B2	14				1.80E-04	3.00E-02	1.0E-01		3.1E+03		1.4E+02	
P-06	VOC	Bromomethane	74-83-9	T	D	10				2.00E-04	3.30E-02	1.0E-02		9.0E+00		7.0E+01	
P-06	VOC	2-Butanone	78-93-3	T	ID	14	2	5.90E-04	2.00E-03	4.10E-04	6.80E-02	1.3E+01	1.5E-04	2.4E+05	8.3E-09	2.4E+05	8.3E-09
P-06	VOC	Carbon Disulfide	75-15-0	T		14				2.00E-04	3.30E-02	8.0E-01		5.5E+02		1.2E+03	
P-06	VOC	Carbon Tetrachloride	56-23-5	T	B2	14				1.20E-04	2.30E-02	5.0E-03		2.4E+00		4.6E+00	
P-06	VOC	Chlorobenzene	108-90-7	T	D	14				1.40E-04	2.40E-02	1.0E-01		4.7E+02		8.6E+01	
P-06	VOC	Chloroethane	75-00-3	T		14				2.60E-04	4.30E-02	4.3E-01		5.7E+03		4.4E+02	
P-06	VOC	Chloroform	67-66-3	T	B2	14	4	6.50E-04	1.50E-03	1.40E-04	2.30E-02	1.0E-01	1.5E-02	1.8E+02	8.3E-06	1.5E+02	1.0E-05
P-06	VOC	Chloromethane	74-87-3	T	D	14	1	1.80E-04	1.80E-04	1.30E-04	3.10E-02	2.6E-01	6.9E-04	4.5E+01	4.0E-06	4.9E+02	3.7E-07
P-06	VOC	Cumene	98-82-8	T	D	14	2	3.30E-02	3.90E-02	1.20E-04	2.00E-02	8.0E-01	4.9E-02	5.6E+01	7.0E-04	5.6E+01	7.0E-04
P-06	VOC	Cyclohexane	110-82-7	T	ID	14	5	4.20E-04	1.10E-01	1.30E-04	3.30E-04						
P-06	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	14				6.20E-04	1.00E-01	2.0E-04		1.2E+00		3.9E-01	
P-06	VOC	Dibromochloromethane	124-48-1	T	C	14				2.60E-04	4.30E-02	1.0E-01		1.1E+02		1.8E+01	
P-06	VOC	1,2-Dibromoethane	106-93-4	T	B2	14				2.20E-04	3.70E-02	1.0E-03		1.5E+01		2.5E-02	
P-06	VOC	1,2-Dichlorobenzene	95-50-1	T	D	14				1.10E-04	2.40E-02	6.0E-01		1.6E+02		1.6E+02	
P-06	VOC	1,3-Dichlorobenzene	541-73-1	T	D	14				1.50E-04	2.50E-02	6.6E-03				2.0E+00	
P-06	VOC	1,4-Dichlorobenzene	106-46-7	T	C	14				1.70E-04	2.80E-02	7.5E-02		7.4E+01		6.4E+00	
P-06	VOC	Dichlorodifluoromethane	75-71-8	T		14				2.60E-04	4.30E-02	1.7E+00		3.0E+02		3.0E+02	
P-06	VOC	1,1-Dichloroethane	75-34-3	T	C	14	1	5.10E-04	5.10E-04	1.60E-04	2.70E-02	8.8E-01	5.8E-04	2.3E+03	2.2E-07	2.4E+03	2.1E-07
P-06	VOC	1,2-Dichloroethane	107-06-2	T	B2	14				2.10E-04	3.50E-02	5.0E-03		5.9E+01		1.9E+01	
P-06	VOC	1,1-Dichloroethene	75-35-4	T	C	14				2.40E-04	4.00E-02	7.0E-03		1.3E+00		1.1E+01	
P-06	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	14				2.20E-04	3.70E-02	7.0E-02		2.1E+02		2.0E+02	
P-06	VOC	trans-1,2-Dichloroethene	156-60-5	T		14				1.50E-04	2.50E-02	1.0E-01		2.0E+02		2.2E+02	
P-06	VOC	1,2-Dichloropropane	78-87-5	T	B2	14				1.70E-04	2.80E-02	5.0E-03		3.6E+01		1.6E+01	
P-06	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	14				2.70E-04	4.50E-02	8.5E-03		2.6E+01		5.5E+00	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-06	VOC	Ethyl Benzene	100-41-4	T	D	19	10	1.50E-04	1.60E+00	1.20E-04	4.10E-04	7.0E-01	**2.3E+00**	1.7E+02	9.4E-03	1.7E+02	9.4E-03
P-06	VOC	2-Hexanone	591-78-6	T		14				4.60E-04	7.70E-02	4.0E+00		8.7E+03		5.2E+03	
P-06	VOC	Methyl Acetate	79-20-9	T		14				4.10E-04	6.80E-02						
P-06	VOC	Methyl tert-butyl ether	1634-04-4	T		14	2	5.40E-04	2.10E-03	1.30E-04	2.20E-02	2.4E-01	8.8E-03	4.7E+04	4.5E-08	6.1E+02	3.4E-06
P-06	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	9	1	7.90E-04	7.90E-04	2.30E-04	3.80E-02	1.8E+00	4.4E-04	2.0E+04	4.0E-08	1.3E+04	6.1E-08
P-06	VOC	Methylcyclohexane	108-87-2	T		14	2	4.90E-02	7.80E-02	1.50E-04	2.50E-02						
P-06	VOC	Methylene Chloride	75-09-2	T	B2	13				2.90E-04	5.70E-02	5.0E-03		1.4E+03		2.2E+02	
P-06	VOC	Styrene	100-42-5	T		14				1.50E-04	2.50E-02	1.0E-01		3.1E+02		9.7E+00	
P-06	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	14				2.50E-04	4.20E-02	8.5E-03		7.7E+01		4.7E+00	
P-06	VOC	Tetrachloroethene	127-18-4	T	C-B2	14				2.30E-04	3.80E-02	5.0E-03		1.7E+02		1.2E+01	
P-06	VOC	Toluene	108-88-3	T	D	19	10	1.90E-03	5.40E+00	1.60E-04	3.90E-04	1.0E+00	**5.4E+00**	5.3E+02	1.0E-02	5.3E+02	1.0E-02
P-06	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	14				2.70E-04	2.80E-02	7.0E-02		3.0E+02		1.9E+01	
P-06	VOC	1,1,1-Trichloroethane	71-55-6	T	D	14				1.50E-04	2.50E-02	2.0E-01		1.3E+03		1.3E+03	
P-06	VOC	1,1,2-Trichloroethane	79-00-5	T	C	14				3.00E-04	5.00E-02	5.0E-03		1.1E+02		2.1E+01	
P-06	VOC	Trichloroethene	79-01-6	T	C-B2	14				1.40E-04	2.60E-02	5.0E-03		9.7E+01		2.2E+01	
P-06	VOC	Trichlorofluoromethane	75-69-4	T		14				2.80E-04	4.70E-02	2.6E+00		1.1E+03		1.1E+03	
P-06	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		14				3.20E-04	5.30E-02	1.7E+02		1.7E+02		1.7E+02	
P-06	VOC	Vinyl Chloride	75-01-4	T	A	14				1.50E-04	2.50E-02	2.0E-03		1.3E+01		1.0E+00	
P-06	VOC	Xylenes (total)	1330-20-7	T	ID	19	6	3.70E-04	4.20E-02	3.30E-04	1.30E-03	1.0E+01	4.2E-01	1.9E+02	2.2E-02	1.9E+02	2.2E-02
P-06	SVOC	Acenaphthene	83-32-9	T		10				8.00E-04	4.00E-03	1.3E+00		4.2E+00		4.2E+00	
P-06	SVOC	Acenaphthylene	208-96-8	T	D	10				7.10E-04	3.60E-03	5.2E-02		3.9E+00		3.9E+00	
P-06	SVOC	Acetophenone	98-86-2	T	D	10				2.60E-03	1.30E-02	1.5E+00		6.1E+03		6.1E+03	
P-06	SVOC	Anthracene	120-12-7	T	D	10				6.80E-04	3.40E-03	4.3E-02		4.3E-02		4.3E-02	
P-06	SVOC	Atrazine	1912-24-9	T		10				2.50E-03	1.20E-02	3.0E-03				5.4E+00	
P-06	SVOC	Benzaldehyde	100-52-7	T		10				2.80E-03	1.40E-02						
P-06	SVOC	Benzo(a)anthracene	56-55-3	T	B2	10				7.00E-04	3.50E-03	2.1E-03				9.4E-03	
P-06	SVOC	Benzo(a)pyrene	50-32-8	T	B2	10				7.30E-04	3.60E-03	5.0E-03				2.0E-03	
P-06	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	10				9.40E-04	4.70E-03	2.0E-03				2.0E-03	
P-06	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	10				8.50E-04	4.20E-03	5.0E-03				5.0E-03	
P-06	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	10				8.40E-04	4.20E-03	5.0E-03				5.0E-03	
P-06	SVOC	Biphenyl	92-52-4	T	D	10				2.60E-03	1.30E-02						
P-06	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	10				8.70E-04	4.40E-03						
P-06	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	10				9.70E-04	4.80E-03	2.0E-03		2.1E+02		5.7E+00	
P-06	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	10				2.70E-03	1.40E-02	6.0E-03				3.2E-01	
P-06	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	10				8.80E-04	4.40E-03						
P-06	SVOC	Butylbenzylphthalate	85-68-7	T	C	10				8.80E-04	4.40E-03	1.2E+00				2.7E+00	
P-06	SVOC	Caprolactam	105-60-2	T		10	1	1.20E-02	1.20E-02	2.50E-03	1.20E-02	5.8E+00	2.1E-03			3.9E+05	3.1E-08
P-06	SVOC	Carbazole	86-74-8	T	B2	10				8.20E-04	4.10E-03	8.5E-02				7.4E+00	
P-06	SVOC	4-Chloro-3-methylphenol	59-50-7	T		10				9.90E-04	5.00E-03	1.5E-01				7.9E+01	
P-06	SVOC	4-Chloroaniline	106-47-8	T		10				6.10E-04	3.00E-03						
P-06	SVOC	2-Chloronaphthalene	91-58-7	T		10				8.50E-04	4.20E-03	1.8E+00				6.7E+00	
P-06	SVOC	2-Chlorophenol	95-57-8	T		10				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
P-06	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		10				7.90E-04	4.00E-03						
P-06	SVOC	Chrysene	218-01-9	T	B2	10				7.50E-04	3.80E-03	5.0E-03				5.0E-03	
P-06	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	10				7.90E-04	4.00E-03	2.0E-03				2.0E-03	
P-06	SVOC	Dibenzofuran	132-64-9	T	D	10				1.10E-03	5.50E-03						
P-06	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	10				9.30E-04	4.60E-03	1.1E-03				1.8E-01	
P-06	SVOC	2,4-Dichlorophenol	120-83-2	T		10				8.50E-04	4.20E-03	7.3E-02				4.8E+01	
P-06	SVOC	Diethylphthalate	84-66-2	T	D	10				6.50E-04	3.20E-03	5.5E+00				1.1E+03	
P-06	SVOC	2,4-Dimethylphenol	105-67-9	T		10	2	3.50E-03	3.80E-02	8.50E-04	4.50E-04	3.7E-01	7.6E-02			5.2E+02	5.4E-05
P-06	SVOC	Dimethylphthalate	131-11-3	T	D	10				7.60E-04	3.80E-03	7.3E+01				4.2E+03	
P-06	SVOC	Di-n-butylphthalate	84-74-2	T	D	10				6.70E-04	3.40E-03	8.8E-01				1.1E+01	
P-06	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		10				1.30E-03	6.50E-03	2.0E-02				9.5E+00	
P-06	SVOC	2,4-Dinitrophenol	51-28-5	T		10				3.00E-03	1.50E-02						
P-06	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	10				7.90E-04	4.00E-03	7.7E-03				8.6E+00	
P-06	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	10				5.70E-04	2.80E-03						

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-06	SVOC	Di-n-octylphthalate	117-84-0	T		10				1.10E-03	5.50E-03	7.3E-01				4.0E-01	
P-06	SVOC	Fluoranthene	206-44-0	T	D	10				8.10E-04	4.00E-03	2.1E-01		2.1E-01		2.1E-01	
P-06	SVOC	Fluorene	86-73-7	T	D	10				1.00E-03	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
P-06	SVOC	Hexachlorobenzene	118-74-1	T	B2	10				7.40E-04	3.70E-03	1.0E-03		3.0E+00		4.6E-03	
P-06	SVOC	Hexachlorobutadiene	87-68-3	T	C	10				7.30E-04	3.60E-03	1.5E-02		3.2E+00		4.0E-01	
P-06	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	9				1.10E-03	5.50E-03	5.0E-02		4.2E-01		1.6E+00	
P-06	SVOC	Hexachloroethane	67-72-1	T	C	10				7.40E-04	3.70E-03	7.3E-03		5.0E+01		1.9E+00	
P-06	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	10				6.50E-04	3.20E-03	2.0E-03				2.0E-03	
P-06	SVOC	Isophorone	78-59-1	T	C	10				6.30E-04	3.20E-03	7.7E-01				9.9E+02	
P-06	SVOC	2-Methylnaphthalene	91-57-6	T	ID	10	2	9.90E-03	1.60E-02	6.40E-04	6.40E-04	2.6E-01	6.2E-02			2.5E+01	6.4E-04
P-06	SVOC	Methylphenol (total)	1319-77-3	T		10	1	2.95E-02	2.95E-02	1.50E-03	3.20E-03	3.7E-01	8.0E-01			8.1E+02	3.6E-04
P-06	SVOC	Naphthalene	91-20-3	T	C	10	2	8.60E-02	9.30E-02	7.50E-04	7.50E-04	5.2E-01	1.8E-01	3.1E+01	3.0E-03	3.1E+01	3.0E-03
P-06	SVOC	2-Nitroaniline	88-74-4	T		10				7.00E-04	3.50E-03						
P-06	SVOC	3-Nitroaniline	99-09-2	T	C	10				7.10E-04	3.60E-03						
P-06	SVOC	4-Nitroaniline	100-01-6	T	C	10				1.30E-03	6.50E-03						
P-06	SVOC	Nitrobenzene	98-95-3	T	D	10				8.10E-04	4.00E-03	3.4E-03		5.5E+02		1.1E+01	
P-06	SVOC	2-Nitrophenol	88-75-5	T		10				2.10E-03	1.00E-02	2.0E-02				7.9E+01	
P-06	SVOC	4-Nitrophenol	100-02-7	T		10				1.90E-03	9.50E-03						
P-06	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	10				1.40E-03	7.00E-03	2.7E-01				3.5E+01	
P-06	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	10				6.70E-04	3.40E-03	5.0E-03				3.6E-01	
P-06	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	10				7.80E-04	3.90E-03						
P-06	SVOC	Pentachlorophenol	87-86-5	T	B2	10				2.40E-03	1.20E-02	1.0E-03				2.0E-01	
P-06	SVOC	Phenanthrene	85-01-8	T	D	10				8.20E-04	4.10E-03	5.2E-02		1.0E+00		1.0E+00	
P-06	SVOC	Phenol	108-95-2	T	ID	10	1	3.60E-02	3.60E-02	2.60E-03	6.50E-03	4.4E+00	8.2E-03			2.9E+04	1.2E-06
P-06	SVOC	Pyrene	129-00-0	T	D	10				1.10E-03	5.50E-03	1.4E-01		1.4E-01		1.4E-01	
P-06	SVOC	2,4,5-Trichlorophenol	95-95-4	T		10				1.20E-03	6.00E-03	7.3E-01				1.7E+02	
P-06	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	10				1.70E-03	8.50E-03	1.2E-01				1.0E+01	
P-06	INORG	Antimony	7440-36-0	D		1				2.20E-03	2.20E-03	6.0E-03				6.8E+01	
P-06	INORG	Antimony	7440-36-0	T		1				2.20E-03	2.20E-03	6.0E-03				6.8E+01	
P-06	INORG	Arsenic	7440-38-2	D	A	1				3.90E-03	3.90E-03	5.0E-02				4.3E+00	
P-06	INORG	Arsenic	7440-38-2	T	A	1				3.90E-03	3.90E-03	5.0E-02				4.3E+00	
P-06	INORG	Barium	7440-39-3	D	D	1	1	9.78E-01	9.78E-01			2.0E+00	4.9E-01			1.4E+04	7.0E-05
P-06	INORG	Barium	7440-39-3	T	D	1	1	9.94E-01	9.94E-01			2.0E+00	5.0E-01			1.4E+04	7.1E-05
P-06	INORG	Beryllium	7440-41-7	D	B1	1				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
P-06	INORG	Beryllium	7440-41-7	T	B1	1				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
P-06	INORG	Cadmium	7440-43-9	D	B1	1	1	3.80E-04	3.80E-04			5.0E-03	7.6E-02			1.9E+02	2.0E-06
P-06	INORG	Cadmium	7440-43-9	T	B1	1	1	3.80E-04	3.80E-04			5.0E-03	7.6E-02			1.9E+02	2.0E-06
P-06	INORG	Chromium (total)	7440-47-3	D		1				1.40E-03	1.40E-03	1.0E-01				4.6E+02	
P-06	INORG	Chromium (total)	7440-47-3	T		1				1.40E-03	1.40E-03	1.0E-01				4.6E+02	
P-06	INORG	Cobalt	7440-48-4	D	B1	1	1	8.30E-03	8.30E-03			4.0E-02	2.1E-01			2.4E+03	3.5E-06
P-06	INORG	Cobalt	7440-48-4	T	B1	1	1	8.00E-03	8.00E-03			4.0E-02	2.0E-01			2.4E+03	3.3E-06
P-06	INORG	Copper	7440-50-8	D	D	1				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
P-06	INORG	Copper	7440-50-8	T	D	1				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
P-06	INORG	Lead	7439-92-1	D	B2	9				2.50E-03	2.50E-03	4.0E-03					
P-06	INORG	Lead	7439-92-1	T	B2	10				1.60E-03	2.50E-03	4.0E-03					
P-06	INORG	Manganese	7439-96-5	D	D	1	1	7.22E-01	7.22E-01			8.6E-01	8.4E-01			9.1E+03	7.9E-05
P-06	INORG	Manganese	7439-96-5	T	D	1	1	7.41E-01	7.41E-01			8.6E-01	8.6E-01			9.1E+03	8.1E-05
P-06	INORG	Mercury	7439-97-6	D	D	1				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
P-06	INORG	Mercury	7439-97-6	T	D	1				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
P-06	INORG	Nickel	7440-02-0	D	A	1	1	1.30E-02	1.30E-02			1.0E-01	1.3E-01			7.4E+04	1.8E-07
P-06	INORG	Nickel	7440-02-0	T	A	1	1	1.32E-02	1.32E-02			1.0E-01	1.3E-01			7.4E+04	1.8E-07
P-06	INORG	Selenium	7782-49-2	D	D	1				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
P-06	INORG	Selenium	7782-49-2	T	D	1				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
P-06	INORG	Silver	7440-22-4	D	D	1				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
P-06	INORG	Silver	7440-22-4	T	D	1				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
P-06	INORG	Thallium	7440-28-0	D		1	1	1.50E-04	1.50E-04			2.0E-03	7.5E-02			1.3E+01	1.2E-05

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-06	INORG	Thallium	7440-28-0	T		1	1	1.70E-04	1.70E-04			2.0E-03	8.5E-02			1.3E+01	1.3E-05
P-06	INORG	Vanadium	7440-62-2	D		1				8.20E-04	8.20E-04	4.5E-03				9.7E+02	
P-06	INORG	Vanadium	7440-62-2	T		1				8.20E-04	8.20E-04	4.5E-03				9.7E+02	
P-06	INORG	Zinc	7440-66-6	D	D	1	1	1.25E-02	1.25E-02			2.4E+00	5.2E-03			1.1E+05	1.1E-07
P-06	INORG	Zinc	7440-66-6	T	D	1				1.20E-02	1.20E-02	2.4E+00				1.1E+05	
P-09	VOC	Acetone	67-64-1	T	ID	6	5	2.40E-03	7.10E-01	6.60E-04	6.60E-04	7.3E-01	9.7E-01	1.0E+06	7.1E-07	3.1E+04	2.3E-05
P-09	VOC	Benzene	71-43-2	T	A	6				2.00E-04	4.10E-03	5.0E-03		3.5E+01		1.1E+01	
P-09	VOC	Bromodichloromethane	75-27-4	T	B2	3				2.60E-04	4.10E-03	1.0E-01		3.7E+01		1.4E+01	
P-09	VOC	Bromoform	75-25-2	T	B2	6				3.20E-04	4.10E-03	1.0E-01		3.1E+03		1.4E+02	
P-09	VOC	Bromomethane	74-83-9	T	D	6				1.60E-04	3.30E-03	1.0E-02		9.0E+00		7.0E+01	
P-09	VOC	2-Butanone	78-93-3	T	ID	6	4	2.50E-03	1.10E-01	2.60E-04	5.90E-04	1.4E-01	8.5E-03	2.4E+05	4.6E-07	2.4E+05	4.6E-07
P-09	VOC	Carbon Disulfide	75-15-0	T		6	2	3.00E-04	3.40E-04	2.10E-04	2.70E-03	8.0E-01	4.3E-04	5.5E+02	6.2E-07	1.2E+03	2.8E-07
P-09	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.80E-04	4.10E-03	5.0E-03		2.4E+00		4.6E+00	
P-09	VOC	Chlorobenzene	108-90-7	T	D	6				1.60E-04	4.10E-03	1.0E-01		4.7E+02		8.6E+01	
P-09	VOC	Chloroethane	75-00-3	T		6				2.20E-04	3.30E-03	4.3E-01		5.7E+03		4.4E+02	
P-09	VOC	Chloroform	67-66-3	T	B2	6				2.10E-04	3.90E-03	1.0E-01		1.8E+02		1.5E+02	
P-09	VOC	Chloromethane	74-87-3	T	D	6				2.60E-04	5.40E-03	2.6E-01		4.5E+01		4.9E+02	
P-09	VOC	Cumene	98-82-8	T	D	6				1.50E-04	4.30E-03	8.0E-01		5.6E+01		5.6E+01	
P-09	VOC	Cyclohexane	110-82-7	T	ID	6				3.30E-04	3.70E-03						
P-09	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				5.30E-04	9.10E-03	2.0E-04		1.2E+00		3.9E-01	
P-09	VOC	Dibromochloromethane	124-48-1	T	C	6				2.50E-04	4.10E-03	1.0E-01		1.1E+02		1.8E+01	
P-09	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	3.80E-03	1.0E-03		1.5E+01		2.5E-02	
P-09	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.50E-04	4.20E-03	6.0E-01		1.6E+02		1.6E+02	
P-09	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				2.00E-04	4.20E-03	6.6E-03				2.0E+00	
P-09	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.60E-04	4.20E-03	7.5E-02		7.4E+01		6.4E+00	
P-09	VOC	Dichlorodifluoromethane	75-71-8	T		6				2.30E-04	5.40E-03	1.7E+00		3.0E+02		3.0E+02	
P-09	VOC	1,1-Dichloroethane	75-34-3	T	C	5	4	5.40E-04	1.10E-03	1.50E-03	1.50E-03	8.8E-01	1.3E-03	2.3E+03	4.8E-07	2.4E+03	4.6E-07
P-09	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.20E-04	3.10E-03	5.0E-03		5.9E+01		1.9E+01	
P-09	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.20E-04	3.40E-03	7.0E-03		1.3E+00		1.1E+01	
P-09	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4				2.50E-04	3.90E-03	7.0E-02		2.1E+02		2.0E+02	
P-09	VOC	trans-1,2-Dichloroethene	156-60-5	T		6				2.40E-04	3.70E-03	1.0E-01		2.0E+02		2.2E+02	
P-09	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.80E-04	4.60E-03	5.0E-03		3.6E+01		1.6E+01	
P-09	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				1.50E-04	3.90E-03	8.5E-03		2.6E+01		5.5E+00	
P-09	VOC	Ethyl Benzene	100-41-4	T	D	6				1.90E-04	4.60E-03	7.0E-01		1.7E+02		1.7E+02	
P-09	VOC	2-Hexanone	591-78-6	T		6				3.10E-04	6.40E-03	1.0E+00		8.7E+03		5.2E+03	
P-09	VOC	Methyl Acetate	79-20-9	T		6				5.40E-04	6.00E-03						
P-09	VOC	Methyl tert-butyl ether	1634-04-4	T		6				2.10E-04	3.00E-03	2.4E-01		4.7E+04		6.1E+02	
P-09	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	6	4	9.80E-04	2.90E-02	2.60E-04	3.40E-04	1.8E+00	1.6E-02	2.0E+04	1.5E-06	1.3E+04	2.2E-06
P-09	VOC	Methylcyclohexane	108-87-2	T		6				2.40E-04	4.70E-03						
P-09	VOC	Methylene Chloride	75-09-2	T	B2	6				2.80E-04	3.20E-03	5.0E-03		1.4E+03		2.2E+02	
P-09	VOC	Styrene	100-42-5	T		4				1.60E-04	3.90E-03	1.0E-01		3.1E+02		9.7E+00	
P-09	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.30E-04	4.00E-03	8.5E-03		7.7E+01		4.7E+00	
P-09	VOC	Tetrachloroethene	127-18-4	T	C-B2	6				1.20E-04	4.70E-03	5.0E-03		1.7E+02		1.2E+01	
P-09	VOC	Toluene	108-88-3	T	D	6				1.70E-04	4.30E-03	1.0E+00		5.3E+02		5.3E+02	
P-09	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				1.50E-04	4.40E-03	7.0E-02		3.0E+02		1.9E+01	
P-09	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6				1.80E-04	4.30E-03	2.0E-01		1.3E+03		1.3E+03	
P-09	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				2.10E-04	4.00E-03	5.0E-03		1.1E+02		2.1E+01	
P-09	VOC	Trichloroethene	79-01-6	T	C-B2	6				2.20E-04	4.70E-03	5.0E-03		9.7E+01		2.2E+01	
P-09	VOC	Trichlorofluoromethane	75-69-4	T		6				2.50E-04	6.00E-03	2.6E+00		1.1E+03		1.1E+03	
P-09	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		6				3.20E-04	4.60E-03	1.7E+02		1.7E+02		1.7E+02	
P-09	VOC	Vinyl Chloride	75-01-4	T	A	4				2.60E-04	4.00E-03	2.0E-03		1.3E+01		1.0E+00	
P-09	VOC	Xylenes (total)	1330-20-7	T	ID	6				4.40E-04	4.90E-03	1.0E+01		1.9E+02		1.9E+02	
P-09	SVOC	Acenaphthene	83-32-9	T		6				2.00E-04	3.40E-02	1.3E+00		4.2E+00		4.2E+00	
P-09	SVOC	Acenaphthylene	208-96-8	T	D	6				4.10E-04	2.00E-02	5.2E-02		3.9E+00		3.9E+00	
P-09	SVOC	Acetophenone	98-86-2	T	D	6				6.50E-04	3.20E-02	1.5E+00		6.1E+03		6.1E+03	
P-09	SVOC	Anthracene	120-12-7	T	D	6				5.90E-04	3.00E-02	4.3E-02		4.3E-02		4.3E-02	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-09	SVOC	Atrazine	1912-24-9	T		6				3.50E-04	1.80E-02	3.0E-03				5.4E+00	
P-09	SVOC	Benzaldehyde	100-52-7	T		6				5.90E-04	3.00E-02						
P-09	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				6.80E-04	3.40E-02	2.1E-03				9.4E-03	
P-09	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				5.30E-04	2.60E-02	5.0E-03				2.0E-03	
P-09	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				7.00E-04	3.50E-02	2.0E-03				2.0E-03	
P-09	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				7.00E-04	3.50E-02	5.0E-03				5.0E-03	
P-09	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				6.40E-04	3.20E-02	5.0E-03				5.0E-03	
P-09	SVOC	Biphenyl	92-52-4	T	D	6				6.50E-04	3.20E-02						
P-09	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				1.00E-03	5.00E-02						
P-09	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	6				1.70E-03	8.50E-02			2.1E+02		5.7E+00	
P-09	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6				2.00E-04	1.00E-02	6.0E-03				3.2E-01	
P-09	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				7.80E-04	3.90E-02						
P-09	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				2.30E-04	1.20E-02	1.2E+00				2.7E+00	
P-09	SVOC	Caprolactam	105-60-2	T		6				4.50E-04	2.30E-02	5.8E+00				3.9E+05	
P-09	SVOC	Carbazole	86-74-8	T	B2	2	9.90E-04	3.20E-02	6.10E-04	3.00E-02	8.5E-02	3.8E-01				7.4E+00	4.3E-03
P-09	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				5.50E-04	2.80E-02	1.5E-01				7.9E+01	
P-09	SVOC	4-Chloroaniline	106-47-8	T		3				9.00E-04	4.50E-02						
P-09	SVOC	2-Chloronaphthalene	91-58-7	T		6				7.30E-04	3.60E-02	1.8E+00				6.7E+00	
P-09	SVOC	2-Chlorophenol	95-57-8	T		6				1.30E-03	6.50E-02	4.5E-02				9.4E+01	
P-09	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				6.60E-04	3.30E-02						
P-09	SVOC	Chrysene	218-01-9	T	B2	6				6.70E-04	3.40E-02	5.0E-03				5.0E-03	
P-09	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				6.80E-04	3.40E-02	2.0E-03				2.0E-03	
P-09	SVOC	Dibenzofuran	132-64-9	T	D	6				6.60E-04	3.30E-02						
P-09	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	3				4.70E-04	2.40E-02	1.1E-03				1.8E-01	
P-09	SVOC	2,4-Dichlorophenol	120-83-2	T		6				7.00E-04	3.50E-02	7.3E-02				4.8E+01	
P-09	SVOC	Diethylphthalate	84-66-2	T	D	6				2.50E-04	1.20E-02	5.5E+00				1.1E+03	
P-09	SVOC	2,4-Dimethylphenol	105-67-9	T		6	2	3.00E-01	6.00E-01	1.00E-03	2.50E-03	3.7E-01	**1.6E+00**			5.2E+02	1.2E-03
P-09	SVOC	Dimethylphthalate	131-11-3	T	D	6				2.00E-04	1.00E-02	7.3E+01				4.2E+03	
P-09	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				3.70E-04	1.80E-02	8.8E-01				1.1E+01	
P-09	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				2.10E-03	1.00E-01	2.0E-02				9.5E+00	
P-09	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.30E-03	1.60E-01						
P-09	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				4.60E-04	2.30E-02	7.7E-03				8.6E+00	
P-09	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				7.10E-04	3.60E-02						
P-09	SVOC	Di-n-octylphthalate	117-84-0	T		6				6.90E-04	3.40E-02	1.3E-01				4.0E-01	
P-09	SVOC	Fluoranthene	206-44-0	T	D	6				7.10E-04	3.60E-02	2.1E-01		2.1E-01		2.1E-01	
P-09	SVOC	Fluorene	86-73-7	T	D	6	1	1.65E-03	1.65E-03	7.50E-04	3.80E-02	8.8E-01	1.9E-03	2.0E+00	8.3E-04	2.0E+00	8.3E-04
P-09	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.70E-04	3.80E-02	1.0E-03		3.0E+00		4.6E-03	
P-09	SVOC	Hexachlorobutadiene	87-68-3	T	C	6				1.50E-03	7.50E-02	1.5E-02		3.2E+00		4.0E-01	
P-09	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	1				1.10E-03	1.10E-03	5.0E-02		4.2E-01		1.6E+00	
P-09	SVOC	Hexachloroethane	67-72-1	T	C	6				1.60E-03	8.00E-02	7.3E-03		5.0E+01		1.9E+00	
P-09	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.90E-04	3.40E-02	2.0E-03				2.0E-03	
P-09	SVOC	Isophorone	78-59-1	T	C	6				8.60E-04	4.30E-02	7.7E-01				9.9E+02	
P-09	SVOC	2-Methylnaphthalene	91-57-6	T	ID	6				9.30E-04	4.60E-02	2.6E-01				2.5E+01	
P-09	SVOC	Methylphenol (total)	1319-77-3	T		6	4	2.15E-03	1.28E+00	9.00E-04	2.20E-03	3.7E-01	**3.5E+00**			8.1E+02	1.6E-03
P-09	SVOC	Naphthalene	91-20-3	T	C	6	2	7.50E-02	9.90E-02	1.30E-03	3.25E-03	5.2E-01	1.9E-01	3.1E+01	3.2E-03	3.1E+01	3.2E-03
P-09	SVOC	2-Nitroaniline	88-74-4	T		6				4.90E-04	2.40E-02						
P-09	SVOC	3-Nitroaniline	99-09-2	T	C	3				4.80E-04	2.40E-02						
P-09	SVOC	4-Nitroaniline	100-01-6	T	C	6				5.90E-04	3.00E-02						
P-09	SVOC	Nitrobenzene	98-95-3	T	D	6				1.30E-03	6.50E-02	3.4E-03		5.5E+02		1.1E+01	
P-09	SVOC	2-Nitrophenol	88-75-5	T		6				1.60E-03	8.00E-02	2.0E-02				7.9E+01	
P-09	SVOC	4-Nitrophenol	100-02-7	T		6				3.50E-03	1.80E-01						
P-09	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				6.40E-04	3.20E-02	2.7E-01				3.5E+01	
P-09	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				1.00E-03	5.50E-02	5.0E-03				3.6E-01	
P-09	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				1.80E-03	9.00E-02						
P-09	SVOC	Pentachlorophenol	87-86-5	T	B2	6	1	3.90E-03	3.90E-03	2.60E-03	1.30E-01	1.0E-03	**3.9E+00**			2.0E-01	2.0E-02
P-09	SVOC	Phenanthrene	85-01-8	T	D	6	1	2.35E-03	2.35E-03	6.80E-04	3.40E-02	5.2E-02	4.5E-02	1.0E+00	2.4E-03	1.0E+00	2.4E-03

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-09	SVOC	Phenol	108-95-2	T	ID	6	4	3.30E-03	1.60E+00	1.30E-03	3.20E-03	2.1E+00	3.6E-01			2.9E+04	5.5E-05
P-09	SVOC	Pyrene	129-00-0	T	D	6				6.30E-04	3.20E-03	1.4E-01		1.4E-01		1.4E-01	
P-09	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				8.60E-04	4.30E-03	7.3E-01				1.7E+02	
P-09	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				7.10E-04	3.60E-03	1.2E-01				1.0E+01	
P-09	P/PCB	PCBs (total)	1336-36-3	T	B2	6	1	3.69E-04	3.69E-04	8.20E-05	1.00E-05	5.0E-04	7.4E-01	4.5E-02	8.2E-03	3.3E-03	1.1E-01
P-09	INORG	Antimony	7440-36-0	T		6	2	9.40E-03	1.31E-02	3.10E-03	2.40E-03	6.0E-03	**2.2E+00**			6.8E+01	1.9E-04
P-09	INORG	Arsenic	7440-38-2	T	A	6	5	3.20E-03	4.49E-02	2.10E-03	2.10E-03	5.0E-02	9.0E-01			4.3E+00	1.0E-02
P-09	INORG	Barium	7440-39-3	T	D	6	6	3.10E-03	5.16E-02			2.0E+00	2.6E-02			1.4E+04	3.7E-06
P-09	INORG	Beryllium	7440-41-7	T	B1	6				4.70E-04	6.00E-04	4.0E-03				2.9E+02	
P-09	INORG	Cadmium	7440-43-9	T	B1	6				2.80E-04	3.60E-04	5.0E-03				1.9E+02	
P-09	INORG	Chromium (total)	7440-47-3	T		6	1	5.30E-03	5.30E-03	1.00E-03	1.50E-03	1.0E-01	5.3E-02			4.6E+02	1.2E-05
P-09	INORG	Cobalt	7440-48-4	T	B1	6	2	2.20E-03	1.63E-03	1.40E-04	1.10E-03	4.0E-02	4.0E-02			2.4E+03	6.7E-07
P-09	INORG	Copper	7440-50-8	T	D	6	2	2.30E-03	4.70E-03	1.70E-03	1.80E-03	1.4E+00	4.8E-03			7.4E+03	9.1E-07
P-09	INORG	Lead	7439-92-1	T	B2	6	1	2.85E-03	2.85E-03	1.60E-03	3.30E-03	4.0E-03	7.1E-01				
P-09	INORG	Manganese	7439-96-5	T	D	6	6	3.80E-03	4.36E-02	6.60E-04	6.60E-04	8.6E-01	5.1E-02			9.1E+03	4.8E-06
P-09	INORG	Mercury	7439-97-6	T	D	6				6.70E-05	8.70E-05	2.0E-03		5.6E-02		5.6E-02	
P-09	INORG	Nickel	7440-02-0	T	A	6	6	3.50E-03	1.20E-01	2.90E-03	2.90E-03	1.0E-01	**1.3E+00**			7.4E+04	1.7E-06
P-09	INORG	Selenium	7782-49-2	T	D	6	3	4.40E-03	9.07E-03	3.90E-03	4.70E-03	5.0E-02	**1.2E+00**			9.7E+02	6.3E-05
P-09	INORG	Silver	7440-22-4	T	D	6				9.80E-04	1.10E-03	3.4E-02				1.5E+03	
P-09	INORG	Thallium	7440-28-0	T		6				1.50E-05	3.30E-05	2.0E-03				1.3E+01	
P-09	INORG	Vanadium	7440-62-2	T		6	4	8.70E-03	5.78E-01	6.70E-04	9.60E-04	4.5E-03	**1.3E+02**			9.7E+02	6.0E-04
P-09	INORG	Zinc	7440-66-6	T	D	6	1	2.02E-02	2.02E-02	1.30E-02	1.40E-02	2.4E+00	8.4E-03			1.1E+05	1.8E-07
P-11	VOC	Acetone	67-64-1	T	ID	2	1	1.90E-02	1.90E-02	1.10E-03	1.10E-03	7.3E-01	2.6E-02	1.0E+06	1.9E-08	3.1E+04	6.1E-07
P-11	VOC	Benzene	71-43-2	T	A	2				3.70E-04	1.50E-03	5.0E-03		3.5E+01		1.1E+01	
P-11	VOC	Bromodichloromethane	75-27-4	T	B2	1				3.20E-04	3.20E-04	1.0E-01		3.7E+01		1.4E+01	
P-11	VOC	Bromoform	75-25-2	T	B2	2				3.70E-04	1.50E-03	1.0E-01		3.1E+03		1.4E+02	
P-11	VOC	Bromomethane	74-83-9	T	D	2				3.00E-04	1.25E-03	1.0E-02		9.0E+00		7.0E+01	
P-11	VOC	2-Butanone	78-93-3	T	ID	2				5.90E-04	2.50E-03	1.3E+01		2.4E+05		2.4E+05	
P-11	VOC	Carbon Disulfide	75-15-0	T		2				2.40E-04	1.00E-03	8.0E-01		5.5E+02		1.2E+03	
P-11	VOC	Carbon Tetrachloride	56-23-5	T	B2	2				3.70E-04	1.50E-03	5.0E-03		2.4E+00		4.6E+00	
P-11	VOC	Chlorobenzene	108-90-7	T	D	2				3.80E-04	1.60E-03	1.0E-01		4.7E+02		8.6E+01	
P-11	VOC	Chloroethane	75-00-3	T		2				2.90E-04	1.19E-03	4.3E-01		5.7E+03		4.4E+02	
P-11	VOC	Chloroform	67-66-3	T	B2	2				3.50E-04	1.50E-03	1.0E-01		1.8E+02		1.5E+02	
P-11	VOC	Chloromethane	74-87-3	T	D	2				4.90E-04	2.00E-03	2.6E-01		4.5E+01		4.9E+02	
P-11	VOC	Cumene	98-82-8	T	D	2				3.90E-04	1.65E-03	8.0E-01		5.6E+01		5.6E+01	
P-11	VOC	Cyclohexane	110-82-7	T	ID	2				3.30E-04	1.35E-03						
P-11	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	2				8.20E-04	3.40E-03	2.0E-04		1.2E+00		3.9E-01	
P-11	VOC	Dibromochloromethane	124-48-1	T	C	2				3.70E-04	1.50E-03	1.0E-01		1.1E+02		1.8E+01	
P-11	VOC	1,2-Dibromoethane	106-93-4	T	B2	2				3.40E-04	1.40E-03	1.0E-03		1.5E+01		2.5E-02	
P-11	VOC	1,2-Dichlorobenzene	95-50-1	T	D	2				3.80E-04	1.60E-03	6.0E-01		1.6E+02		1.6E+02	
P-11	VOC	1,3-Dichlorobenzene	541-73-1	T	D	2				3.80E-04	1.60E-03	6.6E-03				2.0E+00	
P-11	VOC	1,4-Dichlorobenzene	106-46-7	T	C	2				3.80E-04	1.60E-03	7.5E-02		7.4E+01		6.4E+00	
P-11	VOC	Dichlorodifluoromethane	75-71-8	T		2				4.90E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	
P-11	VOC	1,1-Dichloroethane	75-34-3	T	C	2				3.00E-04	1.25E-03	8.8E-01		2.3E+03		2.4E+03	
P-11	VOC	1,2-Dichloroethane	107-06-2	T	B2	2				2.80E-04	1.17E-03	5.0E-03		5.9E+01		1.9E+01	
P-11	VOC	1,1-Dichloroethene	75-35-4	T	C	2				3.10E-04	1.30E-03	7.0E-03		1.3E+00		1.1E+01	
P-11	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	1				3.50E-04	3.50E-04	7.0E-02		2.1E+02		2.0E+02	
P-11	VOC	trans-1,2-Dichloroethene	156-60-5	T		2				3.30E-04	1.35E-03	1.0E-01		2.0E+02		2.2E+02	
P-11	VOC	1,2-Dichloropropane	78-87-5	T	B2	2				4.10E-04	1.70E-03	5.0E-03		3.6E+01		1.6E+01	
P-11	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	2				3.50E-04	3.50E-04	8.5E-03		2.6E+01		5.5E+00	
P-11	VOC	Ethyl Benzene	100-41-4	T	D	1				1.70E-03	1.70E-03	7.0E-01		1.7E+02		1.7E+02	
P-11	VOC	2-Hexanone	591-78-6	T		2				5.80E-04	2.40E-03	1.0E+00		8.7E+03		5.2E+03	
P-11	VOC	Methyl Acetate	79-20-9	T		2				9.00E-04	2.25E-03						
P-11	VOC	Methyl tert-butyl ether	1634-04-4	T		2				2.70E-04	1.15E-03	2.4E-01		4.7E+04		6.1E+02	
P-11	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	2	1	2.30E-03	2.30E-03	2.60E-04	2.60E-04	1.8E+00	1.3E-03	2.0E+04	1.2E-07	1.3E+04	1.8E-07
P-11	VOC	Methylcyclohexane	108-87-2	T		2				4.20E-04	1.75E-03						

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-11	VOC	Methylene Chloride	75-09-2	T	B2	2				2.90E-04	1.19E-03	5.0E-03		1.4E+03		2.2E+02	
P-11	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	2				3.60E-04	1.50E-03	8.5E-03		7.7E+01		4.7E+00	
P-11	VOC	Tetrachloroethene	127-18-4	T	C-B2	1				1.75E-03	1.75E-03	5.0E-03		1.7E+02		1.2E+01	
P-11	VOC	Toluene	108-88-3	T	D	2				3.90E-04	1.65E-03	1.0E+00		5.3E+02		5.3E+02	
P-11	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	2				4.00E-04	1.65E-03	7.0E-02		3.0E+02		1.9E+01	
P-11	VOC	1,1,1-Trichloroethane	71-55-6	T	D	2				3.90E-04	1.65E-03	2.0E-01		1.3E+03		1.3E+03	
P-11	VOC	1,1,2-Trichloroethane	79-00-5	T	C	2				3.60E-04	1.50E-03	5.0E-03		1.1E+02		2.1E+01	
P-11	VOC	Trichloroethene	79-01-6	T	C-B2	2				4.20E-04	1.75E-03	5.0E-03		9.7E+01		2.2E+01	
P-11	VOC	Trichlorofluoromethane	75-69-4	T		2				5.40E-04	2.25E-03	2.6E+00		1.1E+03		1.1E+03	
P-11	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		2				3.20E-04	1.35E-03	1.7E+02		1.7E+02		1.7E+02	
P-11	VOC	Vinyl Chloride	75-01-4	T	A	1				3.60E-04	3.60E-04	2.0E-03		1.3E+01		1.0E+00	
P-11	VOC	Xylenes (total)	1330-20-7	T	ID	2				7.40E-04	1.85E-03	1.0E+01		1.9E+02		1.9E+02	
P-11	SVOC	Acenaphthene	83-32-9	T		2				6.90E-04	6.90E-03	1.3E+00		4.2E+00		4.2E+00	
P-11	SVOC	Acenaphthylene	208-96-8	T	D	2				4.10E-04	4.10E-03	5.2E-02		3.9E+00		3.9E+00	
P-11	SVOC	Acetophenone	98-86-2	T	D	2				6.50E-04	6.50E-03	1.5E+00		6.1E+03		6.1E+03	
P-11	SVOC	Anthracene	120-12-7	T	D	2				5.90E-04	5.90E-03	4.3E-02		4.3E-02		4.3E-02	
P-11	SVOC	Atrazine	1912-24-9	T		2				3.50E-04	3.50E-03	3.0E-03				5.4E+00	
P-11	SVOC	Benzaldehyde	100-52-7	T		2				5.90E-04	5.90E-03						
P-11	SVOC	Benzo(a)anthracene	56-55-3	T	B2	2				6.80E-04	6.80E-03	2.1E-03				9.4E-03	
P-11	SVOC	Benzo(a)pyrene	50-32-8	T	B2	2				5.30E-04	5.30E-03	5.0E-03				2.0E-03	
P-11	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	2				7.10E-04	7.10E-03	2.0E-03				2.0E-03	
P-11	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	2				7.00E-04	7.00E-03	5.0E-03				5.0E-03	
P-11	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	2				6.40E-04	6.40E-03	5.0E-03				5.0E-03	
P-11	SVOC	Biphenyl	92-52-4	T	D	2				6.50E-04	6.50E-03						
P-11	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	2				1.00E-03	1.00E-02						
P-11	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	2				1.70E-03	1.70E-02	2.0E-03		2.1E+02		5.7E+00	
P-11	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	2				2.00E-04	2.00E-03	6.0E-03				3.2E-01	
P-11	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	2				7.80E-04	7.80E-03						
P-11	SVOC	Butylbenzylphthalate	85-68-7	T	C	2				2.30E-04	2.30E-03	1.2E+00				2.7E+00	
P-11	SVOC	Caprolactam	105-60-2	T		2				4.50E-04	4.50E-03	5.8E+00				3.9E+05	
P-11	SVOC	Carbazole	86-74-8	T	B2	2				6.10E-04	6.10E-03	8.5E-02				7.4E+00	
P-11	SVOC	4-Chloro-3-methylphenol	59-50-7	T		2				5.50E-04	5.50E-03	1.5E-01				7.9E+01	
P-11	SVOC	2-Chloronaphthalene	91-58-7	T		2				7.30E-04	7.30E-03	1.8E+00				6.7E+00	
P-11	SVOC	2-Chlorophenol	95-57-8	T		2				1.30E-03	1.30E-02	4.5E-02				9.4E+01	
P-11	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		2				6.60E-04	6.60E-03						
P-11	SVOC	Chrysene	218-01-9	T	B2	2				6.70E-04	6.70E-03	5.0E-03				5.0E-03	
P-11	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	2				6.80E-04	6.80E-03	2.0E-03				2.0E-03	
P-11	SVOC	Dibenzofuran	132-64-9	T	D	2				6.60E-04	6.60E-03						
P-11	SVOC	2,4-Dichlorophenol	120-83-2	T		2				7.00E-04	7.00E-03	7.3E-02				4.8E+01	
P-11	SVOC	Diethylphthalate	84-66-2	T	D	2				2.50E-04	2.50E-03	5.5E+00				1.1E+03	
P-11	SVOC	2,4-Dimethylphenol	105-67-9	T		2				1.00E-03	1.00E-02	3.7E-01				5.2E+02	
P-11	SVOC	Dimethylphthalate	131-11-3	T	D	2				2.00E-04	2.00E-03	7.3E+01				4.2E+03	
P-11	SVOC	Di-n-butylphthalate	84-74-2	T	D	2				3.70E-04	3.70E-03	8.8E-01				1.1E+01	
P-11	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		2				2.10E-03	2.10E-02	2.0E-02				9.5E+00	
P-11	SVOC	2,4-Dinitrophenol	51-28-5	T		2				3.30E-03	3.30E-02						
P-11	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	2				4.60E-04	4.60E-03	7.7E-03				8.6E+00	
P-11	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	2				7.10E-04	7.10E-03						
P-11	SVOC	Di-n-octylphthalate	117-84-0	T		2				6.90E-04	6.90E-03	1.3E-01				4.0E-01	
P-11	SVOC	Fluoranthene	206-44-0	T	D	2				7.10E-04	7.10E-03	2.1E-01		2.1E-01		2.1E-01	
P-11	SVOC	Fluorene	86-73-7	T	D	2				3.50E-04	1.50E-03	8.8E-01		2.0E+00		2.0E+00	
P-11	SVOC	Hexachlorobenzene	118-74-1	T	B2	2				7.70E-04	7.70E-03	1.0E-03		3.0E+00		4.6E-03	
P-11	SVOC	Hexachlorobutadiene	87-68-3	T	C	2				1.50E-03	1.50E-02	1.5E-02		3.2E+00		4.0E-01	
P-11	SVOC	Hexachloroethane	67-72-1	T	C	2				1.60E-03	1.60E-02	7.3E-03		5.0E+01		1.9E+00	
P-11	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	2				6.90E-04	6.90E-03	2.0E-03				2.0E-03	
P-11	SVOC	Isophorone	78-59-1	T	C	2				8.60E-04	8.60E-03	7.7E-01				9.9E+02	
P-11	SVOC	2-Methylnaphthalene	91-57-6	T	ID	2				9.30E-04	9.30E-03	2.6E-01				2.5E+01	

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RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
P-11	SVOC	Methylphenol (total)	1319-77-3	T		2				9.00E-04	9.00E-03	9.1E-01				8.1E+02	
P-11	SVOC	Naphthalene	91-20-3	T	C	2				1.30E-03	1.30E-02	3.2E-01		3.1E+01		3.1E+01	
P-11	SVOC	2-Nitroaniline	88-74-4	T		2				4.90E-04	4.90E-03						
P-11	SVOC	4-Nitroaniline	100-01-6	T	C	2				5.90E-04	5.90E-03						
P-11	SVOC	Nitrobenzene	98-95-3	T	D	2				1.30E-03	1.30E-02	3.4E-03		5.5E+02		1.1E+01	
P-11	SVOC	2-Nitrophenol	88-75-5	T		2				9.50E-04	9.50E-03	2.0E-02				7.9E+01	
P-11	SVOC	4-Nitrophenol	100-02-7	T		2				3.50E-03	3.50E-02						
P-11	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	2				6.40E-04	6.40E-03	2.7E-01				3.5E+01	
P-11	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	2				1.10E-03	1.10E-02	5.0E-03				3.6E-01	
P-11	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	2				1.80E-03	1.80E-02						
P-11	SVOC	Pentachlorophenol	87-86-5	T	B2	1				2.60E-02	2.60E-02	1.0E-03				2.0E-01	
P-11	SVOC	Phenanthrene	85-01-8	T	D	2				6.80E-04	6.80E-03	9.2E-02		1.0E+00		1.0E+00	
P-11	SVOC	Phenol	108-95-2	T	ID	2				1.30E-03	1.30E-02	4.4E+00				2.9E+04	
P-11	SVOC	Pyrene	129-00-0	T	D	2				6.30E-04	6.30E-03	1.4E-01		1.4E-01		1.4E-01	
P-11	SVOC	2,4,5-Trichlorophenol	95-95-4	T		2				8.60E-04	8.60E-03	7.3E-01				1.7E+02	
P-11	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	2				7.10E-04	7.10E-03	1.2E-01				1.0E+01	
P-11	P/PCB	PCBs (total)	1336-36-3	T	B2	2				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
P-11	INORG	Antimony	7440-36-0	T		2				3.40E-03	3.40E-03	6.0E-03				6.8E+01	
P-11	INORG	Arsenic	7440-38-2	T	A	2	2	3.90E-03	2.86E-02			5.0E-02	4.7E-01			4.3E+00	5.5E-03
P-11	INORG	Barium	7440-39-3	T	D	2	2	4.23E-02	3.97E-01			2.0E+00	2.0E-01			1.4E+04	2.8E-05
P-11	INORG	Beryllium	7440-41-7	T	B1	2				6.00E-04	6.00E-04	4.0E-03				2.9E+02	
P-11	INORG	Cadmium	7440-43-9	T	B1	2				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
P-11	INORG	Chromium (total)	7440-47-3	T		2				1.50E-03	1.50E-03	1.0E-01				4.6E+02	
P-11	INORG	Cobalt	7440-48-4	T	B1	2	1	5.35E-02	5.35E-02	7.40E-04	7.40E-04	4.0E-02	**1.3E+00**			2.4E+03	2.2E-05
P-11	INORG	Copper	7440-50-8	T	D	2	1	9.10E-03	9.10E-03	1.70E-03	1.70E-03	1.4E+00	6.5E-03			7.4E+03	1.2E-06
P-11	INORG	Lead	7439-92-1	T	B2	2				1.60E-03	1.60E-03	4.0E-03					
P-11	INORG	Manganese	7439-96-5	T	D	2	2	3.11E-02	5.01E-01			8.6E-01	5.8E-01			9.1E+03	5.5E-05
P-11	INORG	Mercury	7439-97-6	T	D	2				8.70E-05	8.70E-05	2.0E-03		5.6E-02		5.6E-02	
P-11	INORG	Nickel	7440-02-0	T	A	2	1	9.75E-03	9.75E-03	2.90E-03	2.90E-03	1.0E-01	9.8E-02			7.4E+04	1.3E-07
P-11	INORG	Selenium	7782-49-2	T	D	2				4.70E-03	4.70E-03	5.0E-02				9.7E+02	
P-11	INORG	Silver	7440-22-4	T	D	2				9.80E-04	9.80E-04	3.4E-02				1.5E+03	
P-11	INORG	Thallium	7440-28-0	T		2				3.30E-05	3.30E-05	2.0E-03				1.3E+01	
P-11	INORG	Vanadium	7440-62-2	T		2	1	5.98E-04	5.98E-04	6.70E-04	6.70E-04	4.5E-03	1.3E-01			9.7E+02	6.2E-07
P-11	INORG	Zinc	7440-66-6	T	D	2				1.40E-02	1.40E-02	2.4E+00				1.1E+05	
PSB	VOC	Acetone	67-64-1	T	ID	4				5.10E-04	1.00E-03	7.3E-01		1.0E+06		3.1E+04	
PSB	VOC	Benzene	71-43-2	T	A	4	2	1.20E-03	1.40E-03	1.60E-04	1.60E-04	5.0E-03	2.8E-01	3.5E+01	4.0E-05	1.1E+01	1.3E-04
PSB	VOC	Bromodichloromethane	75-27-4	T	B2	4				1.70E-04	3.40E-04	1.0E-01		3.7E+01		1.4E+01	
PSB	VOC	Bromoform	75-25-2	T	B2	4				1.80E-04	3.60E-04	1.0E-01		3.1E+03		1.4E+02	
PSB	VOC	Bromomethane	74-83-9	T	D	4				2.00E-04	4.00E-04	1.0E-02		9.0E+00		7.0E+01	
PSB	VOC	2-Butanone	78-93-3	T	ID	4	1	4.00E-03	4.00E-03	4.10E-04	8.20E-04	1.3E+01	3.1E-04	2.4E+05	1.7E-08	2.4E+05	1.7E-08
PSB	VOC	Carbon Disulfide	75-15-0	T		4	1	8.30E-04	8.30E-04	2.00E-04	4.00E-04	8.0E-01	1.0E-03	5.5E+02	1.5E-06	1.2E+03	6.9E-07
PSB	VOC	Carbon Tetrachloride	56-23-5	T	B2	4				1.20E-04	2.40E-04	5.0E-03		2.4E+00		4.6E+00	
PSB	VOC	Chlorobenzene	108-90-7	T	D	4				1.40E-04	2.80E-04	1.0E-01		4.7E+02		8.6E+01	
PSB	VOC	Chloroethane	75-00-3	T		4				2.60E-04	5.20E-04	4.3E-01		5.7E+03		4.4E+02	
PSB	VOC	Chloroform	67-66-3	T	B2	4				1.40E-04	2.80E-04	1.0E-01		1.8E+02		1.5E+02	
PSB	VOC	Chloromethane	74-87-3	T	D	4				1.30E-04	2.60E-04	2.6E-01		4.5E+01		4.9E+02	
PSB	VOC	Cumene	98-82-8	T	D	4	3	1.70E-04	3.20E-04	1.20E-04	1.20E-04	8.0E-01	4.0E-04	5.6E+01	5.7E-06	5.6E+01	5.7E-06
PSB	VOC	Cyclohexane	110-82-7	T	ID	4	4	2.00E-04	4.40E-04								
PSB	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	4				6.20E-04	1.20E-03	2.0E-04		1.2E+00		3.9E-01	
PSB	VOC	Dibromochloromethane	124-48-1	T	C	4				1.60E-04	3.20E-04	1.0E-01		1.1E+02		1.8E+01	
PSB	VOC	1,2-Dibromoethane	106-93-4	T	B2	4				2.20E-04	4.40E-04	1.0E-03		1.5E+01		2.5E-02	
PSB	VOC	1,2-Dichlorobenzene	95-50-1	T	D	4				1.10E-04	2.20E-04	6.0E-01		1.6E+02		1.6E+02	
PSB	VOC	1,3-Dichlorobenzene	541-73-1	T	D	4				1.50E-04	3.00E-04	6.6E-03				2.0E+00	
PSB	VOC	1,4-Dichlorobenzene	106-46-7	T	C	4				1.70E-04	3.40E-04	7.5E-02		7.4E+01		6.4E+00	
PSB	VOC	Dichlorodifluoromethane	75-71-8	T		4				2.60E-04	5.20E-04	1.7E+00		3.0E+02		3.0E+02	
PSB	VOC	1,1-Dichloroethane	75-34-3	T	C	4				1.60E-04	3.20E-04	8.8E-01		2.3E+03		2.4E+03	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
PSB	VOC	1,2-Dichloroethane	107-06-2	T	B2	4				2.10E-04	4.20E-04	5.0E-03		5.9E+01		1.9E+01	
PSB	VOC	1,1-Dichloroethene	75-35-4	T	C	4				2.40E-04	4.80E-04	7.0E-03		1.3E+00		1.1E+01	
PSB	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4				2.20E-04	4.40E-04	7.0E-02		2.1E+02		2.0E+02	
PSB	VOC	trans-1,2-Dichloroethene	156-60-5	T		4				1.50E-04	3.00E-04	1.0E-01		2.0E+02		2.2E+02	
PSB	VOC	1,2-Dichloropropane	78-87-5	T	B2	4				1.70E-04	3.40E-04	5.0E-03		3.6E+01		1.6E+01	
PSB	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	4				2.70E-04	5.40E-04	8.5E-03		2.6E+01		5.5E+00	
PSB	VOC	Ethyl Benzene	100-41-4	T	D	4	2	5.70E-04	7.40E-04	1.20E-04	1.20E-04	7.0E-01	1.1E-03	1.7E+02	4.4E-06	1.7E+02	4.4E-06
PSB	VOC	2-Hexanone	591-78-6	T		4				4.60E-04	9.20E-04	1.0E+00		8.7E+03		5.2E+03	
PSB	VOC	Methyl Acetate	79-20-9	T		4				4.10E-04	8.20E-04						
PSB	VOC	Methyl tert-butyl ether	1634-04-4	T		4				1.30E-04	2.60E-04	2.6E-02		4.7E+04		6.1E+02	
PSB	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	4				2.30E-04	4.60E-04	1.0E+00		2.0E+04		1.3E+04	
PSB	VOC	Methylcyclohexane	108-87-2	T		4	4	1.60E-04	4.70E-04								
PSB	VOC	Methylene Chloride	75-09-2	T	B2	4				3.40E-04	6.80E-04	5.0E-03		1.4E+03		2.2E+02	
PSB	VOC	Styrene	100-42-5	T		4				1.50E-04	3.00E-04	1.0E-01		3.1E+02		9.7E+00	
PSB	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	4				2.50E-04	5.00E-04	8.5E-03		7.7E+01		4.7E+00	
PSB	VOC	Tetrachloroethene	127-18-4	T	C-B2	4				2.30E-04	4.60E-04	5.0E-03		1.7E+02		1.2E+01	
PSB	VOC	Toluene	108-88-3	T	D	4	2	1.20E-03	2.40E-03	1.80E-04	1.80E-04	1.0E+00	2.4E-03	5.3E+02	4.5E-06	5.3E+02	4.5E-06
PSB	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	4				1.70E-04	3.40E-04	7.0E-02		3.0E+02		1.9E+01	
PSB	VOC	1,1,1-Trichloroethane	71-55-6	T	D	4				1.50E-04	3.00E-04	2.0E-01		1.3E+03		1.3E+03	
PSB	VOC	1,1,2-Trichloroethane	79-00-5	T	C	4				3.00E-04	6.00E-04	5.0E-03		1.1E+02		2.1E+01	
PSB	VOC	Trichloroethene	79-01-6	T	C-B2	4				1.40E-04	2.80E-04	5.0E-03		9.7E+01		2.2E+01	
PSB	VOC	Trichlorofluoromethane	75-69-4	T		4				2.80E-04	5.60E-04	2.6E+00		1.1E+03		1.1E+03	
PSB	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		4				3.20E-04	6.40E-04	1.7E+02		1.7E+02		1.7E+02	
PSB	VOC	Vinyl Chloride	75-01-4	T	A	4				1.50E-04	3.00E-04	2.0E-03		1.3E+01		1.0E+00	
PSB	VOC	Xylenes (total)	1330-20-7	T	ID	4	3	4.90E-04	9.50E-03	3.30E-04	3.30E-04	1.0E+01	9.5E-04	1.9E+02	5.0E-05	1.9E+02	5.0E-05
PSB	SVOC	Acenaphthene	83-32-9	T		4	1	1.50E-03	1.50E-03	8.00E-04	8.00E-04	1.3E+00	1.2E-03	4.2E+00	3.6E-04	4.2E+00	3.6E-04
PSB	SVOC	Acenaphthylene	208-96-8	T	D	4				7.10E-04	7.10E-04	5.2E-02		3.9E+00		3.9E+00	
PSB	SVOC	Acetophenone	98-86-2	T	D	4				2.60E-03	2.60E-03	1.5E+00		6.1E+03		6.1E+03	
PSB	SVOC	Anthracene	120-12-7	T	D	4				6.80E-04	6.80E-04	4.3E-02		4.3E-02		4.3E-02	
PSB	SVOC	Atrazine	1912-24-9	T		4				2.50E-03	2.50E-03	3.0E-03				5.4E+00	
PSB	SVOC	Benzaldehyde	100-52-7	T		4				2.80E-03	2.80E-03						
PSB	SVOC	Benzo(a)anthracene	56-55-3	T	B2	4				7.00E-04	7.00E-04	2.1E-03				9.4E-03	
PSB	SVOC	Benzo(a)pyrene	50-32-8	T	B2	4				7.30E-04	7.30E-04	5.0E-03				2.0E-03	
PSB	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	4				9.40E-04	9.40E-04	2.0E-03				2.0E-03	
PSB	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	4				8.50E-04	8.50E-04	5.0E-03				5.0E-03	
PSB	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	4				8.40E-04	8.40E-04	5.0E-03				5.0E-03	
PSB	SVOC	Biphenyl	92-52-4	T	D	4				2.60E-03	2.60E-03						
PSB	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	4				8.70E-04	8.70E-04						
PSB	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	4				9.70E-04	9.70E-04	2.0E-03		2.1E+02		5.7E+00	
PSB	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	4				2.70E-03	2.70E-03	6.0E-03				3.2E-01	
PSB	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	4				8.80E-04	8.80E-04						
PSB	SVOC	Butylbenzylphthalate	85-68-7	T	C	4				8.80E-04	8.80E-04	1.2E+00				2.7E+00	
PSB	SVOC	Caprolactam	105-60-2	T		4				2.50E-03	2.50E-03	5.8E+00				3.9E+05	
PSB	SVOC	Carbazole	86-74-8	T	B2	4	2	1.10E-03	1.40E-03	8.20E-04	8.20E-04	8.5E-02	1.6E-02			7.4E+00	1.9E-04
PSB	SVOC	4-Chloro-3-methylphenol	59-50-7	T		4				9.90E-04	9.90E-04	1.5E-01				7.9E+01	
PSB	SVOC	4-Chloroaniline	106-47-8	T		2				6.10E-04	6.10E-04						
PSB	SVOC	2-Chloronaphthalene	91-58-7	T		4				8.50E-04	8.50E-04	1.8E+00				6.7E+00	
PSB	SVOC	2-Chlorophenol	95-57-8	T		4				1.00E-03	1.00E-03	4.5E-02				9.4E+01	
PSB	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		4				7.90E-04	7.90E-04						
PSB	SVOC	Chrysene	218-01-9	T	B2	4				4.50E-04	4.50E-04	5.0E-03				5.0E-03	
PSB	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	4				7.90E-04	7.90E-04	2.0E-03				2.0E-03	
PSB	SVOC	Dibenzofuran	132-64-9	T	D	4				1.10E-03	1.10E-03						
PSB	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	4				9.30E-04	9.30E-04	1.1E-03				1.8E-01	
PSB	SVOC	2,4-Dichlorophenol	120-83-2	T		4				8.50E-04	8.50E-04	7.3E-02				4.8E+01	
PSB	SVOC	Diethylphthalate	84-66-2	T	D	4				6.50E-04	6.50E-04	5.5E+00				1.1E+03	
PSB	SVOC	2,4-Dimethylphenol	105-67-9	T		4				8.50E-04	8.50E-04	3.7E-01				5.2E+02	

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PSB	SVOC	Dimethylphthalate	131-11-3	T	D	4				7.60E-04	7.60E-04	3.6E-01				4.2E+03	
PSB	SVOC	Di-n-butylphthalate	84-74-2	T	D	4				6.70E-04	6.70E-04	3.8E-01				1.1E+01	
PSB	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		4				1.30E-03	1.30E-03	2.0E-02				9.5E+00	
PSB	SVOC	2,4-Dinitrophenol	51-28-5	T		4				3.00E-03	3.00E-03						
PSB	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	4				7.90E-04	7.90E-04	7.7E-03				8.6E+00	
PSB	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	4				5.70E-04	5.70E-04						
PSB	SVOC	Di-n-octylphthalate	117-84-0	T		4				1.10E-03	1.10E-03	1.3E-01				4.0E-01	
PSB	SVOC	Fluoranthene	206-44-0	T	D	4				8.10E-04	8.10E-04	2.1E-01		2.1E-01		2.1E-01	
PSB	SVOC	Fluorene	86-73-7	T	D	4				1.00E-03	1.00E-03	8.8E-01		2.0E+00		2.0E+00	
PSB	SVOC	Hexachlorobenzene	118-74-1	T	B2	4				7.40E-04	7.40E-04	1.0E-03		3.0E+00		4.6E-03	
PSB	SVOC	Hexachlorobutadiene	87-68-3	T	C	4				7.30E-04	7.30E-04	1.5E-02		3.2E+00		4.0E-01	
PSB	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	4				1.10E-03	1.10E-03	5.0E-02		4.2E-01		1.6E+00	
PSB	SVOC	Hexachloroethane	67-72-1	T	C	4				7.40E-04	7.40E-04	7.3E-03		5.0E+01		1.9E+00	
PSB	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	4				6.30E-04	6.30E-04	2.0E-03				2.0E-03	
PSB	SVOC	Isophorone	78-59-1	T	C	4				6.30E-04	6.30E-04	7.7E-01				9.9E+02	
PSB	SVOC	2-Methylnaphthalene	91-57-6	T	ID	4	1	6.40E-04	6.40E-04	6.40E-04	6.40E-04	2.6E-01	3.4E-03			2.5E+01	3.6E-05
PSB	SVOC	Methylphenol (total)	1319-77-3	T		4	4	1.75E-03	4.55E-03	1.30E-03	1.30E-03	3.7E-01	1.2E-02			8.1E+02	5.6E-06
PSB	SVOC	Naphthalene	91-20-3	T	C	4	2	5.30E-04	6.80E-04	7.50E-04	7.50E-04	5.2E-01	1.3E-02	3.1E+01	2.2E-04	3.1E+01	2.2E-04
PSB	SVOC	2-Nitroaniline	88-74-4	T		4				7.00E-04	7.00E-04						
PSB	SVOC	3-Nitroaniline	99-09-2	T	C	4				7.10E-04	7.10E-04						
PSB	SVOC	4-Nitroaniline	100-01-6	T	C	4				1.30E-03	1.30E-03						
PSB	SVOC	Nitrobenzene	98-95-3	T	D	4				8.10E-04	8.10E-04	3.4E-03		5.5E+02		1.1E+01	
PSB	SVOC	2-Nitrophenol	88-75-5	T		4				2.10E-03	2.10E-03	2.0E-02				7.9E+01	
PSB	SVOC	4-Nitrophenol	100-02-7	T		4				1.90E-03	1.90E-03						
PSB	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	4				1.40E-03	1.40E-03	2.7E-01				3.5E+01	
PSB	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	4				6.70E-04	6.70E-04	5.0E-03				3.6E-01	
PSB	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	4				7.80E-04	7.80E-04						
PSB	SVOC	Pentachlorophenol	87-86-5	T	B2	4				2.40E-03	2.40E-03	1.0E-03				2.0E-01	
PSB	SVOC	Phenanthrene	85-01-8	T	D	4	1	1.10E-03	1.10E-03	8.20E-04	8.20E-04	5.2E-02	2.1E-02	1.0E+00	1.1E-03	1.0E+00	1.1E-03
PSB	SVOC	Phenol	108-95-2	T	ID	4	2	6.10E-02	6.70E-02	2.60E-03	2.60E-03	4.4E+00	1.5E-02			2.9E+04	2.3E-06
PSB	SVOC	Pyrene	129-00-0	T	D	4				1.10E-03	1.10E-03	1.4E-01		1.4E-01		1.4E-01	
PSB	SVOC	2,4,5-Trichlorophenol	95-95-4	T		4				1.20E-03	1.20E-03	7.3E-01				1.7E+02	
PSB	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	4				1.70E-03	1.70E-03	1.2E-01				1.0E+01	
PSB	P/PCB	PCBs (total)	1336-36-3	D	B2	2				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
PSB	P/PCB	PCBs (total)	1336-36-3	T	B2	4				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
PSB	INORG	Antimony	7440-36-0	D		4	1	2.70E-03	2.70E-03	2.20E-03	2.20E-03	6.0E-03	4.5E-01			6.8E+01	4.0E-05
PSB	INORG	Antimony	7440-36-0	T		4				2.20E-03	2.20E-03	6.0E-03				6.8E+01	
PSB	INORG	Arsenic	7440-38-2	D	A	4	4	4.50E-03	1.51E-02			5.0E-02	3.0E-01			4.3E+00	3.5E-03
PSB	INORG	Arsenic	7440-38-2	T	A	4	3	6.00E-03	1.42E-02	3.90E-03	3.90E-03	5.0E-02	2.8E-01			4.3E+00	3.3E-03
PSB	INORG	Barium	7440-39-3	D	D	4	4	5.55E-01	9.09E-01			2.0E+00	4.5E-01			1.4E+04	6.5E-05
PSB	INORG	Barium	7440-39-3	T	D	4	4	5.66E-01	8.79E-01			2.0E+00	4.4E-01			1.4E+04	6.3E-05
PSB	INORG	Beryllium	7440-41-7	D	B1	4				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
PSB	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
PSB	INORG	Cadmium	7440-43-9	D	B1	4				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
PSB	INORG	Cadmium	7440-43-9	T	B1	4				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
PSB	INORG	Chromium (total)	7440-47-3	D		4				1.40E-03	1.40E-03	1.0E-01				4.6E+02	
PSB	INORG	Chromium (total)	7440-47-3	T		4				1.40E-03	1.40E-03	1.0E-01				4.6E+02	
PSB	INORG	Cobalt	7440-48-4	D	B1	4				1.30E-03	1.30E-03	4.0E-02				2.4E+03	
PSB	INORG	Cobalt	7440-48-4	T	B1	4				1.30E-03	1.30E-03	4.0E-02				2.4E+03	
PSB	INORG	Copper	7440-50-8	D	D	4				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
PSB	INORG	Copper	7440-50-8	T	D	4				4.20E-03	4.20E-03	1.4E+00				7.4E+03	
PSB	INORG	Lead	7439-92-1	D	B2	4				2.50E-03	2.50E-03	4.0E-03					
PSB	INORG	Lead	7439-92-1	T	B2	4				2.50E-03	2.50E-03	4.0E-03					
PSB	INORG	Manganese	7439-96-5	D	D	4	2	3.43E-01	4.14E-01	9.00E-04	9.00E-04	8.6E-01	4.8E-01			9.1E+03	4.5E-05
PSB	INORG	Manganese	7439-96-5	T	D	4	4	4.50E-03	3.97E-01			8.6E-01	4.6E-01			9.1E+03	4.4E-05
PSB	INORG	Mercury	7439-97-6	D	D	4	1	2.50E-04	2.50E-04	6.90E-05	6.90E-05	2.0E-03	1.3E-01	5.6E-02	4.5E-03	5.6E-02	4.5E-03

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
PSB	INORG	Mercury	7439-97-6	T	D	4	2	9.20E-05	1.10E-04	6.90E-05	6.90E-05	2.0E-03	5.5E-02	5.6E-02	2.0E-03	5.6E-02	2.0E-03
PSB	INORG	Nickel	7440-02-0	D	A	4	2	4.30E-03	1.56E-02	2.20E-03	2.20E-03	1.0E-01	1.6E-01			7.4E+04	2.1E-07
PSB	INORG	Nickel	7440-02-0	T	A	4	2	3.90E-03	1.55E-02	2.20E-03	2.20E-03	1.0E-01	1.6E-01			7.4E+04	2.1E-07
PSB	INORG	Selenium	7782-49-2	D	D	4				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
PSB	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
PSB	INORG	Silver	7440-22-4	D	D	4				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
PSB	INORG	Silver	7440-22-4	T	D	4				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
PSB	INORG	Thallium	7440-28-0	D		4				1.80E-05	5.00E-03	2.0E-03				1.3E+01	
PSB	INORG	Thallium	7440-28-0	T		4				1.80E-05	5.00E-03	2.0E-03				1.3E+01	
PSB	INORG	Vanadium	7440-62-2	D		4	1	2.50E-03	2.50E-03	8.20E-04	8.20E-04	4.9E-03	5.6E-01			9.7E+02	2.6E-06
PSB	INORG	Vanadium	7440-62-2	T		4	1	2.40E-03	2.40E-03	8.20E-04	8.20E-04	4.9E-03	5.3E-01			9.7E+02	2.5E-06
PSB	INORG	Zinc	7440-66-6	D	D	4				1.20E-02	1.20E-02	2.4E+00				1.1E+05	
PSB	INORG	Zinc	7440-66-6	T	D	4	3	1.30E-02	1.90E-02	1.20E-02	1.20E-02	2.4E+00	8.2E-03			1.1E+05	1.8E-07
SWDF	VOC	Acetone	67-64-1	T	ID	10	1	2.10E-03	5.30E-03	1.10E-03	1.10E-03	7.3E-01	7.5E-03	1.0E+06	5.5E-09	3.1E+04	1.8E-07
SWDF	VOC	Benzene	71-43-2	T	A	10	1	4.50E-04	4.50E-04	3.70E-04	3.70E-04	5.0E-03	9.0E-02	3.5E+01	1.3E-05	1.1E+01	4.1E-05
SWDF	VOC	Bromodichloromethane	75-27-4	T	B2	10				3.20E-04	3.20E-04	1.0E-01		3.7E+01		1.4E+01	
SWDF	VOC	Bromoform	75-25-2	T	B2	10				3.70E-04	3.70E-04	1.0E-01		3.1E+03		1.4E+02	
SWDF	VOC	Bromomethane	74-83-9	T	D	10				3.00E-04	3.00E-04	1.0E-02		9.0E+00		7.0E+01	
SWDF	VOC	2-Butanone	78-93-3	T	ID	10	1	1.80E-03	1.80E-03	5.90E-04	5.90E-04	1.3E+01	1.0E-04	2.4E+05	5.4E-09	2.4E+05	5.4E-09
SWDF	VOC	Carbon Disulfide	75-15-0	T		10	6	1.30E-04	2.30E-03	2.40E-04	2.40E-04	8.0E-01	2.9E-03	5.5E+02	4.2E-06	1.2E+03	1.9E-06
SWDF	VOC	Carbon Tetrachloride	56-23-5	T	B2	10				3.70E-04	3.70E-04	5.0E-03		2.4E+00		4.6E+00	
SWDF	VOC	Chlorobenzene	108-90-7	T	D	10				3.80E-04	3.80E-04	1.0E-01		4.7E+02		8.6E+01	
SWDF	VOC	Chloroethane	75-00-3	T		10				2.90E-04	2.90E-04	4.3E-01		5.7E+03		4.4E+02	
SWDF	VOC	Chloroform	67-66-3	T	B2	10				3.50E-04	3.50E-04	1.0E-01		1.8E+02		1.5E+02	
SWDF	VOC	Chloromethane	74-87-3	T	D	10				4.90E-04	4.90E-04	2.6E-01		4.5E+01		4.9E+02	
SWDF	VOC	Cumene	98-82-8	T	D	10				3.90E-04	3.90E-04	8.0E-01		5.6E+01		5.6E+01	
SWDF	VOC	Cyclohexane	110-82-7	T	ID	10				3.30E-04	3.30E-04						
SWDF	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	10				8.20E-04	8.20E-04	2.0E-04		1.2E+00		3.9E-01	
SWDF	VOC	Dibromochloromethane	124-48-1	T	C	10				3.70E-04	3.70E-04	1.0E-01		1.1E+02		1.8E+01	
SWDF	VOC	1,2-Dibromoethane	106-93-4	T	B2	10				3.40E-04	3.40E-04	1.0E-03		1.5E+01		2.5E-02	
SWDF	VOC	1,2-Dichlorobenzene	95-50-1	T	D	10				3.80E-04	3.80E-04	6.0E-01		1.6E+02		1.6E+02	
SWDF	VOC	1,3-Dichlorobenzene	541-73-1	T	D	10				3.80E-04	3.80E-04	6.6E-03				2.0E+00	
SWDF	VOC	1,4-Dichlorobenzene	106-46-7	T	C	10				3.80E-04	3.80E-04	7.5E-02		7.4E+01		6.4E+00	
SWDF	VOC	Dichlorodifluoromethane	75-71-8	T		10				4.90E-04	4.90E-04	1.7E+00		3.0E+02		3.0E+02	
SWDF	VOC	1,1-Dichloroethane	75-34-3	T	C	10	1	5.40E-04	5.40E-04	3.00E-04	3.00E-04	8.8E-01	6.1E-04	2.3E+03	2.3E-07	2.4E+03	2.3E-07
SWDF	VOC	1,2-Dichloroethane	107-06-2	T	B2	10				2.80E-04	2.80E-04	5.0E-03		5.9E+01		1.9E+01	
SWDF	VOC	1,1-Dichloroethene	75-35-4	T	C	10				3.10E-04	3.10E-04	7.0E-03		1.3E+00		1.1E+01	
SWDF	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	10				3.50E-04	3.50E-04	7.0E-02		2.1E+02		2.0E+02	
SWDF	VOC	trans-1,2-Dichloroethene	156-60-5	T		10				3.30E-04	3.30E-04	1.0E-01		2.0E+02		2.2E+02	
SWDF	VOC	1,2-Dichloropropane	78-87-5	T	B2	10				4.10E-04	4.10E-04	5.0E-03		3.6E+01		1.6E+01	
SWDF	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	10				3.50E-04	3.50E-04	8.5E-03		2.6E+01		5.5E+00	
SWDF	VOC	Ethyl Benzene	100-41-4	T	D	10				4.10E-04	4.10E-04	7.0E-01		1.7E+02		1.7E+02	
SWDF	VOC	2-Hexanone	591-78-6	T		10				5.80E-04	5.80E-04	1.0E+00		8.7E+03		5.2E+03	
SWDF	VOC	Methyl Acetate	79-20-9	T		10				5.40E-04	5.40E-04						
SWDF	VOC	Methyl tert-butyl ether	1634-04-4	T		10				2.70E-04	2.70E-04	2.4E-01		4.7E+04		6.1E+02	
SWDF	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	9	6	7.80E-04	3.30E-03	2.60E-04	2.60E-04	1.8E+00	1.8E-03	2.0E+04	1.7E-07	1.3E+04	2.5E-07
SWDF	VOC	Methylcyclohexane	108-87-2	T		10				4.20E-04	4.20E-04						
SWDF	VOC	Methylene Chloride	75-09-2	T	B2	10				2.90E-04	2.90E-04	5.0E-03		1.4E+03		2.2E+02	
SWDF	VOC	Styrene	100-42-5	T		10				3.50E-04	3.50E-04	1.0E-01		3.1E+02		9.7E+00	
SWDF	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	10				3.60E-04	3.60E-04	8.5E-03		7.7E+01		4.7E+00	
SWDF	VOC	Tetrachloroethene	127-18-4	T	C-B2	10				4.20E-04	4.20E-04	5.0E-03		1.7E+02		1.2E+01	
SWDF	VOC	Toluene	108-88-3	T	D	10	8	4.70E-04	9.50E-04	3.90E-04	3.90E-04	1.0E+00	9.5E-04	5.3E+02	1.8E-06	5.3E+02	1.8E-06
SWDF	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	10				4.00E-04	4.00E-04	7.0E-02		3.0E+02		1.9E+01	
SWDF	VOC	1,1,1-Trichloroethane	71-55-6	T	D	10				3.90E-04	3.90E-04	2.0E-01		1.3E+03		1.3E+03	
SWDF	VOC	1,1,2-Trichloroethane	79-00-5	T	C	10				3.60E-04	3.60E-04	5.0E-03		1.1E+02		2.1E+01	
SWDF	VOC	Trichloroethene	79-01-6	T	C-B2	10				4.20E-04	4.20E-04	5.0E-03		9.7E+01		2.2E+01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
SWDF	VOC	Trichlorofluoromethane	75-69-4	T		10				5.40E-04	5.40E-04	3.6E+00		1.1E+03		1.1E+03	
SWDF	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		10				3.20E-04	3.20E-04	1.7E+02		1.7E+02		1.7E+02	
SWDF	VOC	Vinyl Chloride	75-01-4	T	A	10				3.60E-04	3.60E-04	2.0E-03		1.3E+01		1.0E+00	
SWDF	VOC	Xylenes (total)	1330-20-7	T	ID	10	6	5.20E-04	1.50E-03	4.40E-04	4.40E-04	1.0E+01	1.5E-04	1.9E+02	7.9E-06	1.9E+02	7.9E-06
SWDF	SVOC	Acenaphthene	83-32-9	T		10	3	8.60E-04	1.35E-03	8.00E-04	2.00E-03	1.3E+00	1.0E-03	4.2E+00	3.2E-04	4.2E+00	3.2E-04
SWDF	SVOC	Acenaphthylene	208-96-8	T	D	10				7.10E-04	1.80E-03	5.2E-02		3.9E+00		3.9E+00	
SWDF	SVOC	Acetophenone	98-86-2	T	D	10				2.60E-03	6.50E-03	1.5E+00		6.1E+03		6.1E+03	
SWDF	SVOC	Anthracene	120-12-7	T	D	10	1	7.40E-04	7.40E-04	6.80E-04	1.70E-03	4.3E-02	1.7E-02	4.3E-02	1.7E-02	4.3E-02	1.7E-02
SWDF	SVOC	Atrazine	1912-24-9	T		10				2.50E-03	6.20E-03	3.0E-03				5.4E+00	
SWDF	SVOC	Benzaldehyde	100-52-7	T		10				2.80E-03	7.00E-03						
SWDF	SVOC	Benzo(a)anthracene	56-55-3	T	B2	10				7.20E-04	1.80E-03	2.1E-03				9.4E-03	
SWDF	SVOC	Benzo(a)pyrene	50-32-8	T	B2	10				7.30E-04	1.80E-03	9.0E-03				2.0E-03	
SWDF	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	10				9.40E-04	2.40E-03	2.0E-03				2.0E-03	
SWDF	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	10				8.50E-04	2.10E-03	5.0E-03				5.0E-03	
SWDF	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	10				8.40E-04	2.10E-03	5.0E-03				5.0E-03	
SWDF	SVOC	Biphenyl	92-52-4	T	D	10				2.60E-03	6.50E-03						
SWDF	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	10				8.70E-04	2.20E-03						
SWDF	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	10				9.70E-04	2.40E-03	2.0E-03		2.1E+02		5.7E+00	
SWDF	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	10				2.70E-03	6.80E-03	6.0E-03				3.2E-01	
SWDF	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	10				8.80E-04	2.20E-03						
SWDF	SVOC	Butylbenzylphthalate	85-68-7	T	C	10				8.80E-04	2.20E-03	1.2E+00				2.7E+00	
SWDF	SVOC	Caprolactam	105-60-2	T		10				2.50E-03	6.20E-03	5.8E+00				3.9E+05	
SWDF	SVOC	Carbazole	86-74-8	T	B2	10	5	1.00E-03	4.70E-03	8.20E-04	2.00E-03	8.5E-02	5.5E-02			7.4E+00	6.4E-04
SWDF	SVOC	4-Chloro-3-methylphenol	59-50-7	T		10				9.90E-04	2.50E-03	1.5E-01				7.9E+01	
SWDF	SVOC	4-Chloroaniline	106-47-8	T		10				6.10E-04	1.50E-03						
SWDF	SVOC	2-Chloronaphthalene	91-58-7	T		10				8.50E-04	2.10E-03	1.8E+00				6.7E+00	
SWDF	SVOC	2-Chlorophenol	95-57-8	T		10				1.00E-03	2.50E-03	4.5E-02				9.4E+01	
SWDF	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		10				7.90E-04	2.00E-03						
SWDF	SVOC	Chrysene	218-01-9	T	B2	10				7.50E-04	1.90E-03	5.0E-03				5.0E-03	
SWDF	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	10				7.90E-04	2.00E-03	2.0E-03				2.0E-03	
SWDF	SVOC	Dibenzofuran	132-64-9	T	D	10				1.10E-03	2.80E-03						
SWDF	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	10				9.30E-04	2.30E-03	1.1E-03				1.8E-01	
SWDF	SVOC	2,4-Dichlorophenol	120-83-2	T		10				8.50E-04	2.10E-03	7.3E-02				4.8E+01	
SWDF	SVOC	Diethylphthalate	84-66-2	T	D	10	4	8.00E-04	2.30E-03	6.50E-04	1.60E-03	5.5E+00	4.2E-04			1.1E+03	2.1E-06
SWDF	SVOC	2,4-Dimethylphenol	105-67-9	T		10	7	1.30E-03	1.50E-02	8.50E-04	8.50E-04	3.7E-01	4.1E-02			5.2E+02	2.9E-05
SWDF	SVOC	Dimethylphthalate	131-11-3	T	D	10				7.60E-04	1.90E-03	7.3E+01				4.2E+03	
SWDF	SVOC	Di-n-butylphthalate	84-74-2	T	D	10	1	7.70E-04	7.70E-04	6.70E-04	1.70E-03	8.8E-01	8.8E-04			1.1E+01	7.0E-05
SWDF	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		10				1.30E-03	3.20E-03	2.0E-02				9.5E+00	
SWDF	SVOC	2,4-Dinitrophenol	51-28-5	T		10				3.00E-03	7.50E-03						
SWDF	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	10				7.90E-04	2.00E-03	7.7E-03				8.6E+00	
SWDF	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	10				5.70E-04	1.40E-03						
SWDF	SVOC	Di-n-octylphthalate	117-84-0	T		10				1.10E-03	2.80E-03	1.3E-01				4.0E-01	
SWDF	SVOC	Fluoranthene	206-44-0	T	D	10	1	9.15E-04	9.15E-04	8.10E-04	2.00E-03	2.1E-01	4.4E-03	2.1E-01	4.4E-03	2.1E-01	4.4E-03
SWDF	SVOC	Fluorene	86-73-7	T	D	10	2	1.65E-03	1.70E-03	1.00E-03	2.50E-03	8.8E-01	1.9E-03	2.0E+00	8.5E-04	2.0E+00	8.5E-04
SWDF	SVOC	Hexachlorobenzene	118-74-1	T	B2	10				7.40E-04	1.80E-03	1.0E-03		3.0E+00		4.6E-03	
SWDF	SVOC	Hexachlorobutadiene	87-68-3	T	C	10				7.30E-04	1.80E-03	1.5E-02		3.2E+00		4.0E-01	
SWDF	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	10				1.10E-03	2.80E-03	5.0E-02		4.2E-01		1.6E+00	
SWDF	SVOC	Hexachloroethane	67-72-1	T	C	10				7.40E-04	1.80E-03	7.3E-03		5.0E+01		1.9E+00	
SWDF	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	10				6.30E-04	1.60E-03	2.0E-03				2.0E-03	
SWDF	SVOC	Isophorone	78-59-1	T	C	10				6.30E-04	1.60E-03	7.7E-01				9.9E+02	
SWDF	SVOC	2-Methylnaphthalene	91-57-6	T	ID	10	2	7.20E-04	7.30E-04	6.40E-04	1.60E-03	2.6E-01	2.8E-03			2.5E+01	2.9E-05
SWDF	SVOC	Methylphenol (total)	1319-77-3	T		10	7	2.45E-03	1.75E-02	1.30E-03	1.30E-03	3.7E-01	4.7E-02			8.1E+02	2.2E-05
SWDF	SVOC	Naphthalene	91-20-3	T	C	10	6	7.60E-04	1.70E-03	7.50E-04	1.90E-03	5.2E-01	6.9E-03	3.1E+01	1.2E-04	3.1E+01	1.2E-04
SWDF	SVOC	2-Nitroaniline	88-74-4	T		10				7.00E-04	1.80E-03						
SWDF	SVOC	3-Nitroaniline	99-09-2	T	C	10				7.10E-04	1.80E-03						
SWDF	SVOC	4-Nitroaniline	100-01-6	T	C	10				1.30E-03	3.20E-03						

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
SWDF	SVOC	Nitrobenzene	98-95-3	T	D	10				8.10E-04	2.00E-03	3.4E-03		5.5E+02		1.1E+01	
SWDF	SVOC	2-Nitrophenol	88-75-5	T		10				2.10E-03	5.20E-03	2.0E-02				7.9E+01	
SWDF	SVOC	4-Nitrophenol	100-02-7	T		10				1.90E-03	4.80E-03						
SWDF	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	10				1.40E-03	3.50E-03	2.7E-01				3.5E+01	
SWDF	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	10				6.70E-04	2.00E-03	5.0E-03				3.6E-01	
SWDF	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	10				7.80E-04	2.00E-03						
SWDF	SVOC	Pentachlorophenol	87-86-5	T	B2	10				2.40E-03	6.00E-03	1.0E-03				2.0E-01	
SWDF	SVOC	Phenanthrene	85-01-8	T	D	10	4	9.10E-04	2.25E-03	8.20E-04	2.00E-03	5.2E-02	4.3E-02	1.0E+00	2.3E-03	1.0E+00	2.3E-03
SWDF	SVOC	Phenol	108-95-2	T	ID	10	5	2.70E-03	9.40E-02	2.60E-03	2.60E-03	4.4E+00	2.1E-02			2.9E+04	3.2E-06
SWDF	SVOC	Pyrene	129-00-0	T	D	10				1.10E-03	2.80E-03	2.1E-01		1.4E-01		1.4E-01	
SWDF	SVOC	2,4,5-Trichlorophenol	95-95-4	T		10				1.50E-03	3.00E-03	7.3E-01				1.7E+02	
SWDF	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	10				1.70E-03	4.20E-03	1.2E-01				1.0E+01	
SWDF	P/PCB	PCBs (total)	1336-36-3	T	B2	10	9	1.35E-04	4.00E-03	8.20E-05	8.20E-05	5.0E-04	**2.8E+00**	4.5E-02	3.1E-02	3.3E-03	4.2E-01
SWDF	INORG	Antimony	7440-36-0	D		8	2	3.20E-03	2.23E-02	3.40E-03	3.40E-03	6.0E-03	**3.7E+00**			6.8E+01	3.3E-04
SWDF	INORG	Antimony	7440-36-0	T		9	2	6.70E-03	1.29E-02	3.40E-03	3.40E-03	6.0E-03	**2.2E+00**			6.8E+01	1.9E-04
SWDF	INORG	Arsenic	7440-38-2	D	A	8	7	1.00E-03	1.64E-02	2.10E-03	2.10E-03	5.0E-02	3.3E-01			4.3E+00	3.8E-03
SWDF	INORG	Arsenic	7440-38-2	T	A	9	9	1.40E-03	3.00E-02			5.0E-02	6.1E-01			4.3E+00	7.1E-03
SWDF	INORG	Barium	7440-39-3	D	D	8	8	6.01E-02	5.84E-01			2.0E+00	1.9E-01			1.4E+04	2.7E-05
SWDF	INORG	Barium	7440-39-3	T	D	9	9	1.82E-02	4.13E-01			2.0E+00	2.1E-01			1.4E+04	3.0E-05
SWDF	INORG	Beryllium	7440-41-7	D	B1	8	2	6.10E-04	6.20E-04	6.00E-04	6.00E-04	4.0E-03	1.6E-01			2.9E+02	2.1E-06
SWDF	INORG	Beryllium	7440-41-7	T	B1	9	3	6.90E-04	1.00E-04	6.00E-04	6.00E-04	4.0E-03	2.3E-01			2.9E+02	3.1E-06
SWDF	INORG	Cadmium	7440-43-9	D	B1	8	5	3.80E-04	4.90E-04	2.80E-04	2.80E-04	5.0E-03	9.8E-02			1.9E+02	2.6E-06
SWDF	INORG	Cadmium	7440-43-9	T	B1	9	9	3.80E-04	6.70E-03			5.0E-03	**1.3E+00**			1.9E+02	3.5E-05
SWDF	INORG	Chromium (total)	7440-47-3	D		8				1.50E-03	1.50E-03	1.0E-01				4.6E+02	
SWDF	INORG	Chromium (total)	7440-47-3	T		9	5	4.70E-03	9.00E-02	1.50E-03	1.50E-03	1.0E-01	9.0E-01			4.6E+02	2.0E-04
SWDF	INORG	Cobalt	7440-48-4	D	B1	8	1	1.40E-03	1.40E-03	7.40E-04	7.40E-04	4.0E-02	3.5E-02			2.4E+03	5.8E-07
SWDF	INORG	Cobalt	7440-48-4	T	B1	9	6	9.80E-04	2.80E-02	7.40E-04	7.40E-04	4.0E-02	7.0E-01			2.4E+03	1.2E-05
SWDF	INORG	Copper	7440-50-8	D	D	8	1	8.50E-03	8.50E-03	1.70E-03	1.70E-03	1.4E+00	6.1E-03			7.4E+03	1.1E-06
SWDF	INORG	Copper	7440-50-8	T	D	9	1	1.56E-01	1.56E-01	1.70E-03	1.70E-03	1.4E+00	1.1E-01			7.4E+03	2.1E-05
SWDF	INORG	Lead	7439-92-1	D	B2	8				1.60E-03	1.60E-03	4.0E-03					
SWDF	INORG	Lead	7439-92-1	T	B2	9	6	1.70E-03	1.64E-01	1.60E-03	1.60E-03	4.0E-03	**4.1E+01**				
SWDF	INORG	Manganese	7439-96-5	D	D	8	4	2.52E-02	1.02E+00	6.80E-04	6.80E-04	8.6E-01	**1.2E+00**			9.1E+03	1.1E-04
SWDF	INORG	Manganese	7439-96-5	T	D	9	6	5.82E-02	1.64E+00	6.80E-04	6.80E-04	8.6E-01	**1.9E+00**			9.1E+03	1.8E-04
SWDF	INORG	Mercury	7439-97-6	D	D	8				8.70E-05	8.70E-05	2.0E-03		5.6E-02		5.6E-02	
SWDF	INORG	Mercury	7439-97-6	T	D	9	2	1.60E-04	9.30E-04	8.70E-05	8.70E-05	2.0E-03	4.7E-01	5.6E-02	1.7E-02	5.6E-02	1.7E-02
SWDF	INORG	Nickel	7440-02-0	D	A	8	7	3.40E-03	1.45E-02	2.90E-03	2.90E-03	1.0E-01	1.5E-01			7.4E+04	2.0E-07
SWDF	INORG	Nickel	7440-02-0	T	A	9	9	3.00E-03	9.84E-02			1.0E-01	9.8E-01			7.4E+04	1.3E-06
SWDF	INORG	Selenium	7782-49-2	D	D	8				4.70E-03	4.70E-03	5.0E-02				9.7E+02	
SWDF	INORG	Selenium	7782-49-2	T	D	9				4.70E-03	4.70E-03	5.0E-02				9.7E+02	
SWDF	INORG	Silver	7440-22-4	D	D	8				9.80E-04	9.80E-04	3.4E-02				1.5E+03	
SWDF	INORG	Silver	7440-22-4	T	D	9				9.80E-04	9.80E-04	3.4E-02				1.5E+03	
SWDF	INORG	Thallium	7440-28-0	D		8				3.30E-05	3.30E-05	2.0E-03				1.3E+01	
SWDF	INORG	Thallium	7440-28-0	T		9	1	2.50E-04	2.50E-04	3.30E-05	3.30E-05	2.0E-03	1.3E-01			1.3E+01	1.9E-05
SWDF	INORG	Vanadium	7440-62-2	D		8	7	9.90E-04	1.16E-02	6.70E-04	6.70E-04	4.5E-03	**2.6E+00**			9.7E+02	1.2E-05
SWDF	INORG	Vanadium	7440-62-2	T		9	9	1.40E-03	8.70E-02			4.5E-03	**1.9E+01**			9.7E+02	9.0E-05
SWDF	INORG	Zinc	7440-66-6	D	D	8	1	3.59E-02	3.59E-02	1.40E-02	1.40E-02	2.4E+00	1.5E-02			1.1E+05	3.3E-07
SWDF	INORG	Zinc	7440-66-6	T	D	9	2	2.23E-01	3.95E-01	1.40E-02	1.40E-02	2.4E+00	1.6E-01			1.1E+05	3.6E-06
SWHI	VOC	Acetone	67-64-1	T	ID	24	6	1.50E-02	7.80E-02	5.10E-04	1.00E-02	7.3E-01	1.1E-01	1.0E+06	7.8E-08	3.1E+04	2.5E-06
SWHI	VOC	Benzene	71-43-2	T	A	24				1.60E-04	1.00E-03	5.0E-03		3.5E+01		1.1E+01	
SWHI	VOC	Bromodichloromethane	75-27-4	T	B2	24	2	1.80E-04	4.30E-04	1.70E-04	1.00E-03	1.0E-01	4.2E-03	3.7E+01	1.1E-05	1.4E+01	3.0E-05
SWHI	VOC	Bromoform	75-25-2	T	B2	24				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
SWHI	VOC	Bromomethane	74-83-9	T	D	23				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
SWHI	VOC	2-Butanone	78-93-3	T	ID	24	1	5.00E-03	5.00E-03	1.00E-04	1.00E-02	1.3E+01	3.8E-05	2.4E+05	2.1E-09	2.4E+05	2.1E-09
SWHI	VOC	Carbon Disulfide	75-15-0	T		24				2.00E-04	1.00E-03	8.0E-01		5.5E+02		1.2E+03	
SWHI	VOC	Carbon Tetrachloride	56-23-5	T	B2	24				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
SWHI	VOC	Chlorobenzene	108-90-7	T	D	24				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
SWHI	VOC	Chloroethane	75-00-3	T		24				2.60E-04	1.00E-03	1.5E+01		5.7E+03		4.4E+02	
SWHI	VOC	Chloroform	67-66-3	T	B2	24	6	1.40E-04	1.70E-03	1.40E-04	1.00E-03	1.0E-01	1.7E-02	1.8E+02	9.4E-06	1.5E+02	1.1E-05
SWHI	VOC	Chloromethane	74-87-3	T	D	24	3	1.30E-04	3.35E-04	1.30E-04	1.00E-03	2.6E-01	1.3E-03	4.5E+01	7.4E-06	4.9E+02	6.8E-07
SWHI	VOC	Cumene	98-82-8	T	D	24				1.20E-04	1.00E-03	8.0E-01		5.6E+01		5.6E+01	
SWHI	VOC	Cyclohexane	110-82-7	T	ID	24				1.30E-04	1.00E-03						
SWHI	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	24				6.20E-04	1.00E-03	2.0E-04		1.2E+00		3.9E-01	
SWHI	VOC	Dibromochloromethane	124-48-1	T	C	24				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
SWHI	VOC	1,2-Dibromoethane	106-93-4	T	B2	24				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
SWHI	VOC	1,2-Dichlorobenzene	95-50-1	T	D	24	1	2.20E-04	2.20E-04	1.10E-04	1.00E-03	6.0E-01	3.7E-04	1.6E+02	1.4E-06	1.6E+02	1.4E-06
SWHI	VOC	1,3-Dichlorobenzene	541-73-1	T	D	24				1.50E-04	1.00E-03	5.9E-02				2.0E+00	
SWHI	VOC	1,4-Dichlorobenzene	106-46-7	T	C	24				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
SWHI	VOC	Dichlorodifluoromethane	75-71-8	T		24				2.60E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	
SWHI	VOC	1,1-Dichloroethane	75-34-3	T	C	24	2	8.50E-04	1.00E-03	1.60E-04	1.00E-03	8.8E-01	1.1E-03	2.3E+03	4.3E-07	2.4E+03	4.2E-07
SWHI	VOC	1,2-Dichloroethane	107-06-2	T	B2	24				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
SWHI	VOC	1,1-Dichloroethene	75-35-4	T	C	24	2	8.10E-04	9.70E-04	2.40E-04	1.00E-03	7.0E-03	1.4E-01	1.3E+00	7.5E-04	1.1E+01	8.8E-05
SWHI	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	24				2.20E-04	5.00E-04	7.0E-02		2.1E+02		2.0E+02	
SWHI	VOC	trans-1,2-Dichloroethene	156-60-5	T		24				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
SWHI	VOC	1,2-Dichloropropane	78-87-5	T	B2	24				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
SWHI	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	24				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
SWHI	VOC	Ethyl Benzene	100-41-4	T	D	24	1	1.30E-04	1.80E-04	1.20E-04	1.00E-03	7.0E-01	2.6E-04	1.7E+02	1.1E-06	1.7E+02	1.1E-06
SWHI	VOC	2-Hexanone	591-78-6	T		24				4.60E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	
SWHI	VOC	Methyl Acetate	79-20-9	T		24				4.10E-04	1.00E-02						
SWHI	VOC	Methyl tert-butyl ether	1634-04-4	T		24				1.30E-04	5.00E-03	2.4E-01		4.7E+04		6.1E+02	
SWHI	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	23				2.30E-04	1.00E-02	1.8E+00		2.0E+04		1.3E+04	
SWHI	VOC	Methylcyclohexane	108-87-2	T		24				1.50E-04	1.00E-03						
SWHI	VOC	Methylene Chloride	75-09-2	T	B2	24				2.90E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
SWHI	VOC	Styrene	100-42-5	T		24				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
SWHI	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	24				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
SWHI	VOC	Tetrachloroethene	127-18-4	T	C-B2	24	2	4.60E-04	5.50E-04	2.30E-04	1.00E-03	5.0E-03	1.1E-01	1.7E+02	3.2E-06	1.2E+01	4.6E-05
SWHI	VOC	Toluene	108-88-3	T	D	24	5	1.90E-04	8.10E-04	1.80E-04	1.00E-03	1.0E+00	8.1E-04	5.3E+02	1.5E-06	5.3E+02	1.5E-06
SWHI	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	24				1.70E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
SWHI	VOC	1,1,1-Trichloroethane	71-55-6	T	D	24	5	5.25E-04	7.00E-03	1.50E-04	1.00E-03	2.0E-01	3.5E-02	1.3E+03	5.4E-06	1.3E+03	5.4E-06
SWHI	VOC	1,1,2-Trichloroethane	79-00-5	T	C	24				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
SWHI	VOC	Trichloroethene	79-01-6	T	C-B2	24	2	7.10E-04	1.10E-03	1.40E-04	1.00E-03	5.0E-03	2.2E-01	9.7E+01	1.1E-05	2.2E+01	5.0E-05
SWHI	VOC	Trichlorofluoromethane	75-69-4	T		24				2.80E-04	1.00E-03	2.6E+00		1.1E+03		1.1E+03	
SWHI	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		24				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
SWHI	VOC	Vinyl Chloride	75-01-4	T	A	24				1.50E-04	1.00E-03	2.0E-03		1.3E+01		1.0E+00	
SWHI	VOC	Xylenes (total)	1330-20-7	T	ID	24	1	9.90E-04	9.90E-04	3.30E-04	1.00E-03	1.0E+01	9.9E-05	1.9E+02	5.2E-06	1.9E+02	5.2E-06
SWHI	SVOC	Acenaphthene	83-32-9	T		24				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
SWHI	SVOC	Acenaphthylene	208-96-8	T	D	24				7.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
SWHI	SVOC	Acetophenone	98-86-2	T	D	24				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
SWHI	SVOC	Anthracene	120-12-7	T	D	24				6.80E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
SWHI	SVOC	Atrazine	1912-24-9	T		24				2.50E-03	5.00E-03	3.0E-03				5.4E+00	
SWHI	SVOC	Benzaldehyde	100-52-7	T		24				2.80E-03	1.00E-02						
SWHI	SVOC	Benzo(a)anthracene	56-55-3	T	B2	24				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
SWHI	SVOC	Benzo(a)pyrene	50-32-8	T	B2	24				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
SWHI	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	24				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
SWHI	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	24				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
SWHI	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	24				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
SWHI	SVOC	Biphenyl	92-52-4	T	D	24				3.60E-04	5.00E-02						
SWHI	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	24				8.70E-04	5.00E-03						
SWHI	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	24				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
SWHI	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	24				9.00E-03	5.00E-03	6.0E-03				3.2E-01	
SWHI	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	24				8.80E-04	5.00E-03						
SWHI	SVOC	Butylbenzylphthalate	85-68-7	T	C	24				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
SWHI	SVOC	Caprolactam	105-60-2	T		24				2.50E-03	1.00E-02	5.8E+00				3.9E+05	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
SWHI	SVOC	Carbazole	86-74-8	T	B2	24				8.20E-04	1.00E-02	3.5E-02				7.4E+00	
SWHI	SVOC	4-Chloro-3-methylphenol	59-50-7	T		24				9.90E-04	5.00E-03	7.5E-01				7.9E+01	
SWHI	SVOC	4-Chloroaniline	106-47-8	T		20				6.10E-04	1.00E-02						
SWHI	SVOC	2-Chloronaphthalene	91-58-7	T		24				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
SWHI	SVOC	2-Chlorophenol	95-57-8	T		24				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
SWHI	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		24				7.90E-04	5.00E-03						
SWHI	SVOC	Chrysene	218-01-9	T	B2	24				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
SWHI	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	24				7.90E-04	5.00E-03	2.0E-03				2.0E-03	
SWHI	SVOC	Dibenzofuran	132-64-9	T	D	24				1.10E-03	5.00E-03						
SWHI	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	20				9.30E-04	2.00E-02	1.9E-02				1.8E-01	
SWHI	SVOC	2,4-Dichlorophenol	120-83-2	T		24				9.50E-04	1.00E-02	7.3E-02				4.8E+01	
SWHI	SVOC	Diethylphthalate	84-66-2	T	D	24				8.50E-04	5.00E-03	5.5E+00				1.1E+03	
SWHI	SVOC	2,4-Dimethylphenol	105-67-9	T		24				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
SWHI	SVOC	Dimethylphthalate	131-11-3	T	D	24				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
SWHI	SVOC	Di-n-butylphthalate	84-74-2	T	D	24				6.70E-04	5.00E-03	8.8E-01				1.1E+01	
SWHI	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		24				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
SWHI	SVOC	2,4-Dinitrophenol	51-28-5	T		24				3.00E-03	2.00E-02						
SWHI	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	24				7.90E-04	5.00E-03	7.7E-03				8.6E+00	
SWHI	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	24				5.70E-04	5.00E-03						
SWHI	SVOC	Di-n-octylphthalate	117-84-0	T		24				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
SWHI	SVOC	Fluoranthene	206-44-0	T	D	24				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
SWHI	SVOC	Fluorene	86-73-7	T	D	24				1.00E-03	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
SWHI	SVOC	Hexachlorobenzene	118-74-1	T	B2	24				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
SWHI	SVOC	Hexachlorobutadiene	87-68-3	T	C	24				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
SWHI	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	24				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
SWHI	SVOC	Hexachloroethane	67-72-1	T	C	24				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
SWHI	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	24				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
SWHI	SVOC	Isophorone	78-59-1	T	C	24				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
SWHI	SVOC	2-Methylnaphthalene	91-57-6	T	ID	24				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
SWHI	SVOC	Methylphenol (total)	1319-77-3	T		24				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
SWHI	SVOC	Naphthalene	91-20-3	T	C	24				7.50E-04	5.00E-03	5.2E-01		3.1E+01		3.1E+01	
SWHI	SVOC	2-Nitroaniline	88-74-4	T		24				7.00E-04	2.00E-02						
SWHI	SVOC	3-Nitroaniline	99-09-2	T	C	20				7.10E-04	2.00E-02						
SWHI	SVOC	4-Nitroaniline	100-01-6	T	C	24				1.30E-03	2.00E-02						
SWHI	SVOC	Nitrobenzene	98-95-3	T	D	24				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
SWHI	SVOC	2-Nitrophenol	88-75-5	T		24				2.10E-03	5.00E-03	2.0E-02				7.9E+01	
SWHI	SVOC	4-Nitrophenol	100-02-7	T		24				1.90E-03	2.00E-02						
SWHI	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	24				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
SWHI	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	24				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
SWHI	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	24				7.80E-04	5.00E-03						
SWHI	SVOC	Pentachlorophenol	87-86-5	T	B2	24				2.40E-03	5.00E-03	1.0E-03				2.0E-01	
SWHI	SVOC	Phenanthrene	85-01-8	T	D	24				8.20E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
SWHI	SVOC	Phenol	108-95-2	T	ID	24				2.60E-03	5.00E-03	4.4E+00				2.9E+04	
SWHI	SVOC	Pyrene	129-00-0	T	D	24				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
SWHI	SVOC	2,4,5-Trichlorophenol	95-95-4	T		24				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
SWHI	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	24				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
SWHI	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
SWHI	P/PCB	PCBs (total)	1336-36-3	T	B2	9				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
SWHI	INORG	Antimony	7440-36-0	D		22	1	2.60E-03	2.60E-03	2.20E-03	2.50E-02	6.0E-03	4.3E-01			6.8E+01	3.8E-05
SWHI	INORG	Antimony	7440-36-0	T		24				3.20E-03	2.50E-02	6.0E-03				6.8E+01	
SWHI	INORG	Arsenic	7440-38-2	D	A	22	6	3.90E-03	7.80E-03	3.90E-03	1.00E-02	5.0E-02	1.6E-01			4.3E+00	1.8E-03
SWHI	INORG	Arsenic	7440-38-2	T	A	24	6	2.10E-03	9.60E-03	2.10E-03	1.00E-02	5.0E-02	1.9E-01			4.3E+00	2.2E-03
SWHI	INORG	Barium	7440-39-3	D	D	22	22	5.30E-02	9.29E-01			2.0E+00	4.6E-01			1.4E+04	6.6E-05
SWHI	INORG	Barium	7440-39-3	T	D	24	24	5.04E-02	9.29E-01			2.0E+00	4.6E-01			1.4E+04	6.6E-05
SWHI	INORG	Beryllium	7440-41-7	D	B1	22				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
SWHI	INORG	Beryllium	7440-41-7	T	B1	24				5.40E-04	1.00E-03	4.0E-03				2.9E+02	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
SWHI	INORG	Cadmium	7440-43-9	D	B1	22	9	2.90E-04	1.47E-03	2.80E-04	5.00E-03	5.0E-03	2.9E-01			1.9E+02	7.7E-06
SWHI	INORG	Cadmium	7440-43-9	T	B1	24	6	3.50E-04	1.45E-03	2.80E-04	5.00E-03	5.0E-03	2.9E-01			1.9E+02	7.6E-06
SWHI	INORG	Chromium (total)	7440-47-3	D		22	4	1.80E-03	2.70E-03	1.40E-03	1.00E-02	1.0E-01	2.7E-02			4.6E+02	5.9E-06
SWHI	INORG	Chromium (total)	7440-47-3	T		24	6	1.40E-03	2.50E-03	1.40E-03	1.00E-02	1.0E-01	2.5E-02			4.6E+02	5.4E-06
SWHI	INORG	Cobalt	7440-48-4	D	B1	22	5	1.30E-03	4.60E-03	1.30E-03	1.00E-02	4.0E-02	1.2E-01			2.4E+03	1.9E-06
SWHI	INORG	Cobalt	7440-48-4	T	B1	24	4	1.40E-03	4.10E-03	7.40E-04	1.00E-02	4.0E-02	1.0E-01			2.4E+03	1.7E-06
SWHI	INORG	Copper	7440-50-8	D	D	22	4	4.40E-03	6.00E-03	4.20E-03	5.00E-03	1.4E+00	4.3E-03			7.4E+03	8.1E-07
SWHI	INORG	Copper	7440-50-8	T	D	24	2	4.70E-03	4.70E-03	1.70E-03	5.00E-03	1.4E+00	3.4E-03			7.4E+03	6.4E-07
SWHI	INORG	Lead	7439-92-1	D	B2	22				2.50E-03	3.00E-03	4.0E-03					
SWHI	INORG	Lead	7439-92-1	T	B2	24	1	3.50E-03	3.50E-03	1.60E-03	3.00E-03	4.0E-03	8.8E-01				
SWHI	INORG	Manganese	7439-96-5	D	D	22	22	1.60E-03	5.17E-01			8.0E-01	7.2E-01			9.1E+03	6.8E-05
SWHI	INORG	Manganese	7439-96-5	T	D	24	24	2.30E-04	6.37E-01			8.6E-01	7.4E-01			9.1E+03	7.0E-05
SWHI	INORG	Mercury	7439-97-6	D	D	22	2	7.50E-05	9.00E-04	6.90E-05	2.00E-04	2.0E-03	5.0E-02	5.6E-02	1.8E-03	5.6E-02	1.8E-03
SWHI	INORG	Mercury	7439-97-6	T	D	24	2	7.50E-05	9.00E-05	6.90E-05	2.00E-04	2.0E-03	4.5E-02	5.6E-02	1.6E-03	5.6E-02	1.6E-03
SWHI	INORG	Nickel	7440-02-0	D	A	22	17	2.40E-03	1.08E-02	2.20E-03	2.00E-02	1.0E-01	1.1E-01			7.4E+04	1.5E-07
SWHI	INORG	Nickel	7440-02-0	T	A	24	13	2.20E-03	1.06E-02	2.20E-03	2.00E-02	1.0E-01	1.1E-01			7.4E+04	1.4E-07
SWHI	INORG	Selenium	7782-49-2	D	D	22				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
SWHI	INORG	Selenium	7782-49-2	T	D	24	2	5.10E-03	6.00E-03	4.50E-03	5.00E-03	5.0E-02	1.2E-01			9.7E+02	6.2E-06
SWHI	INORG	Silver	7440-22-4	D	D	22				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
SWHI	INORG	Silver	7440-22-4	T	D	24				9.80E-04	5.00E-03	3.4E-02				1.5E+03	
SWHI	INORG	Thallium	7440-28-0	D		22	13	3.10E-05	1.50E-02	1.80E-05	1.00E-02	2.0E-03	**7.5E+00**			1.3E+01	1.2E-03
SWHI	INORG	Thallium	7440-28-0	T		24	12	1.80E-05	1.59E-02	1.80E-05	1.00E-02	2.0E-03	**8.0E+00**			1.3E+01	1.2E-03
SWHI	INORG	Vanadium	7440-62-2	D		22	4	1.10E-03	6.50E-03	8.20E-04	1.00E-02	4.5E-03	**1.4E+00**			9.7E+02	6.7E-06
SWHI	INORG	Vanadium	7440-62-2	T		24	4	1.10E-03	6.40E-03	6.70E-04	1.00E-02	4.5E-03	**1.4E+00**			9.7E+02	6.6E-06
SWHI	INORG	Zinc	7440-66-6	D	D	22	3	1.73E-02	2.90E-02	1.20E-02	2.00E-02	2.4E+00	1.2E-02			1.1E+05	2.6E-07
SWHI	INORG	Zinc	7440-66-6	T	D	24	7	1.30E-02	3.46E-02	1.20E-02	2.00E-02	2.4E+00	1.4E-02			1.1E+05	3.1E-07
W-01	VOC	Acetone	67-64-1	T	ID	38	10	6.80E-04	3.30E-02	5.10E-04	1.00E-02	7.3E-01	4.5E-02	1.0E+06	3.3E-08	3.1E+04	1.1E-06
W-01	VOC	Benzene	71-43-2	T	A	38	17	1.60E-04	9.10E-02	1.60E-04	1.00E-03	5.0E-03	**1.8E+01**	3.5E+01	2.6E-03	1.1E+01	8.3E-03
W-01	VOC	Bromodichloromethane	75-27-4	T	B2	38				1.70E-04	1.00E-03	1.0E-01		3.7E+01		1.4E+01	
W-01	VOC	Bromoform	75-25-2	T	B2	38				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
W-01	VOC	Bromomethane	74-83-9	T	D	37				2.00E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
W-01	VOC	2-Butanone	78-93-3	T	ID	38	16	4.30E-04	7.30E-03	4.10E-04	1.00E-02	1.3E+01	5.6E-04	2.4E+05	3.0E-08	2.4E+05	3.0E-08
W-01	VOC	Carbon Disulfide	75-15-0	T		38	1	1.30E-03	1.30E-03	2.00E-04	1.00E-03	8.0E-01	1.6E-03	5.5E+02	2.4E-06	1.2E+03	1.1E-06
W-01	VOC	Carbon Tetrachloride	56-23-5	T	B2	38				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
W-01	VOC	Chlorobenzene	108-90-7	T	D	38				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
W-01	VOC	Chloroethane	75-00-3	T		38	11	5.30E-04	4.50E-02	2.60E-04	1.00E-03	4.3E-01	1.0E-01	5.7E+03	7.9E-06	4.4E+02	1.0E-04
W-01	VOC	Chloroform	67-66-3	T	B2	38	1	8.10E-04	8.10E-04	1.40E-04	1.00E-03	1.0E-01	8.1E-03	1.8E+02	4.5E-06	1.5E+02	5.4E-06
W-01	VOC	Chloromethane	74-87-3	T	D	38	4	1.30E-04	1.70E-04	1.30E-04	1.00E-03	2.6E-01	6.5E-04	4.5E+01	3.8E-06	4.9E+02	3.5E-07
W-01	VOC	Cumene	98-82-8	T	D	38	12	1.70E-04	8.60E-03	1.20E-04	1.00E-03	8.0E-01	1.1E-02	5.6E+01	1.5E-04	5.6E+01	1.5E-04
W-01	VOC	Cyclohexane	110-82-7	T	ID	38	11	1.70E-04	1.90E-02	1.30E-04	1.00E-03						
W-01	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	38				6.20E-04	2.10E-03	2.0E-04		1.2E+00		3.9E-01	
W-01	VOC	Dibromochloromethane	124-48-1	T	C	38				2.60E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
W-01	VOC	1,2-Dibromoethane	106-93-4	T	B2	38				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
W-01	VOC	1,2-Dichlorobenzene	95-50-1	T	D	38	4	4.80E-04	2.00E-03	1.10E-04	1.00E-03	6.0E-01	3.3E-03	1.6E+02	1.3E-05	1.6E+02	1.3E-05
W-01	VOC	1,3-Dichlorobenzene	541-73-1	T	D	38				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
W-01	VOC	1,4-Dichlorobenzene	106-46-7	T	C	38				1.70E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
W-01	VOC	Dichlorodifluoromethane	75-71-8	T		38				2.60E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	
W-01	VOC	1,1-Dichloroethane	75-34-3	T	C	38	11	1.60E-04	2.30E-02	1.60E-04	1.00E-03	8.8E-01	2.6E-02	2.3E+03	1.0E-05	2.4E+03	9.6E-06
W-01	VOC	1,2-Dichloroethane	107-06-2	T	B2	38	1	4.50E-04	4.50E-04	2.10E-04	1.00E-03	5.0E-03	9.0E-02	5.9E+01	7.6E-06	1.9E+01	2.4E-05
W-01	VOC	1,1-Dichloroethene	75-35-4	T	C	38				1.40E-04	1.00E-03	7.0E-03		1.3E+00		1.1E+01	
W-01	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	38	7	4.50E-04	3.90E-03	2.20E-04	5.00E-04	7.0E-02	5.6E-02	2.1E+02	1.9E-05	2.0E+02	2.0E-05
W-01	VOC	trans-1,2-Dichloroethene	156-60-5	T		38	3	1.80E-04	2.10E-03	1.50E-04	5.00E-04	1.0E-01	2.1E-02	2.0E+02	1.1E-05	2.2E+02	9.5E-06
W-01	VOC	1,2-Dichloropropane	78-87-5	T	B2	38				1.90E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
W-01	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	38				2.70E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
W-01	VOC	Ethyl Benzene	100-41-4	T	D	38	8	2.40E-04	1.90E-02	1.20E-04	1.00E-03	7.0E-01	2.7E-02	1.7E+02	1.1E-04	1.7E+02	1.1E-04
W-01	VOC	2-Hexanone	591-78-6	T		38				4.60E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-01	VOC	Methyl Acetate	79-20-9	T		38				4.10E-04	1.00E-02						
W-01	VOC	Methyl tert-butyl ether	1634-04-4	T		38	3	8.40E-04	7.10E-03	1.30E-04	5.00E-03	2.4E-01	3.0E-02	4.7E+04	1.5E-07	6.1E+02	1.2E-05
W-01	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	37	4	2.88E-04	1.60E-03	2.30E-04	1.00E-02	1.8E+00	8.9E-04	2.0E+04	8.0E-08	1.3E+04	1.2E-07
W-01	VOC	Methylcyclohexane	108-87-2	T		38	11	3.30E-04	7.60E-03	1.50E-04	1.00E-03						
W-01	VOC	Methylene Chloride	75-09-2	T	B2	38	5	5.00E-04	7.00E-03	2.90E-04	1.00E-03	5.0E-03	**1.4E+00**	1.4E+03	5.0E-06	2.2E+02	3.2E-05
W-01	VOC	Styrene	100-42-5	T		38				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
W-01	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	38				2.50E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
W-01	VOC	Tetrachloroethene	127-18-4	T	C-B2	37	3	4.30E-04	2.60E-03	2.30E-04	1.00E-03	5.0E-03	5.2E-01	1.7E+02	1.5E-05	1.2E+01	2.2E-04
W-01	VOC	Toluene	108-88-3	T	D	38	14	2.50E-04	1.50E-02	1.80E-04	1.00E-03	1.0E+00	1.5E-02	5.3E+02	2.8E-05	5.3E+02	2.8E-05
W-01	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	38	1	9.20E-04	9.20E-04	1.70E-04	1.00E-03	7.0E-02	1.3E-02	3.0E+02	3.1E-06	1.9E+01	4.8E-05
W-01	VOC	1,1,1-Trichloroethane	71-55-6	T	D	38				1.50E-04	1.00E-03	2.0E-01		1.3E+03		1.3E+03	
W-01	VOC	1,1,2-Trichloroethane	79-00-5	T	C	38				3.00E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
W-01	VOC	Trichloroethene	79-01-6	T	C-B2	38	6	2.20E-04	4.40E-03	1.40E-04	1.00E-03	5.0E-03	2.8E-01	9.7E+01	1.4E-05	2.2E+01	6.4E-05
W-01	VOC	Trichlorofluoromethane	75-69-4	T		38	2	5.60E-04	6.80E-04	2.80E-04	1.00E-03	2.6E+00	2.5E-04	1.1E+03	6.0E-07	1.1E+03	6.0E-07
W-01	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		38				3.20E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
W-01	VOC	Vinyl Chloride	75-01-4	T	A	38	9	8.10E-04	1.80E-02	1.50E-04	1.00E-03	2.0E-03	**9.0E+00**	1.3E+01	1.4E-03	1.0E+00	1.8E-02
W-01	VOC	Xylenes (total)	1330-20-7	T	ID	38	10	6.90E-04	2.00E-01	3.30E-04	1.00E-03	1.0E+01	2.0E-02	1.9E+02	1.1E-03	1.9E+02	1.1E-03
W-01	SVOC	Acenaphthene	83-32-9	T		38	1	2.40E-03	2.40E-03	8.00E-04	2.50E-02	1.3E+00	1.8E-03	4.2E+00	5.7E-04	4.2E+00	5.7E-04
W-01	SVOC	Acenaphthylene	208-96-8	T	D	38				7.10E-04	2.50E-02	5.2E-02		3.9E+00		3.9E+00	
W-01	SVOC	Acetophenone	98-86-2	T	D	38	1	2.70E-03	2.70E-03	2.60E-03	5.00E-02	1.5E+00	1.8E-03	6.1E+03	4.4E-07	6.1E+03	4.4E-07
W-01	SVOC	Anthracene	120-12-7	T	D	38				6.80E-04	2.50E-02	4.3E-02		4.3E-02		4.3E-02	
W-01	SVOC	Atrazine	1912-24-9	T		38				2.50E-03	2.50E-02	3.0E-03				5.4E+00	
W-01	SVOC	Benzaldehyde	100-52-7	T		38				2.80E-03	5.00E-02						
W-01	SVOC	Benzo(a)anthracene	56-55-3	T	B2	38				7.00E-04	2.50E-02	2.1E-03				9.4E-03	
W-01	SVOC	Benzo(a)pyrene	50-32-8	T	B2	38				7.30E-04	2.50E-02	5.0E-03				2.0E-03	
W-01	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	38				9.40E-04	2.50E-02	2.0E-03				2.0E-03	
W-01	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	38				8.50E-04	2.50E-02	5.0E-03				5.0E-03	
W-01	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	38				8.40E-04	2.50E-02	5.0E-03				5.0E-03	
W-01	SVOC	Biphenyl	92-52-4	T	D	38				2.60E-03	5.00E-02						
W-01	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	38				8.70E-04	2.50E-02						
W-01	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	36				9.70E-04	2.50E-02	2.0E-03		2.1E+02		5.7E+00	
W-01	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	38	2	2.70E-03	4.10E-03	2.70E-03	2.50E-02	6.0E-03	6.8E-01			3.2E-01	1.3E-02
W-01	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	38				8.80E-04	2.50E-02						
W-01	SVOC	Butylbenzylphthalate	85-68-7	T	C	38				8.80E-04	2.50E-02	1.2E+00				2.7E+00	
W-01	SVOC	Caprolactam	105-60-2	T		38				2.50E-03	5.00E-02	5.8E+00				3.9E+05	
W-01	SVOC	Carbazole	86-74-8	T	B2	38	2	1.50E-03	2.80E-03	8.20E-04	5.00E-02	8.5E-02	3.3E-02			7.4E+00	3.8E-04
W-01	SVOC	4-Chloro-3-methylphenol	59-50-7	T		37				9.90E-04	2.50E-02	1.5E-01				7.9E+01	
W-01	SVOC	4-Chloroaniline	106-47-8	T		37				6.10E-04	5.00E-02						
W-01	SVOC	2-Chloronaphthalene	91-58-7	T		38				8.50E-04	2.50E-02	1.8E+00				6.7E+00	
W-01	SVOC	2-Chlorophenol	95-57-8	T		38				1.00E-03	2.50E-02	4.5E-02				9.4E+01	
W-01	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		38				7.90E-04	2.50E-02						
W-01	SVOC	Chrysene	218-01-9	T	B2	38				7.50E-04	2.50E-02	5.0E-03				5.0E-03	
W-01	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	38				7.90E-04	2.50E-02	2.0E-03				2.0E-03	
W-01	SVOC	Dibenzofuran	132-64-9	T	D	38	1	1.80E-03	1.80E-03	1.10E-03	2.50E-02						
W-01	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	36				9.30E-04	1.00E-01	1.1E-03				1.8E-01	
W-01	SVOC	2,4-Dichlorophenol	120-83-2	T		38				8.50E-04	5.00E-02	7.3E-02				4.8E+01	
W-01	SVOC	Diethylphthalate	84-66-2	T	D	38				6.50E-04	2.50E-02	5.5E+00				1.1E+03	
W-01	SVOC	2,4-Dimethylphenol	105-67-9	T		37	3	1.90E-03	1.10E-02	8.50E-04	2.50E-02	3.7E-01	3.0E-02			5.2E+02	2.1E-05
W-01	SVOC	Dimethylphthalate	131-11-3	T	D	38				7.60E-04	2.50E-02	7.3E+01				4.2E+03	
W-01	SVOC	Di-n-butylphthalate	84-74-2	T	D	38	3	1.25E-03	2.30E-03	4.70E-04	2.50E-02	8.8E-01	2.6E-03			1.1E+01	2.1E-04
W-01	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		38				1.30E-03	1.00E-01	2.0E-02				9.5E+00	
W-01	SVOC	2,4-Dinitrophenol	51-28-5	T		38				3.00E-03	1.00E-01						
W-01	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	38				9.00E-04	2.50E-02	7.7E-03				8.6E+00	
W-01	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	38				5.70E-04	2.50E-02						
W-01	SVOC	Di-n-octylphthalate	117-84-0	T		38				1.10E-03	2.50E-02	1.3E-01				4.0E-01	
W-01	SVOC	Fluoranthene	206-44-0	T	D	38	1	9.90E-04	9.90E-04	8.10E-04	2.50E-02	2.1E-01	4.7E-03	2.1E-01	4.7E-03	2.1E-01	4.7E-03

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-01	SVOC	Fluorene	86-73-7	T	D	38	1	2.20E-03	2.20E-03	1.00E-03	2.50E-02	2.9E-01	2.5E-03	2.0E+00	1.1E-03	2.0E+00	1.1E-03
W-01	SVOC	Hexachlorobenzene	118-74-1	T	B2	38				7.40E-04	2.50E-02	1.0E-03		3.0E+00		4.6E-03	
W-01	SVOC	Hexachlorobutadiene	87-68-3	T	C	36				7.30E-04	2.50E-02	1.5E-02		3.2E+00		4.0E-01	
W-01	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	35				1.10E-03	2.50E-02	5.0E-02		4.2E-01		1.6E+00	
W-01	SVOC	Hexachloroethane	67-72-1	T	C	38				7.40E-04	2.50E-02	7.3E-03		5.0E+01		1.9E+00	
W-01	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	38				6.30E-04	2.50E-02	2.0E-03				2.0E-03	
W-01	SVOC	Isophorone	78-59-1	T	C	38				6.30E-04	2.50E-02	7.7E-01				9.9E+02	
W-01	SVOC	2-Methylnaphthalene	91-57-6	T	ID	38	6	8.50E-04	6.10E-03	6.40E-04	2.50E-02	2.6E-01	2.3E-02			2.5E+01	2.4E-04
W-01	SVOC	Methylphenol (total)	1319-77-3	T		38	1	2.16E-02	2.16E-02	1.30E-03	2.50E-02	3.7E-01	5.8E-02			8.1E+02	2.7E-05
W-01	SVOC	Naphthalene	91-20-3	T	C	37	4	6.20E-03	1.90E-02	7.50E-04	2.50E-02	5.2E-01	2.5E-02	3.1E+01	4.2E-04	3.1E+01	4.2E-04
W-01	SVOC	2-Nitroaniline	88-74-4	T		38				7.50E-04	1.00E-01						
W-01	SVOC	3-Nitroaniline	99-09-2	T	C	37				7.10E-04	1.00E-01						
W-01	SVOC	4-Nitroaniline	100-01-6	T	C	37				1.30E-03	1.00E-01						
W-01	SVOC	Nitrobenzene	98-95-3	T	D	38				8.10E-04	2.50E-02	3.4E-03		5.5E+02		1.1E+01	
W-01	SVOC	2-Nitrophenol	88-75-5	T		38				2.10E-03	2.50E-02	2.0E-02				7.9E+01	
W-01	SVOC	4-Nitrophenol	100-02-7	T		38				1.90E-03	1.00E-01						
W-01	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	38				1.40E-03	2.50E-02	2.7E-01				3.5E+01	
W-01	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	38				6.70E-04	2.50E-02	5.0E-03				3.6E-01	
W-01	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	38				7.80E-04	2.50E-02						
W-01	SVOC	Pentachlorophenol	87-86-5	T	B2	38				2.40E-03	2.50E-02	1.0E-03				2.0E-01	
W-01	SVOC	Phenanthrene	85-01-8	T	D	38				8.20E-04	2.50E-02	5.2E-02		1.0E+00		1.0E+00	
W-01	SVOC	Phenol	108-95-2	T	ID	38	1	1.90E-02	1.90E-02	2.60E-03	2.50E-02	4.4E+00	4.3E-03			2.9E+04	6.6E-07
W-01	SVOC	Pyrene	129-00-0	T	D	38				1.10E-03	2.50E-02	1.4E-01		1.4E-01		1.4E-01	
W-01	SVOC	2,4,5-Trichlorophenol	95-95-4	T		38				1.20E-03	2.50E-02	7.3E-01				1.7E+02	
W-01	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	37				1.70E-03	2.50E-02	1.2E-01				1.0E+01	
W-01	P/PCB	PCBs (total)	1336-36-3	D	B2	12	1	5.22E-04	5.22E-04	8.20E-05	4.00E-04	5.0E-04	1.0E+00	4.5E-02	1.2E-02	3.3E-03	1.6E-01
W-01	P/PCB	PCBs (total)	1336-36-3	T	B2	41	8	3.67E-04	4.59E-03	8.20E-05	4.00E-04	5.0E-04	**9.2E+00**	4.5E-02	1.0E-01	3.3E-03	**1.4E+00**
W-01	INORG	Antimony	7440-36-0	D		28	4	5.80E-03	7.90E-03	2.20E-03	2.50E-02	6.0E-03	**1.3E+00**			6.8E+01	1.2E-04
W-01	INORG	Antimony	7440-36-0	T		38	5	2.60E-03	8.60E-03	2.20E-03	2.50E-02	6.0E-03	**1.4E+00**			6.8E+01	1.3E-04
W-01	INORG	Arsenic	7440-38-2	D	A	28	19	4.00E-03	2.69E-02	3.90E-03	1.00E-02	5.0E-02	5.4E-01			4.3E+00	6.3E-03
W-01	INORG	Arsenic	7440-38-2	T	A	38	26	2.10E-03	2.64E-02	2.10E-03	1.00E-02	5.0E-02	5.3E-01			4.3E+00	6.1E-03
W-01	INORG	Barium	7440-39-3	D	D	28	28	5.63E-02	4.07E+00			2.0E+00	**2.0E+00**			1.4E+04	2.9E-04
W-01	INORG	Barium	7440-39-3	T	D	38	38	3.50E-02	4.57E+00			2.0E+00	**2.3E+00**			1.4E+04	3.3E-04
W-01	INORG	Beryllium	7440-41-7	D	B1	28	1	7.50E-04	7.50E-04	5.40E-04	1.00E-03	4.0E-03	1.9E-01			2.9E+02	2.6E-06
W-01	INORG	Beryllium	7440-41-7	T	B1	38				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
W-01	INORG	Cadmium	7440-43-9	D	B1	28	4	3.00E-04	6.90E-04	2.80E-04	5.00E-03	5.0E-03	1.4E-01			1.9E+02	3.6E-06
W-01	INORG	Cadmium	7440-43-9	T	B1	38	7	2.20E-04	1.10E-03	2.80E-04	5.00E-03	5.0E-03	2.2E-01			1.9E+02	5.8E-06
W-01	INORG	Chromium (total)	7440-47-3	D		28	3	1.80E-03	8.50E-03	1.40E-03	1.00E-02	1.0E-01	8.5E-02			4.6E+02	1.8E-05
W-01	INORG	Chromium (total)	7440-47-3	T		38	5	1.40E-03	3.05E-02	1.40E-03	1.00E-02	1.0E-01	3.1E-01			4.6E+02	6.6E-05
W-01	INORG	Cobalt	7440-48-4	D	B1	28	9	1.30E-03	3.50E-03	1.30E-03	2.00E-02	4.0E-02	8.8E-02			2.4E+03	1.5E-06
W-01	INORG	Cobalt	7440-48-4	T	B1	38	13	7.60E-04	6.60E-03	7.40E-04	2.00E-02	4.0E-02	1.7E-01			2.4E+03	2.8E-06
W-01	INORG	Copper	7440-50-8	D	D	28	2	4.50E-03	5.60E-03	4.20E-03	5.00E-03	1.4E+00	4.0E-03			7.4E+03	7.6E-07
W-01	INORG	Copper	7440-50-8	T	D	38	7	2.30E-03	2.22E-02	1.70E-03	5.00E-03	1.4E+00	1.6E-02			7.4E+03	3.0E-06
W-01	INORG	Cyanide (total)	57-12-5	T	D	33	22	2.00E-03	1.75E-02	1.70E-03	1.00E-02	2.0E-01	8.8E-02			5.7E+01	3.1E-04
W-01	INORG	Lead	7439-92-1	D	B2	28				2.50E-03	3.00E-03	4.0E-03					
W-01	INORG	Lead	7439-92-1	T	B2	38	7	1.80E-03	2.71E-02	1.60E-03	3.00E-03	4.0E-03	**6.8E+00**				
W-01	INORG	Manganese	7439-96-5	D	D	28	27	4.72E-02	9.52E-01	9.00E-04	9.00E-04	8.6E-01	**1.1E+00**			9.1E+03	1.0E-04
W-01	INORG	Manganese	7439-96-5	T	D	38	38	1.30E-03	1.22E+00			8.6E-01	**1.4E+00**			9.1E+03	1.3E-04
W-01	INORG	Mercury	7439-97-6	D	D	28	6	8.00E-05	1.30E-04	6.90E-05	2.00E-04	2.0E-03	6.5E-02	5.6E-02	2.3E-03	5.6E-02	2.3E-03
W-01	INORG	Mercury	7439-97-6	T	D	38	6	6.75E-05	1.30E-04	6.90E-05	2.00E-04	2.0E-03	6.0E-02	5.6E-02	2.1E-03	5.6E-02	2.1E-03
W-01	INORG	Nickel	7440-02-0	D	A	28	19	2.40E-03	1.59E-02	2.20E-03	2.00E-02	1.0E-01	1.6E-01			7.4E+04	2.1E-07
W-01	INORG	Nickel	7440-02-0	T	A	38	21	2.60E-03	1.94E-02	2.20E-03	2.00E-02	1.0E-01	1.9E-01			7.4E+04	2.6E-07
W-01	INORG	Selenium	7782-49-2	D	D	28				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
W-01	INORG	Selenium	7782-49-2	T	D	38	1	4.90E-03	4.90E-03	4.50E-03	5.00E-03	5.0E-02	9.8E-02			9.7E+02	5.1E-06
W-01	INORG	Silver	7440-22-4	D	D	28				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
W-01	INORG	Silver	7440-22-4	T	D	38	1	1.50E-03	1.50E-03	9.80E-04	5.00E-03	3.4E-02	4.4E-02			1.5E+03	1.0E-06

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-01	INORG	Thallium	7440-28-0	D		28	6	4.30E-05	9.10E-03	1.80E-05	1.00E-02	2.0E-03	**4.6E+00**			1.3E+01	7.0E-04
W-01	INORG	Thallium	7440-28-0	T		38	4	1.80E-05	1.02E-02	1.80E-05	1.00E-02	2.0E-03	**5.1E+00**			1.3E+01	7.8E-04
W-01	INORG	Vanadium	7440-62-2	D		28	4	1.00E-03	2.45E-02	8.20E-04	1.00E-02	4.5E-03	**5.4E+00**			9.7E+02	2.5E-05
W-01	INORG	Vanadium	7440-62-2	T		38	8	8.40E-04	4.84E-02	6.70E-04	1.00E-02	4.5E-03	**1.1E+01**			9.7E+02	5.0E-05
W-01	INORG	Zinc	7440-66-6	D	D	28	2	1.56E-02	2.09E-02	1.20E-02	2.00E-02	2.4E+00	8.7E-03			1.1E+05	1.9E-07
W-01	INORG	Zinc	7440-66-6	T	D	38	6	1.85E-02	3.82E-02	1.20E-02	2.00E-02	2.4E+00	1.6E-02			1.1E+05	3.5E-07
W-01	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	D	B2	4	3	1.99E-09	3.03E-09	4.57E-09	4.57E-09	3.0E-08	1.0E-01			1.0E-08	3.0E-01
W-01	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	31	15	1.63E-09	2.16E-08	2.34E-09	3.96E-08	3.0E-08	7.2E-01			1.0E-08	**2.2E+00**
W-05	VOC	Acetone	67-64-1	T	ID	8				5.10E-04	2.00E-02	7.3E-01		1.0E+06		3.1E+04	
W-05	VOC	Benzene	71-43-2	T	A	8	2	3.50E-04	3.90E-04	1.60E-04	2.00E-03	5.0E-03	9.8E-02	3.5E+01	1.4E-05	1.1E+01	4.5E-05
W-05	VOC	Bromodichloromethane	75-27-4	T	B2	8	1	4.60E-04	4.60E-04	1.70E-04	2.00E-03	1.0E-01	4.6E-03	3.7E+01	1.2E-05	1.4E+01	3.3E-05
W-05	VOC	Bromoform	75-25-2	T	B2	8				1.80E-04	2.00E-03	1.0E-01		3.1E+03		1.4E+02	
W-05	VOC	Bromomethane	74-83-9	T	D	8				2.00E-04	2.00E-03	1.0E-02		9.0E+00		7.0E+01	
W-05	VOC	2-Butanone	78-93-3	T	ID	8	2	1.78E-03	4.30E-03	4.10E-04	1.00E-02	1.3E+01	3.8E-04	2.4E+05	2.0E-08	2.4E+05	2.0E-08
W-05	VOC	Carbon Disulfide	75-15-0	T						2.00E-03	2.00E-03	8.0E-01		5.5E+02		1.2E+03	
W-05	VOC	Carbon Tetrachloride	56-23-5	T	B2					1.20E-04	2.00E-03	5.0E-03		2.4E+00		4.6E+00	
W-05	VOC	Chlorobenzene	108-90-7	T	D	8				1.40E-04	2.00E-03	1.0E-01		4.7E+02		8.6E+01	
W-05	VOC	Chloroethane	75-00-3	T		8	2	3.60E-04	3.70E-03	2.60E-04	1.43E-03	4.3E-01	1.2E-01	5.7E+03	8.8E-06	4.4E+02	1.1E-04
W-05	VOC	Chloroform	67-66-3	T	B2	8	4	5.50E-04	2.10E-03	1.40E-04	7.70E-04	1.0E-01	2.1E-02	1.8E+02	1.2E-05	1.5E+02	1.4E-05
W-05	VOC	Chloromethane	74-87-3	T	D	8	2	3.00E-04	4.75E-04	1.30E-04	2.00E-03	2.6E-01	1.8E-03	4.5E+01	1.1E-05	4.9E+02	9.7E-07
W-05	VOC	Cumene	98-82-8	T	D	8				1.20E-04	2.00E-03	8.0E-01		5.6E+01		5.6E+01	
W-05	VOC	Cyclohexane	110-82-7	T	ID	8				1.30E-04	2.00E-03						
W-05	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				6.20E-04	4.00E-03	2.0E-04		1.2E+00		3.9E-01	
W-05	VOC	Dibromochloromethane	124-48-1	T	C	8				2.60E-04	2.00E-03	1.0E-01		1.1E+02		1.8E+01	
W-05	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				2.20E-04	2.00E-03	1.0E-03		1.5E+01		2.5E-02	
W-05	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				1.10E-04	2.00E-03	6.0E-01		1.6E+02		1.6E+02	
W-05	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				1.50E-04	2.00E-03	6.6E-03				2.0E+00	
W-05	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				1.70E-04	2.00E-03	7.5E-02		7.4E+01		6.4E+00	
W-05	VOC	Dichlorodifluoromethane	75-71-8	T		8				2.60E-04	4.00E-03	1.7E+00		3.0E+02		3.0E+02	
W-05	VOC	1,1-Dichloroethane	75-34-3	T	C	8	2	2.00E-02	3.00E-02	1.60E-04	1.00E-03	8.8E-01	3.4E-02	2.3E+03	1.3E-05	2.4E+03	1.3E-05
W-05	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.10E-04	2.00E-03	5.0E-03		5.9E+01		1.9E+01	
W-05	VOC	1,1-Dichloroethene	75-35-4	T	C	8	1	7.80E-04	7.80E-04	2.40E-04	1.32E-03	7.0E-03	1.1E-01	1.3E+00	6.0E-04	1.1E+01	7.1E-05
W-05	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8	3	3.20E-04	1.10E-03	2.20E-04	1.21E-03	7.0E-02	1.6E-02	2.1E+02	5.2E-06	2.0E+02	5.5E-06
W-05	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				1.50E-04	1.00E-03	1.0E-01		2.0E+02		2.2E+02	
W-05	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				1.70E-04	2.00E-03	5.0E-03		3.6E+01		1.6E+01	
W-05	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				2.70E-04	2.00E-03	8.5E-03		2.6E+01		5.5E+00	
W-05	VOC	Ethyl Benzene	100-41-4	T	D	8				1.20E-04	2.00E-03	7.0E-01		1.7E+02		1.7E+02	
W-05	VOC	2-Hexanone	591-78-6	T		8				4.60E-04	2.00E-02	1.0E+00		8.7E+03		5.2E+03	
W-05	VOC	Methyl Acetate	79-20-9	T		8				4.10E-04	2.00E-02						
W-05	VOC	Methyl tert-butyl ether	1634-04-4	T		8				1.30E-04	1.00E-02	2.4E-01		4.7E+04		6.1E+02	
W-05	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8	3	5.00E-04	1.60E-03	2.30E-04	2.00E-02	1.8E+00	8.9E-04	2.0E+04	8.0E-08	1.3E+04	1.2E-07
W-05	VOC	Methylcyclohexane	108-87-2	T		8				1.50E-04	2.00E-03						
W-05	VOC	Methylene Chloride	75-09-2	T	B2	8	1	7.70E-04	7.70E-04	3.40E-04	1.87E-03	5.0E-03	1.5E-01	1.4E+03	5.5E-07	2.2E+02	3.5E-06
W-05	VOC	Styrene	100-42-5	T		8				1.50E-04	2.00E-03	1.0E-01		3.1E+02		9.7E+00	
W-05	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				2.50E-04	2.00E-03	8.5E-03		7.7E+01		4.7E+00	
W-05	VOC	Tetrachloroethene	127-18-4	T	C-B2	8				2.30E-04	2.00E-03	5.0E-03		1.7E+02		1.2E+01	
W-05	VOC	Toluene	108-88-3	T	D	8	3	2.60E-04	6.05E-04	1.80E-04	1.00E-03	1.0E+00	6.1E-04	5.3E+02	1.1E-06	5.3E+02	1.1E-06
W-05	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				1.70E-04	2.00E-03	7.0E-02		3.0E+02		1.9E+01	
W-05	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8	1	5.65E-04	5.65E-04	1.50E-04	2.00E-03	2.0E-01	2.8E-03	1.3E+03	4.3E-07	1.3E+03	4.3E-07
W-05	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.00E-04	2.00E-03	5.0E-03		1.1E+02		2.1E+01	
W-05	VOC	Trichloroethene	79-01-6	T	C-B2	8				1.40E-04	2.00E-03	5.0E-03		9.7E+01		2.2E+01	
W-05	VOC	Trichlorofluoromethane	75-69-4	T		8				2.80E-04	2.00E-03	2.6E+00		1.1E+03		1.1E+03	
W-05	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				2.20E-04	2.00E-03	1.7E+02		1.7E+02		1.7E+02	
W-05	VOC	Vinyl Chloride	75-01-4	T	A	8	2	2.20E-04	2.70E-04	1.50E-04	2.00E-03	2.0E-03	1.4E-01	1.3E+01	2.1E-05	1.0E+00	2.7E-04
W-05	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	4.30E-04	4.30E-04	3.30E-04	2.00E-03	1.0E+01	4.3E-05	1.9E+02	2.3E-06	1.9E+02	2.3E-06
W-05	SVOC	Acenaphthene	83-32-9	T		8				8.00E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-05	SVOC	Acenaphthylene	208-96-8	T	D	8				7.10E-04	5.00E-03	2.2E-02		3.9E+00		3.9E+00	
W-05	SVOC	Acetophenone	98-86-2	T	D	8				2.60E-03	1.00E-02	7.5E+00		6.1E+03		6.1E+03	
W-05	SVOC	Anthracene	120-12-7	T	D	8	2	1.15E-03	1.20E-03	6.80E-04	5.00E-03	4.3E-02	2.8E-02	4.3E-02	2.8E-02	4.3E-02	2.8E-02
W-05	SVOC	Atrazine	1912-24-9	T		8				2.50E-03	6.70E-03	3.0E-03				5.4E+00	
W-05	SVOC	Benzaldehyde	100-52-7	T		8				2.80E-03	1.00E-02						
W-05	SVOC	Benzo(a)anthracene	56-55-3	T	B2	8				7.00E-04	5.00E-03	2.1E-03				9.4E-03	
W-05	SVOC	Benzo(a)pyrene	50-32-8	T	B2	8				7.30E-04	5.00E-03	5.0E-03				2.0E-03	
W-05	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	8				9.40E-04	5.00E-03	2.0E-03				2.0E-03	
W-05	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	8				8.50E-04	5.00E-03	5.0E-03				5.0E-03	
W-05	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	8				8.40E-04	5.00E-03	5.0E-03				5.0E-03	
W-05	SVOC	Biphenyl	92-52-4	T	D	8				2.60E-03	1.00E-02						
W-05	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	8				9.70E-04	5.00E-03						
W-05	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	8				9.70E-04	5.00E-03	2.0E-03		2.1E+02		5.7E+00	
W-05	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	8				2.70E-03	6.00E-03	6.0E-03				3.2E-01	
W-05	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	8				8.80E-04	5.00E-03						
W-05	SVOC	Butylbenzylphthalate	85-68-7	T	C	8				8.80E-04	5.00E-03	1.2E+00				2.7E+00	
W-05	SVOC	Caprolactam	105-60-2	T		8				2.50E-03	1.00E-02	5.8E+00				3.9E+05	
W-05	SVOC	Carbazole	86-74-8	T	B2	8	2	1.30E-03	1.55E-03	8.20E-04	1.00E-02	8.5E-02	1.8E-02			7.4E+00	2.1E-04
W-05	SVOC	4-Chloro-3-methylphenol	59-50-7	T		8				9.90E-04	5.00E-03	1.5E-01				7.9E+01	
W-05	SVOC	4-Chloroaniline	106-47-8	T		8				6.10E-04	1.00E-02						
W-05	SVOC	2-Chloronaphthalene	91-58-7	T		8				8.50E-04	5.00E-03	1.8E+00				6.7E+00	
W-05	SVOC	2-Chlorophenol	95-57-8	T		8				1.00E-03	5.00E-03	4.5E-02				9.4E+01	
W-05	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		8				7.90E-04	5.00E-03						
W-05	SVOC	Chrysene	218-01-9	T	B2	8				7.50E-04	5.00E-03	5.0E-03				5.0E-03	
W-05	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	8				7.90E-04	5.00E-03	2.0E-03				2.0E-03	
W-05	SVOC	Dibenzofuran	132-64-9	T	D	8				1.10E-03	5.00E-03						
W-05	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	8				9.30E-04	2.00E-02	1.1E-03				1.8E-01	
W-05	SVOC	2,4-Dichlorophenol	120-83-2	T		8				8.50E-04	1.00E-02	7.3E-02				4.8E+01	
W-05	SVOC	Diethylphthalate	84-66-2	T	D	8				6.50E-04	5.00E-03	5.5E+00				1.1E+03	
W-05	SVOC	2,4-Dimethylphenol	105-67-9	T		8				8.50E-04	5.00E-03	3.7E-01				5.2E+02	
W-05	SVOC	Dimethylphthalate	131-11-3	T	D	8				7.60E-04	5.00E-03	7.3E+01				4.2E+03	
W-05	SVOC	Di-n-butylphthalate	84-74-2	T	D	8				6.70E-04	5.00E-03	8.8E-01				1.1E+01	
W-05	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		8				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
W-05	SVOC	2,4-Dinitrophenol	51-28-5	T		8				3.00E-03	2.00E-02						
W-05	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	8				7.90E-04	5.00E-03	7.7E-03				8.6E+00	
W-05	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	8				5.70E-04	5.00E-03						
W-05	SVOC	Di-n-octylphthalate	117-84-0	T		8				1.10E-03	5.00E-03	1.3E-01				4.0E-01	
W-05	SVOC	Fluoranthene	206-44-0	T	D	8				8.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
W-05	SVOC	Fluorene	86-73-7	T	D	8	2	2.80E-03	6.80E-03	1.00E-03	5.00E-03	8.8E-01	7.7E-03	2.0E+00	3.4E-03	2.0E+00	3.4E-03
W-05	SVOC	Hexachlorobenzene	118-74-1	T	B2	8				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
W-05	SVOC	Hexachlorobutadiene	87-68-3	T	C	8				7.30E-04	5.00E-03	1.5E-02		3.2E+00		4.0E-01	
W-05	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	8				1.10E-03	5.00E-03	5.0E-02		4.2E-01		1.6E+00	
W-05	SVOC	Hexachloroethane	67-72-1	T	C	8				7.40E-04	5.00E-03	7.3E-03		5.0E+01		1.9E+00	
W-05	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	8				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
W-05	SVOC	Isophorone	78-59-1	T	C	8				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
W-05	SVOC	2-Methylnaphthalene	91-57-6	T	ID	8				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
W-05	SVOC	Methylphenol (total)	1319-77-3	T		8				1.30E-03	5.00E-03	3.7E-01				8.1E+02	
W-05	SVOC	Naphthalene	91-20-3	T	C	8	1	2.50E-03	2.50E-03	7.50E-04	5.00E-03	5.2E-01	4.8E-03	3.1E+01	8.1E-05	3.1E+01	8.1E-05
W-05	SVOC	2-Nitroaniline	88-74-4	T		8				7.00E-04	2.00E-02						
W-05	SVOC	3-Nitroaniline	99-09-2	T	C	8				3.10E-03	2.00E-02						
W-05	SVOC	4-Nitroaniline	100-01-6	T	C	8				1.30E-03	2.00E-02						
W-05	SVOC	Nitrobenzene	98-95-3	T	D	8				8.10E-04	5.00E-03	3.4E-03		5.5E+02		1.1E+01	
W-05	SVOC	2-Nitrophenol	88-75-5	T		8				1.00E-03	5.20E-03	2.0E-02				7.9E+01	
W-05	SVOC	4-Nitrophenol	100-02-7	T		8				1.90E-03	2.00E-02						
W-05	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	8				1.40E-03	5.00E-03	2.7E-01				3.5E+01	
W-05	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	8				6.70E-04	5.00E-03	5.0E-03				3.6E-01	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-05	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	8				7.80E-04	5.00E-03						
W-05	SVOC	Pentachlorophenol	87-86-5	T	B2	8				2.40E-03	6.00E-03	1.0E-03				2.0E-01	
W-05	SVOC	Phenanthrene	85-01-8	T	D	8	1	2.30E-03	2.30E-03	8.20E-04	5.00E-03	5.2E-02	4.4E-02	1.0E+00	2.3E-03	1.0E+00	2.3E-03
W-05	SVOC	Phenol	108-95-2	T	ID	8				2.60E-03	6.50E-03	4.4E+00				2.9E+04	
W-05	SVOC	Pyrene	129-00-0	T	D	8				1.10E-03	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
W-05	SVOC	2,4,5-Trichlorophenol	95-95-4	T		8				1.20E-03	5.00E-03	7.3E-01				1.7E+02	
W-05	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	8				1.70E-03	5.00E-03	1.2E-01				1.0E+01	
W-05	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	5.00E-04	5.0E-04		4.5E-02		3.3E-03	
W-05	P/PCB	PCBs (total)	1336-36-3	T	B2	8				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
W-05	INORG	Antimony	7440-36-0	D		8	2	8.30E-03	9.80E-03	2.50E-03	2.50E-02	6.0E-03	**1.6E+00**			6.8E+01	1.4E-04
W-05	INORG	Antimony	7440-36-0	T		8	2	9.25E-03	1.07E-02	2.50E-03	2.50E-02	6.0E-03	**1.8E+00**			6.8E+01	1.6E-04
W-05	INORG	Arsenic	7440-38-2	D	A	8	4	1.10E-03	4.75E-02	3.90E-03	1.00E-02	5.0E-02	9.5E-01			4.3E+00	1.1E-02
W-05	INORG	Arsenic	7440-38-2	T	A	8	4	1.20E-03	6.35E-02	3.90E-03	1.00E-02	5.0E-02	**1.2E+00**			4.3E+00	1.4E-02
W-05	INORG	Barium	7440-39-3	D	D	8	8	3.06E-02	3.00E-01			2.0E+00	1.5E-01			1.4E+04	2.1E-05
W-05	INORG	Barium	7440-39-3	T	D	8	8	3.25E-02	2.85E-01			2.0E+00	1.4E-01			1.4E+04	2.0E-05
W-05	INORG	Beryllium	7440-41-7	D	B1	8				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
W-05	INORG	Beryllium	7440-41-7	T	B1	8	3	3.50E-04	5.60E-04	5.40E-04	1.00E-03	4.0E-03	1.4E-01			2.9E+02	1.9E-06
W-05	INORG	Cadmium	7440-43-9	D	B1	8	3	2.20E-04	3.90E-04	2.80E-04	5.00E-03	5.0E-03	7.8E-02			1.9E+02	2.1E-06
W-05	INORG	Cadmium	7440-43-9	T	B1	8	3	2.90E-04	4.70E-04	2.80E-04	5.00E-03	5.0E-03	9.4E-02			1.9E+02	2.5E-06
W-05	INORG	Chromium (total)	7440-47-3	D		8	2	9.60E-03	1.72E-02	1.40E-03	1.00E-02	1.0E-01	1.7E-01			4.6E+02	3.7E-05
W-05	INORG	Chromium (total)	7440-47-3	T		8	2	1.04E-02	1.72E-02	1.40E-03	1.00E-02	1.0E-01	1.7E-01			4.6E+02	3.7E-05
W-05	INORG	Cobalt	7440-48-4	D	B1	8	4	3.00E-03	5.80E-03	1.30E-03	2.00E-02	4.0E-02	1.5E-01			2.4E+03	2.4E-06
W-05	INORG	Cobalt	7440-48-4	T	B1	8	4	1.70E-03	5.50E-03	1.30E-03	2.00E-02	4.0E-02	1.4E-01			2.4E+03	2.3E-06
W-05	INORG	Copper	7440-50-8	D	D	8	2	1.05E-02	4.26E-02	4.20E-03	5.00E-03	1.4E+00	3.0E-02			7.4E+03	5.8E-06
W-05	INORG	Copper	7440-50-8	T	D	8	2	1.37E-02	4.74E-02	4.20E-03	5.00E-03	1.4E+00	3.4E-02			7.4E+03	6.4E-06
W-05	INORG	Lead	7439-92-1	D	B2	8				2.50E-03	3.00E-03	4.0E-03					
W-05	INORG	Lead	7439-92-1	T	B2	8				2.50E-03	3.00E-03	4.0E-03					
W-05	INORG	Manganese	7439-96-5	D	D	8	8	1.38E-03	8.15E-01			8.6E-01	9.5E-01			9.1E+03	9.0E-05
W-05	INORG	Manganese	7439-96-5	T	D	8	8	2.48E-03	7.66E-01			8.6E-01	8.9E-01			9.1E+03	8.4E-05
W-05	INORG	Mercury	7439-97-6	D	D	8	2	8.20E-05	2.20E-04	6.90E-05	2.00E-04	2.0E-03	1.1E-01	5.6E-02	3.9E-03	5.6E-02	3.9E-03
W-05	INORG	Mercury	7439-97-6	T	D	8	1	3.00E-04	3.00E-04	6.90E-05	2.00E-04	2.0E-03	1.5E-01	5.6E-02	5.4E-03	5.6E-02	5.4E-03
W-05	INORG	Nickel	7440-02-0	D	A	8	6	2.70E-03	1.63E-02	2.20E-03	2.00E-02	1.0E-01	1.6E-01			7.4E+04	2.2E-07
W-05	INORG	Nickel	7440-02-0	T	A	8	6	2.90E-03	1.62E-02	2.20E-03	2.00E-02	1.0E-01	1.6E-01			7.4E+04	2.2E-07
W-05	INORG	Selenium	7782-49-2	D	D	8	2	2.78E-02	4.78E-02	4.50E-03	5.00E-03	5.0E-02	9.6E-01			9.7E+02	4.9E-05
W-05	INORG	Selenium	7782-49-2	T	D	8	2	2.88E-02	4.89E-02	4.50E-03	5.00E-03	5.0E-02	9.8E-01			9.7E+02	5.0E-05
W-05	INORG	Silver	7440-22-4	D	D	8				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
W-05	INORG	Silver	7440-22-4	T	D	8				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
W-05	INORG	Thallium	7440-28-0	D		8	5	3.25E-05	9.00E-03	1.80E-05	5.00E-03	2.0E-03	**4.5E+00**			1.3E+01	6.9E-04
W-05	INORG	Thallium	7440-28-0	T		8	3	3.60E-05	7.10E-03	1.80E-05	1.00E-02	2.0E-03	**3.6E+00**			1.3E+01	5.5E-04
W-05	INORG	Vanadium	7440-62-2	D		8	3	1.00E-03	7.32E-02	8.20E-04	1.00E-02	4.5E-03	**1.6E+01**			9.7E+02	7.5E-05
W-05	INORG	Vanadium	7440-62-2	T		8	4	8.30E-04	7.66E-02	8.20E-04	1.00E-02	4.5E-03	**1.7E+01**			9.7E+02	7.9E-05
W-05	INORG	Zinc	7440-66-6	D	D	8	1	1.28E-02	1.28E-02	1.20E-02	2.00E-02	2.4E+00	5.3E-03			1.1E+05	1.2E-07
W-05	INORG	Zinc	7440-66-6	T	D	8	2	1.33E-02	1.85E-02	1.20E-02	2.00E-02	2.4E+00	7.7E-03			1.1E+05	1.7E-07
W-08	VOC	Acetone	67-64-1	T	ID	19	6	1.63E-03	1.60E-01	5.10E-04	1.10E-03	7.3E-01	2.2E-01	1.0E+06	1.6E-07	3.1E+04	5.2E-06
W-08	VOC	Benzene	71-43-2	T	A	19	7	1.80E-04	6.25E-04	1.60E-04	4.00E-03	5.0E-03	1.3E-01	3.5E+01	1.8E-05	1.1E+01	5.7E-05
W-08	VOC	Bromodichloromethane	75-27-4	T	B2	19				1.70E-04	4.00E-03	1.0E-01		3.7E+01		1.4E+01	
W-08	VOC	Bromoform	75-25-2	T	B2	19				1.80E-04	4.00E-03	1.0E-01		3.1E+03		1.4E+02	
W-08	VOC	Bromomethane	74-83-9	T	D	16				1.60E-04	4.00E-03	1.0E-02		9.0E+00		7.0E+01	
W-08	VOC	2-Butanone	78-93-3	T	ID	19	3	5.40E-04	4.40E-03	3.60E-04	4.00E-02	1.3E+01	3.4E-04	2.4E+05	1.8E-08	2.4E+05	1.8E-08
W-08	VOC	Carbon Disulfide	75-15-0	T		19	8	2.50E-04	1.40E-03	3.00E-04	4.00E-03	8.0E-01	1.4E-03	5.5E+02	2.0E-06	1.2E+03	9.2E-07
W-08	VOC	Carbon Tetrachloride	56-23-5	T	B2	19				1.20E-04	4.00E-03	5.0E-03		2.4E+00		4.6E+00	
W-08	VOC	Chlorobenzene	108-90-7	T	D	19				1.40E-04	4.00E-03	1.0E-01		4.7E+02		8.6E+01	
W-08	VOC	Chloroethane	75-00-3	T		19				2.20E-04	4.00E-03	4.3E-01		5.7E+03		4.4E+02	
W-08	VOC	Chloroform	67-66-3	T	B2	19	4	1.40E-04	2.40E-04	1.40E-04	4.00E-03	1.0E-01	2.4E-03	1.8E+02	1.3E-06	1.5E+02	1.6E-06
W-08	VOC	Chloromethane	74-87-3	T	D	19	1	2.60E-04	2.60E-04	1.30E-04	4.00E-03	2.6E-01	1.0E-03	4.5E+01	5.8E-06	4.9E+02	5.3E-07
W-08	VOC	Cumene	98-82-8	T	D	19	6	1.60E-04	1.70E-03	1.20E-04	4.00E-03	8.0E-01	2.1E-03	5.6E+01	3.0E-05	5.6E+01	3.0E-05

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-08	VOC	Cyclohexane	110-82-7	T	ID	19	1	2.20E-04	2.20E-04	1.30E-04	4.00E-03						
W-08	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	19				5.30E-04	8.00E-03	2.0E-04		1.2E+00		3.9E-01	
W-08	VOC	Dibromochloromethane	124-48-1	T	C	19				2.50E-04	4.00E-03	1.0E-01		1.1E+02		1.8E+01	
W-08	VOC	1,2-Dibromoethane	106-93-4	T	B2	19				2.20E-04	4.00E-03	1.0E-03		1.5E+01		2.5E-02	
W-08	VOC	1,2-Dichlorobenzene	95-50-1	T	D	19				1.10E-04	4.00E-03	6.0E-01		1.6E+02		1.6E+02	
W-08	VOC	1,3-Dichlorobenzene	541-73-1	T	D	19				1.50E-04	4.00E-03	6.6E-03				2.0E+00	
W-08	VOC	1,4-Dichlorobenzene	106-46-7	T	C	19				1.60E-04	4.00E-03	7.5E-02		7.4E+01		6.4E+00	
W-08	VOC	Dichlorodifluoromethane	75-71-8	T		19				2.30E-04	8.00E-03	1.7E+00		3.0E+02		3.0E+02	
W-08	VOC	1,1-Dichloroethane	75-34-3	T	C	19	6	1.90E-04	3.00E-03	1.60E-04	4.00E-03	8.8E-01	3.4E-03	2.3E+03	1.3E-06	2.4E+03	1.3E-06
W-08	VOC	1,2-Dichloroethane	107-06-2	T	B2	19				2.10E-04	4.00E-03	5.0E-03		5.9E+01		1.9E+01	
W-08	VOC	1,1-Dichloroethene	75-35-4	T	C	19				2.50E-04	4.00E-03	7.0E-03		1.3E+00		1.1E+01	
W-08	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	19	2	1.00E-04	2.30E-03	2.20E-04	2.00E-03	7.0E-02	3.3E-02	2.1E+02	1.1E-05	2.0E+02	1.2E-05
W-08	VOC	trans-1,2-Dichloroethene	156-60-5	T		19	1	6.30E-04	6.30E-04	1.50E-04	2.00E-03	1.0E-01	6.3E-03	2.0E+02	3.2E-06	2.2E+02	2.9E-06
W-08	VOC	1,2-Dichloropropane	78-87-5	T	B2	19				1.70E-04	4.00E-03	5.0E-03		3.6E+01		1.6E+01	
W-08	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	19				1.50E-04	4.00E-03	8.5E-03		2.6E+01		5.5E+00	
W-08	VOC	Ethyl Benzene	100-41-4	T	D	19	8	5.00E-04	7.00E-04	1.20E-04	4.00E-03	7.0E-01	1.0E-03	1.7E+02	4.1E-06	1.7E+02	4.1E-06
W-08	VOC	2-Hexanone	591-78-6	T		19				3.10E-04	4.00E-02	1.0E+00		8.7E+03		5.2E+03	
W-08	VOC	Methyl Acetate	79-20-9	T		19				4.10E-04	4.00E-02						
W-08	VOC	Methyl tert-butyl ether	1634-04-4	T		19				1.30E-04	2.00E-02	2.4E-01		4.7E+04		6.1E+02	
W-08	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	18	8	4.30E-04	4.90E-03	2.30E-04	4.00E-02	1.8E+00	2.7E-03	2.0E+04	2.5E-07	1.3E+04	3.8E-07
W-08	VOC	Methylcyclohexane	108-87-2	T		19	1	1.90E-04	1.90E-04	1.50E-04	4.00E-03						
W-08	VOC	Methylene Chloride	75-09-2	T	B2	18	1	5.00E-04	5.00E-04	2.80E-04	4.00E-03	5.0E-03	1.0E-01	1.4E+03	3.6E-07	2.2E+02	2.3E-06
W-08	VOC	Styrene	100-42-5	T		19				1.50E-04	4.00E-03	1.0E-01		3.1E+02		9.7E+00	
W-08	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	19				2.30E-04	4.00E-03	8.5E-03		7.7E+01		4.7E+00	
W-08	VOC	Tetrachloroethene	127-18-4	T	C-B2	19	1	8.90E-04	8.90E-04	1.20E-04	4.00E-03	5.0E-03	1.8E-01	1.7E+02	5.2E-06	1.2E+01	7.4E-05
W-08	VOC	Toluene	108-88-3	T	D	19	9	2.00E-04	2.00E-03	1.80E-04	4.00E-03	1.0E+00	2.0E-03	5.3E+02	3.8E-06	5.3E+02	3.8E-06
W-08	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	19				1.50E-04	4.00E-03	7.0E-02		3.0E+02		1.9E+01	
W-08	VOC	1,1,1-Trichloroethane	71-55-6	T	D	19				1.50E-04	4.00E-03	2.0E-01		1.3E+03		1.3E+03	
W-08	VOC	1,1,2-Trichloroethane	79-00-5	T	C	19				2.10E-04	4.00E-03	5.0E-03		1.1E+02		2.1E+01	
W-08	VOC	Trichloroethene	79-01-6	T	C-B2	19	2	2.00E-04	2.60E-03	1.40E-04	4.00E-03	5.0E-03	5.2E-01	9.7E+01	2.7E-05	2.2E+01	1.2E-04
W-08	VOC	Trichlorofluoromethane	75-69-4	T		19				2.50E-04	4.00E-03	2.6E+00		1.1E+03		1.1E+03	
W-08	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		19				2.30E-04	4.00E-03	1.7E+02		1.7E+02		1.7E+02	
W-08	VOC	Vinyl Chloride	75-01-4	T	A	19	1	3.10E-04	3.10E-04	1.50E-04	4.00E-03	2.0E-03	1.6E-01	1.3E+01	2.4E-05	1.0E+00	3.1E-04
W-08	VOC	Xylenes (total)	1330-20-7	T	ID	19	9	5.10E-04	2.80E-03	3.30E-04	4.00E-03	1.0E+01	2.8E-04	1.9E+02	1.5E-05	1.9E+02	1.5E-05
W-08	SVOC	Acenaphthene	83-32-9	T		19	2	2.20E-03	3.10E-03	8.00E-04	1.40E-01	1.3E+00	2.4E-03	4.2E+00	7.4E-04	4.2E+00	7.4E-04
W-08	SVOC	Acenaphthylene	208-96-8	T	D	19				7.10E-04	8.20E-02	5.2E-02		3.9E+00		3.9E+00	
W-08	SVOC	Acetophenone	98-86-2	T	D	19				2.60E-03	1.30E-01	1.5E+00		6.1E+03		6.1E+03	
W-08	SVOC	Anthracene	120-12-7	T	D	19	2	7.30E-04	7.90E-04	6.80E-04	1.20E-01	4.3E-02	1.8E-02	4.3E-02	1.8E-02	4.3E-02	1.8E-02
W-08	SVOC	Atrazine	1912-24-9	T		19				2.50E-03	7.00E-02	3.0E-03				5.4E+00	
W-08	SVOC	Benzaldehyde	100-52-7	T		19				2.80E-03	1.20E-01						
W-08	SVOC	Benzo(a)anthracene	56-55-3	T	B2	19				7.00E-04	1.40E-01	2.1E-03				9.4E-03	
W-08	SVOC	Benzo(a)pyrene	50-32-8	T	B2	19				7.30E-04	1.10E-01	5.0E-03				2.0E-03	
W-08	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	19				9.40E-04	1.40E-01	2.0E-03				2.0E-03	
W-08	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	19				8.50E-04	1.40E-01	5.0E-03				5.0E-03	
W-08	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	19				8.40E-04	1.30E-01	5.0E-03				5.0E-03	
W-08	SVOC	Biphenyl	92-52-4	T	D	19				2.60E-03	1.30E-01						
W-08	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	19				8.70E-04	2.00E-01						
W-08	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	19				9.70E-04	3.40E-01	2.0E-03		2.1E+02		5.7E+00	
W-08	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	19				2.70E-03	5.40E-02	6.0E-03				3.2E-01	
W-08	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	19				8.80E-04	4.60E-01						
W-08	SVOC	Butylbenzylphthalate	85-68-7	T	C	19				8.80E-04	4.60E-02	1.2E+00				2.7E+00	
W-08	SVOC	Caprolactam	105-60-2	T		19	1	5.50E+00	5.50E+00	2.50E-03	9.00E-02	5.8E+00	9.5E-01			3.9E+05	1.4E-05
W-08	SVOC	Carbazole	86-74-8	T	B2	19				9.20E-04	1.20E-01	8.5E-02				7.4E+00	
W-08	SVOC	4-Chloro-3-methylphenol	59-50-7	T		19				9.90E-04	1.10E-01	1.5E-01				7.9E+01	
W-08	SVOC	4-Chloroaniline	106-47-8	T		18				6.10E-04	1.80E-01						
W-08	SVOC	2-Chloronaphthalene	91-58-7	T		19				8.50E-04	1.50E-01	1.8E+00				6.7E+00	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-08	SVOC	2-Chlorophenol	95-57-8	T		19				1.00E-03	2.60E-01	9.1E-02				9.4E+01	
W-08	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		19				7.90E-04	1.30E-01						
W-08	SVOC	Chrysene	218-01-9	T	B2	19				7.50E-04	1.30E-01	5.0E-03				5.0E-03	
W-08	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	19				7.90E-04	1.30E-01	2.0E-03				2.0E-03	
W-08	SVOC	Dibenzofuran	132-64-9	T	D	19				1.10E-03	1.90E-01						
W-08	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	17				9.30E-04	1.40E-02	1.1E-03				1.8E-01	
W-08	SVOC	2,4-Dichlorophenol	120-83-2	T		19				8.50E-04	1.40E-01	7.3E-02				4.8E+01	
W-08	SVOC	Diethylphthalate	84-66-2	T	D	19				6.50E-04	5.00E-02	5.5E+00				1.1E+03	
W-08	SVOC	2,4-Dimethylphenol	105-67-9	T		19	1	2.50E+00	2.50E+00	8.50E-04	1.70E-02	3.7E-01	**6.8E+00**			5.2E+02	4.8E-03
W-08	SVOC	Dimethylphthalate	131-11-3	T	D	19				7.60E-04	4.00E-02	7.3E+01				4.2E+03	
W-08	SVOC	Di-n-butylphthalate	84-74-2	T	D	19				9.70E-04	7.40E-02	8.0E-01				1.1E+01	
W-08	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		19				2.30E-03	4.20E-01	2.0E-02				9.5E+00	
W-08	SVOC	2,4-Dinitrophenol	51-28-5	T		19				3.00E-03	6.60E-01						
W-08	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	19				7.90E-04	9.20E-02	7.7E-03				8.6E+00	
W-08	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	19				5.70E-04	1.40E-01						
W-08	SVOC	Di-n-octylphthalate	117-84-0	T		19				1.10E-03	1.40E-01	1.3E-01				4.0E-01	
W-08	SVOC	Fluoranthene	206-44-0	T	D	19				8.10E-04	1.40E-01	2.1E-01		2.1E-01		2.1E-01	
W-08	SVOC	Fluorene	86-73-7	T	D	19	8	1.50E-03	2.10E-02	1.00E-03	1.50E-01	8.8E-01	2.4E-02	2.0E+00	1.1E-02	2.0E+00	1.1E-02
W-08	SVOC	Hexachlorobenzene	118-74-1	T	B2	19				7.40E-04	1.50E-01	1.0E-03		3.0E+00		4.6E-03	
W-08	SVOC	Hexachlorobutadiene	87-68-3	T	C	19				7.30E-04	3.00E-01	1.5E-02		3.2E+00		4.0E-01	
W-08	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	17				1.10E-03	2.20E-01	5.0E-02		4.2E-01		1.6E+00	
W-08	SVOC	Hexachloroethane	67-72-1	T	C	19				7.40E-04	3.20E-01	7.3E-03		5.0E+01		1.9E+00	
W-08	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	19				6.30E-04	1.40E-01	2.0E-03				2.0E-03	
W-08	SVOC	Isophorone	78-59-1	T	C	19				6.30E-04	1.70E-01	7.7E-01				9.9E+02	
W-08	SVOC	2-Methylnaphthalene	91-57-6	T	ID	19	4	6.50E-04	5.10E-03	6.40E-04	1.90E-01	2.6E-01	2.0E-02			2.5E+01	2.0E-04
W-08	SVOC	Methylphenol (total)	1319-77-3	T		19	1	4.69E+00	4.69E+00	1.30E-03	2.60E-02	3.7E-01	**1.3E+01**			8.1E+02	5.8E-03
W-08	SVOC	Naphthalene	91-20-3	T	C	19	4	1.70E-03	2.60E-03	7.50E-04	2.60E-01	5.2E-01	5.0E-03	3.1E+01	8.4E-05	3.1E+01	8.4E-05
W-08	SVOC	2-Nitroaniline	88-74-4	T		19				7.00E-04	9.80E-02						
W-08	SVOC	3-Nitroaniline	99-09-2	T	C	18				7.10E-04	9.60E-02						
W-08	SVOC	4-Nitroaniline	100-01-6	T	C	19				1.30E-03	1.20E-01						
W-08	SVOC	Nitrobenzene	98-95-3	T	D	19				8.10E-04	2.60E-01	3.4E-03		5.5E+02		1.1E+01	
W-08	SVOC	2-Nitrophenol	88-75-5	T		19				2.10E-03	1.90E-01	2.0E-02				7.9E+01	
W-08	SVOC	4-Nitrophenol	100-02-7	T		19				1.90E-03	7.00E-01						
W-08	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	19				1.40E-03	1.30E-01	2.7E-01				3.5E+01	
W-08	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	19				6.70E-04	2.20E-01	5.0E-03				3.6E-01	
W-08	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	19				7.80E-04	3.60E-01						
W-08	SVOC	Pentachlorophenol	87-86-5	T	B2	19				2.40E-03	5.20E-01	1.0E-03				2.0E-01	
W-08	SVOC	Phenanthrene	85-01-8	T	D	19	9	1.00E-03	2.80E-02	8.20E-04	1.40E-01	5.2E-02	5.4E-01	1.0E+00	2.8E-02	1.0E+00	2.8E-02
W-08	SVOC	Phenol	108-95-2	T	ID	19	2	4.60E-02	1.20E+00	2.60E-03	5.20E-02	4.4E+00	2.7E-01			2.9E+04	4.1E-05
W-08	SVOC	Pyrene	129-00-0	T	D	19				1.10E-03	1.30E-01	1.4E-01		1.4E-01		1.4E-01	
W-08	SVOC	2,4,5-Trichlorophenol	95-95-4	T		19				1.20E-03	1.70E-01	7.3E-01				1.7E+02	
W-08	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	19				1.70E-03	1.40E-01	1.2E-01				1.0E+01	
W-08	P/PCB	PCBs (total)	1336-36-3	D	B2	5				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
W-08	P/PCB	PCBs (total)	1336-36-3	T	B2	19	1	7.36E-04	7.36E-04	8.20E-05	4.00E-04	5.0E-04	**1.5E+00**	4.5E-02	1.6E-02	3.3E-03	2.2E-01
W-08	INORG	Antimony	7440-36-0	D		14	3	2.50E-03	8.00E-03	2.20E-03	2.20E-03	6.0E-03	**1.3E+00**			6.8E+01	1.2E-04
W-08	INORG	Antimony	7440-36-0	T		19	3	2.80E-03	7.90E-03	2.20E-03	3.40E-03	6.0E-03	**1.3E+00**			6.8E+01	1.2E-04
W-08	INORG	Arsenic	7440-38-2	D	A	14	10	4.10E-03	3.41E-02	3.90E-03	1.00E-02	5.0E-02	6.8E-01			4.3E+00	7.9E-03
W-08	INORG	Arsenic	7440-38-2	T	A	19	15	4.10E-03	8.49E-02	3.90E-03	1.00E-02	5.0E-02	**1.7E+00**			4.3E+00	2.0E-02
W-08	INORG	Barium	7440-39-3	D	D	14	14	2.60E-02	3.01E-01			2.0E+00	1.5E-01			1.4E+04	2.2E-05
W-08	INORG	Barium	7440-39-3	T	D	19	18	2.65E-02	1.03E+00	8.20E-04	4.20E-04	2.0E+00	5.2E-01			1.4E+04	7.4E-05
W-08	INORG	Beryllium	7440-41-7	D	B1	14				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
W-08	INORG	Beryllium	7440-41-7	T	B1	19	2	6.20E-04	5.40E-03	4.70E-04	1.00E-03	4.0E-03	**1.4E+00**			2.9E+02	1.9E-05
W-08	INORG	Cadmium	7440-43-9	D	B1	14	3	2.80E-04	3.90E-03	2.80E-04	2.80E-04	5.0E-03	1.1E-01			1.9E+02	2.9E-06
W-08	INORG	Cadmium	7440-43-9	T	B1	19	7	2.90E-04	3.90E-03	2.80E-04	3.60E-04	5.0E-03	7.8E-01			1.9E+02	2.1E-05
W-08	INORG	Chromium (total)	7440-47-3	D		14	2	5.00E-03	4.76E-02	1.40E-03	1.00E-02	1.0E-01	4.8E-01			4.6E+02	1.0E-04
W-08	INORG	Chromium (total)	7440-47-3	T		19	6	1.15E-02	2.95E-01	1.00E-03	1.00E-02	1.0E-01	**3.0E+00**			4.6E+02	6.4E-04

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-08	INORG	Cobalt	7440-48-4	D	B1	14	5	1.40E-03	9.30E-03	1.30E-03	2.00E-02	4.0E-02	2.3E-01			2.4E+03	3.9E-06
W-08	INORG	Cobalt	7440-48-4	T	B1	19	6	1.90E-03	8.79E-02	7.40E-04	2.00E-02	4.0E-02	**2.2E+00**			2.4E+03	3.7E-05
W-08	INORG	Copper	7440-50-8	D	D	14	2	4.40E-03	5.20E-03	4.20E-03	5.00E-03	1.4E+00	3.7E-03			7.4E+03	7.0E-07
W-08	INORG	Copper	7440-50-8	T	D	19	3	6.60E-03	2.14E-01	1.70E-03	5.00E-03	1.4E+00	1.5E-01			7.4E+03	2.9E-05
W-08	INORG	Lead	7439-92-1	D	B2	14				2.50E-03	5.00E-03	4.0E-03					
W-08	INORG	Lead	7439-92-1	T	B2	19	3	5.70E-03	1.22E-01	1.60E-03	5.00E-03	4.0E-03	**3.1E+01**				
W-08	INORG	Manganese	7439-96-5	D	D	14	14	2.10E-03	3.24E+00			8.6E-01	**3.8E+00**			9.1E+03	3.6E-04
W-08	INORG	Manganese	7439-96-5	T	D	19	19	3.50E-03	5.41E+00			8.6E-01	**6.3E+00**			9.1E+03	5.9E-04
W-08	INORG	Mercury	7439-97-6	D	D	14	2	1.10E-04	1.90E-04	6.90E-05	2.00E-04	2.0E-03	9.5E-02	5.6E-02	3.4E-03	5.6E-02	3.4E-03
W-08	INORG	Mercury	7439-97-6	T	D	19	5	7.00E-05	2.60E-04	6.90E-05	2.00E-04	2.0E-03	1.3E-01	5.6E-02	4.6E-03	5.6E-02	4.6E-03
W-08	INORG	Nickel	7440-02-0	D	A	14	11	2.30E-03	1.56E-02	2.20E-03	2.20E-03	1.0E-01	1.6E-01			7.4E+04	2.1E-07
W-08	INORG	Nickel	7440-02-0	T	A	19	14	3.40E-03	3.07E-01	2.20E-03	2.00E-02	1.0E-01	**3.1E+00**			7.4E+04	4.1E-06
W-08	INORG	Selenium	7782-49-2	D	D	14				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
W-08	INORG	Selenium	7782-49-2	T	D	19				3.90E-03	5.00E-03	5.0E-02				9.7E+02	
W-08	INORG	Silver	7440-22-4	D	D	14				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
W-08	INORG	Silver	7440-22-4	T	D	19				9.80E-04	5.00E-03	3.4E-02				1.5E+03	
W-08	INORG	Thallium	7440-28-0	D		14	2	2.10E-05	7.40E-03	1.80E-05	5.00E-03	2.0E-03	**3.7E+00**			1.3E+01	5.7E-04
W-08	INORG	Thallium	7440-28-0	T		19	3	1.00E-05	6.10E-03	1.50E-05	1.00E-02	2.0E-03	**3.1E+00**			1.3E+01	4.7E-04
W-08	INORG	Vanadium	7440-62-2	D		14	4	6.40E-04	3.80E-03	8.20E-04	1.00E-02	4.5E-03	8.4E-01			9.7E+02	3.9E-06
W-08	INORG	Vanadium	7440-62-2	T		19	8	6.70E-04	2.39E-01	6.70E-04	1.00E-02	4.5E-03	**5.3E+01**			9.7E+02	2.5E-04
W-08	INORG	Zinc	7440-66-6	D	D	14	2	2.25E-02	2.21E-02	1.20E-02	2.00E-02	2.4E+00	1.3E-02			1.1E+05	2.9E-07
W-08	INORG	Zinc	7440-66-6	T	D	19	3	3.38E-02	6.31E-01	1.20E-02	2.00E-02	2.4E+00	2.6E-01			1.1E+05	5.7E-06
W-08	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	4	4	1.95E-09	1.97E-08			3.0E-08	6.6E-01			1.0E-08	**2.0E+00**
W-09	VOC	Acetone	67-64-1	T	ID	6	2	1.50E-02	3.50E-02	5.10E-04	6.60E-04	7.3E-01	4.8E-02	1.0E+06	3.5E-08	3.1E+04	1.1E-06
W-09	VOC	Benzene	71-43-2	T	A	6	1	2.85E-04	2.85E-04	1.60E-04	1.00E-03	5.0E-03	5.7E-02	3.5E+01	8.1E-06	1.1E+01	2.6E-05
W-09	VOC	Bromodichloromethane	75-27-4	T	B2	6				1.70E-04	1.00E-03	1.0E-01		3.7E+01		1.4E+01	
W-09	VOC	Bromoform	75-25-2	T	B2	6				1.80E-04	1.00E-03	1.0E-01		3.1E+03		1.4E+02	
W-09	VOC	Bromomethane	74-83-9	T	D	6				1.60E-04	1.00E-03	1.0E-02		9.0E+00		7.0E+01	
W-09	VOC	2-Butanone	78-93-3	T	ID	6	1	2.05E-03	2.05E-03	3.60E-04	1.00E-02	1.3E+01	1.6E-04	2.4E+05	8.5E-09	2.4E+05	8.5E-09
W-09	VOC	Carbon Disulfide	75-15-0	T		6	1	1.40E-03	1.40E-03	2.00E-04	1.00E-03	8.0E-01	1.8E-03	5.5E+02	2.5E-06	1.2E+03	1.2E-06
W-09	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.20E-04	1.00E-03	5.0E-03		2.4E+00		4.6E+00	
W-09	VOC	Chlorobenzene	108-90-7	T	D	6				1.40E-04	1.00E-03	1.0E-01		4.7E+02		8.6E+01	
W-09	VOC	Chloroethane	75-00-3	T		6				2.20E-04	1.00E-03	4.3E-01		5.7E+03		4.4E+02	
W-09	VOC	Chloroform	67-66-3	T	B2	6				1.40E-04	1.00E-03	1.0E-01		1.8E+02		1.5E+02	
W-09	VOC	Chloromethane	74-87-3	T	D	6				1.30E-04	1.00E-03	2.6E-01		4.5E+01		4.9E+02	
W-09	VOC	Cumene	98-82-8	T	D	6	1	2.55E-04	2.55E-04	1.20E-04	1.00E-03	8.0E-01	3.2E-04	5.6E+01	4.6E-06	5.6E+01	4.6E-06
W-09	VOC	Cyclohexane	110-82-7	T	ID	6	1	7.90E-04	7.90E-04	1.30E-04	1.00E-03						
W-09	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				5.30E-04	2.00E-03	2.0E-04		1.2E+00		3.9E-01	
W-09	VOC	Dibromochloromethane	124-48-1	T	C	6				2.50E-04	1.00E-03	1.0E-01		1.1E+02		1.8E+01	
W-09	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	1.00E-03	1.0E-03		1.5E+01		2.5E-02	
W-09	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.10E-04	1.00E-03	6.0E-01		1.6E+02		1.6E+02	
W-09	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				1.50E-04	1.00E-03	6.6E-03				2.0E+00	
W-09	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.60E-04	1.00E-03	7.5E-02		7.4E+01		6.4E+00	
W-09	VOC	Dichlorodifluoromethane	75-71-8	T		6				2.30E-04	2.00E-03	1.7E+00		3.0E+02		3.0E+02	
W-09	VOC	1,1-Dichloroethane	75-34-3	T	C	6				1.60E-04	1.00E-03	8.8E-01		2.3E+03		2.4E+03	
W-09	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.10E-04	1.00E-03	5.0E-03		5.9E+01		1.9E+01	
W-09	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.20E-04	1.00E-03	7.0E-03		1.3E+00		1.1E+01	
W-09	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	6				2.20E-04	5.00E-04	7.0E-02		2.1E+02		2.0E+02	
W-09	VOC	trans-1,2-Dichloroethene	156-60-5	T		6				1.50E-04	5.00E-04	1.0E-01		2.0E+02		2.2E+02	
W-09	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.70E-04	1.00E-03	5.0E-03		3.6E+01		1.6E+01	
W-09	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				1.50E-04	1.00E-03	8.5E-03		2.6E+01		5.5E+00	
W-09	VOC	Ethyl Benzene	100-41-4	T	D	6				1.20E-04	1.00E-03	7.0E-01		1.7E+02		1.7E+02	
W-09	VOC	2-Hexanone	591-78-6	T		6				1.00E-04	1.00E-02	1.0E+00		8.7E+03		5.2E+03	
W-09	VOC	Methyl Acetate	79-20-9	T		6				4.10E-04	1.00E-02						
W-09	VOC	Methyl tert-butyl ether	1634-04-4	T		6				1.30E-04	5.00E-03	2.4E-01		4.7E+04		6.1E+02	
W-09	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	4	1	2.55E-03	2.55E-03	2.30E-04	1.00E-02	1.8E+00	1.4E-03	2.0E+04	1.3E-07	1.3E+04	2.0E-07

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-09	VOC	Methylcyclohexane	108-87-2	T		6	1	8.55E-04	8.55E-04	1.50E-04	1.00E-03						
W-09	VOC	Methylene Chloride	75-09-2	T	B2	6				2.80E-04	1.00E-03	5.0E-03		1.4E+03		2.2E+02	
W-09	VOC	Styrene	100-42-5	T		6				1.50E-04	1.00E-03	1.0E-01		3.1E+02		9.7E+00	
W-09	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.30E-04	1.00E-03	8.5E-03		7.7E+01		4.7E+00	
W-09	VOC	Tetrachloroethene	127-18-4	T	C-B2	6				1.20E-04	1.00E-03	5.0E-03		1.7E+02		1.2E+01	
W-09	VOC	Toluene	108-88-3	T	D	6	1	2.75E-04	2.75E-04	1.70E-04	1.00E-03	1.0E+00	2.8E-04	5.3E+02	5.2E-07	5.3E+02	5.2E-07
W-09	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				1.50E-04	1.00E-03	7.0E-02		3.0E+02		1.9E+01	
W-09	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6	1	2.50E-04	2.50E-04	1.80E-04	1.00E-03	2.0E-01	1.3E-03	1.3E+03	1.9E-07	1.3E+03	1.9E-07
W-09	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				2.10E-04	1.00E-03	5.0E-03		1.1E+02		2.1E+01	
W-09	VOC	Trichloroethene	79-01-6	T	C-B2	6				1.40E-04	1.00E-03	5.0E-03		9.7E+01		2.2E+01	
W-09	VOC	Trichlorofluoromethane	75-69-4	T		6	2	9.50E-03	2.20E-03	2.50E-04	2.50E-04	2.6E+00	8.5E-04	1.1E+03	2.0E-06	1.1E+03	2.0E-06
W-09	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		6				1.30E-04	1.00E-03	1.7E+02		1.7E+02		1.7E+02	
W-09	VOC	Vinyl Chloride	75-01-4	T	A	6				1.50E-04	1.00E-03	2.0E-03		1.3E+01		1.0E+00	
W-09	VOC	Xylenes (total)	1330-20-7	T	ID	6		1.25E-03	1.25E-03	3.30E-04	1.00E-03	1.0E+01	1.3E-04	1.9E+02	6.6E-06	1.9E+02	6.6E-06
W-09	SVOC	Acenaphthene	83-32-9	T		6				6.90E-04	5.00E-03	1.3E+00		4.2E+00		4.2E+00	
W-09	SVOC	Acenaphthylene	208-96-8	T	D	6				4.10E-04	5.00E-03	5.2E-02		3.9E+00		3.9E+00	
W-09	SVOC	Acetophenone	98-86-2	T	D	6				6.50E-04	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
W-09	SVOC	Anthracene	120-12-7	T	D	6				5.90E-04	5.00E-03	4.3E-02		4.3E-02		4.3E-02	
W-09	SVOC	Atrazine	1912-24-9	T		6				3.50E-04	5.00E-03	3.0E-03				5.4E+00	
W-09	SVOC	Benzaldehyde	100-52-7	T		6				5.90E-04	1.00E-02						
W-09	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				6.80E-04	5.00E-03	2.1E-03				9.4E-03	
W-09	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				5.30E-04	5.00E-03	5.0E-03				2.0E-03	
W-09	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				7.00E-04	5.00E-03	2.0E-03				2.0E-03	
W-09	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				7.00E-04	5.00E-03	5.0E-03				5.0E-03	
W-09	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				6.40E-04	5.00E-03	5.0E-03				5.0E-03	
W-09	SVOC	Biphenyl	92-52-4	T	D	6				6.50E-04	1.00E-02						
W-09	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				8.70E-04	5.00E-03						
W-09	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	6				9.70E-04	8.50E-03	2.0E-03		2.1E+02		5.7E+00	
W-09	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6	1	5.80E-04	5.80E-04	2.00E-04	5.00E-03	6.0E-03	9.7E-02			3.2E-01	1.8E-03
W-09	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				7.80E-04	5.00E-03						
W-09	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				2.30E-04	5.00E-03	1.2E+00				2.7E+00	
W-09	SVOC	Caprolactam	105-60-2	T		6				4.50E-04	1.00E-02	5.8E+00				3.9E+05	
W-09	SVOC	Carbazole	86-74-8	T	B2	6				6.10E-04	1.00E-02	8.5E-02				7.4E+00	
W-09	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				5.50E-04	5.00E-03	1.5E-01				7.9E+01	
W-09	SVOC	4-Chloroaniline	106-47-8	T		5				9.00E-04	1.00E-02						
W-09	SVOC	2-Chloronaphthalene	91-58-7	T		6				7.30E-04	5.00E-03	1.8E+00				6.7E+00	
W-09	SVOC	2-Chlorophenol	95-57-8	T		6				1.00E-03	6.50E-03	4.5E-02				9.4E+01	
W-09	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				6.60E-04	5.00E-03						
W-09	SVOC	Chrysene	218-01-9	T	B2	6				6.70E-04	5.00E-03	5.0E-03				5.0E-03	
W-09	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				6.80E-04	5.00E-03	2.0E-03				2.0E-03	
W-09	SVOC	Dibenzofuran	132-64-9	T	D	6				6.60E-04	5.00E-03						
W-09	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	5				4.70E-04	2.00E-02	1.1E-03				1.8E-01	
W-09	SVOC	2,4-Dichlorophenol	120-83-2	T		6				7.00E-04	1.00E-02	7.3E-02				4.8E+01	
W-09	SVOC	Diethylphthalate	84-66-2	T	D	6				2.50E-04	5.00E-03	5.5E+00				1.1E+03	
W-09	SVOC	2,4-Dimethylphenol	105-67-9	T		6	1	1.04E-02	1.04E-02	8.50E-04	5.00E-03	3.7E-01	2.8E-02			5.2E+02	2.0E-05
W-09	SVOC	Dimethylphthalate	131-11-3	T	D	6				2.00E-04	5.00E-03	7.3E+01				4.2E+03	
W-09	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				3.70E-04	5.00E-03	8.8E-01				1.1E+01	
W-09	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				1.30E-03	2.00E-02	2.0E-02				9.5E+00	
W-09	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.00E-03	2.00E-02						
W-09	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				1.60E-04	5.00E-03	7.7E-03				8.6E+00	
W-09	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				5.70E-04	5.00E-03						
W-09	SVOC	Di-n-octylphthalate	117-84-0	T		6				6.90E-04	5.00E-03	1.3E-01				4.0E-01	
W-09	SVOC	Fluoranthene	206-44-0	T	D	6				4.10E-04	5.00E-03	2.1E-01		2.1E-01		2.1E-01	
W-09	SVOC	Fluorene	86-73-7	T	D	6				7.50E-04	5.00E-03	8.8E-01		2.0E+00		2.0E+00	
W-09	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.40E-04	5.00E-03	1.0E-03		3.0E+00		4.6E-03	
W-09	SVOC	Hexachlorobutadiene	87-68-3	T	C	6				7.30E-04	7.50E-03	1.5E-02		3.2E+00		4.0E-01	

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-09	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	6				1.10E-03	5.50E-03	5.0E-02		4.2E-01		1.6E+00	
W-09	SVOC	Hexachloroethane	67-72-1	T	C	6				7.40E-04	8.00E-03	7.3E-03		5.0E+01		1.9E+00	
W-09	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.30E-04	5.00E-03	2.0E-03				2.0E-03	
W-09	SVOC	Isophorone	78-59-1	T	C	6				6.30E-04	5.00E-03	7.7E-01				9.9E+02	
W-09	SVOC	2-Methylnaphthalene	91-57-6	T	ID	6				6.40E-04	5.00E-03	2.6E-01				2.5E+01	
W-09	SVOC	Methylphenol (total)	1319-77-3	T		6				9.00E-04	1.00E-03	3.7E-01				8.1E+02	
W-09	SVOC	Naphthalene	91-20-3	T	C	6				7.50E-04	6.50E-03	5.2E-01		3.1E+01		3.1E+01	
W-09	SVOC	2-Nitroaniline	88-74-4	T		6				4.90E-04	2.00E-02						
W-09	SVOC	3-Nitroaniline	99-09-2	T	C	5				4.80E-04	2.00E-02						
W-09	SVOC	4-Nitroaniline	100-01-6	T	C	6				5.90E-04	2.00E-02						
W-09	SVOC	Nitrobenzene	98-95-3	T	D	6				9.70E-04	6.50E-03	3.4E-03		5.5E+02		1.1E+01	
W-09	SVOC	2-Nitrophenol	88-75-5	T		6				9.50E-04	5.00E-03	2.0E-02				7.9E+01	
W-09	SVOC	4-Nitrophenol	100-02-7	T		6				1.90E-03	2.00E-02						
W-09	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				6.40E-04	5.00E-03	2.7E-01				3.5E+01	
W-09	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				6.70E-04	5.00E-03	5.0E-03				3.6E-01	
W-09	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				7.80E-04	9.00E-03						
W-09	SVOC	Pentachlorophenol	87-86-5	T	B2	6				2.40E-03	1.30E-02	1.0E-03				2.0E-01	
W-09	SVOC	Phenanthrene	85-01-8	T	D	6				6.80E-04	5.00E-03	5.2E-02		1.0E+00		1.0E+00	
W-09	SVOC	Phenol	108-95-2	T	ID	6				1.30E-03	6.50E-03	4.4E+00				2.9E+04	
W-09	SVOC	Pyrene	129-00-0	T	D	6				6.30E-04	5.00E-03	1.4E-01		1.4E-01		1.4E-01	
W-09	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				8.60E-04	5.00E-03	7.3E-01				1.7E+02	
W-09	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				7.10E-04	5.00E-03	1.2E-01				1.0E+01	
W-09	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
W-09	P/PCB	PCBs (total)	1336-36-3	T	B2	6				8.20E-05	4.00E-04	5.0E-04		4.5E-02		3.3E-03	
W-09	INORG	Antimony	7440-36-0	D		2				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
W-09	INORG	Antimony	7440-36-0	T		6				2.20E-03	2.50E-02	6.0E-03				6.8E+01	
W-09	INORG	Arsenic	7440-38-2	D	A	2				3.90E-03	1.00E-02	5.0E-02				4.3E+00	
W-09	INORG	Arsenic	7440-38-2	T	A	6	3	3.70E-03	1.54E-02	2.90E-03	1.00E-02	5.0E-02	3.1E-01			4.3E+00	3.6E-03
W-09	INORG	Barium	7440-39-3	D	D	2	2	5.40E-02	1.47E-01			2.0E+00	7.4E-02			1.4E+04	1.1E-05
W-09	INORG	Barium	7440-39-3	T	D	6	6	1.73E-02	4.20E-01			2.0E+00	2.1E-01			1.4E+04	3.0E-05
W-09	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	1.00E-03	4.0E-03				2.9E+02	
W-09	INORG	Beryllium	7440-41-7	T	B1	6				4.70E-04	1.00E-03	4.0E-03				2.9E+02	
W-09	INORG	Cadmium	7440-43-9	D	B1	2				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
W-09	INORG	Cadmium	7440-43-9	T	B1	6				2.80E-04	5.00E-03	5.0E-03				1.9E+02	
W-09	INORG	Chromium (total)	7440-47-3	D		2	1	1.04E-02	1.04E-02	1.00E-02	1.00E-02	1.0E-01	1.0E-01			4.6E+02	2.3E-05
W-09	INORG	Chromium (total)	7440-47-3	T		6	2	1.12E-02	5.68E-02	1.00E-03	1.00E-02	1.0E-01	5.7E-01			4.6E+02	1.2E-04
W-09	INORG	Cobalt	7440-48-4	D	B1	2	1	1.40E-03	1.40E-03	1.30E-03	1.30E-03	4.0E-02	3.5E-02			2.4E+03	5.8E-07
W-09	INORG	Cobalt	7440-48-4	T	B1	6	3	2.35E-03	2.90E-03	1.10E-03	1.30E-03	4.0E-02	7.3E-02			2.4E+03	1.2E-06
W-09	INORG	Copper	7440-50-8	D	D	2				4.20E-03	5.00E-03	1.4E+00				7.4E+03	
W-09	INORG	Copper	7440-50-8	T	D	6	1	2.80E-03	2.80E-03	1.80E-03	5.00E-03	1.4E+00	2.0E-03			7.4E+03	3.8E-07
W-09	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	3.00E-03	4.0E-03					
W-09	INORG	Lead	7439-92-1	T	B2	6	1	3.91E-02	3.91E-02	2.30E-03	3.00E-03	4.0E-03	**9.8E+00**				
W-09	INORG	Manganese	7439-96-5	D	D	2	2	1.98E-02	2.42E-01			8.6E-01	2.8E-01			9.1E+03	2.7E-05
W-09	INORG	Manganese	7439-96-5	T	D	6	6	1.65E-02	6.70E-01			8.6E-01	7.8E-01			9.1E+03	7.4E-05
W-09	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	2.00E-04	2.0E-03		5.6E-02		5.6E-02	
W-09	INORG	Mercury	7439-97-6	T	D	6	1	8.60E-05	8.60E-05	6.70E-05	2.00E-04	2.0E-03	4.3E-02	5.6E-02	1.5E-03	5.6E-02	1.5E-03
W-09	INORG	Nickel	7440-02-0	D	A	2	1	2.20E-03	2.20E-03	2.20E-03	2.20E-03	1.0E-01	2.2E-02			7.4E+04	3.0E-08
W-09	INORG	Nickel	7440-02-0	T	A	6	3	3.80E-03	3.85E-02	2.10E-03	2.20E-03	1.0E-01	3.9E-01			7.4E+04	5.2E-07
W-09	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	5.00E-03	5.0E-02				9.7E+02	
W-09	INORG	Selenium	7782-49-2	T	D	6				3.00E-03	4.00E-03	5.0E-02				9.7E+02	
W-09	INORG	Silver	7440-22-4	D	D	2				1.50E-03	5.00E-03	3.4E-02				1.5E+03	
W-09	INORG	Silver	7440-22-4	T	D	6				1.10E-03	5.00E-03	3.4E-02				1.5E+03	
W-09	INORG	Thallium	7440-28-0	D		2	2	3.80E-03	4.50E-03			2.0E-03	**2.7E+00**			1.3E+01	4.1E-04
W-09	INORG	Thallium	7440-28-0	T		6	1	1.24E-02	1.24E-02	1.50E-05	1.80E-05	2.0E-03	**6.2E+00**			1.3E+01	9.5E-04
W-09	INORG	Vanadium	7440-62-2	D		2				8.20E-04	1.00E-02	4.5E-03				9.7E+02	
W-09	INORG	Vanadium	7440-62-2	T		6	2	1.50E-03	4.50E-03	8.20E-04	1.00E-02	4.5E-03	1.0E+00			9.7E+02	4.6E-06

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TABLE 5-2a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-09	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	2.00E-02	2.4E+00				1.1E+05	
W-09	INORG	Zinc	7440-66-6	T	D	6	1	5.44E-02	5.44E-02	1.20E-02	2.00E-02	2.4E+00	2.3E-02			1.1E+05	4.9E-07
W-10	VOC	Acetone	67-64-1	T	ID	10	1	3.10E-03	3.10E-03	5.10E-04	1.10E-03	7.3E-01	4.2E-03	1.0E+06	3.1E-09	3.1E+04	1.0E-07
W-10	VOC	Benzene	71-43-2	T	A	10	3	1.90E-04	5.80E-04	1.60E-04	3.70E-04	5.0E-03	1.2E-01	3.5E+01	1.7E-05	1.1E+01	5.3E-05
W-10	VOC	Bromodichloromethane	75-27-4	T	B2	10	1	3.00E-04	3.00E-04	1.70E-04	3.70E-04	1.0E-01	3.0E-03	3.7E+01	8.1E-06	1.4E+01	2.1E-05
W-10	VOC	Bromoform	75-25-2	T	B2	10				1.80E-04	3.70E-04	1.0E-01		3.1E+03		1.4E+02	
W-10	VOC	Bromomethane	74-83-9	T	D	10				2.00E-04	3.00E-04	1.0E-02		9.0E+00		7.0E+01	
W-10	VOC	2-Butanone	78-93-3	T	ID	10	1	1.00E-03	1.00E-03	4.10E-04	5.00E-04	1.3E+01	7.7E-05	2.4E+05	4.2E-09	2.4E+05	4.2E-09
W-10	VOC	Carbon Disulfide	75-15-0	T		10	1	2.00E-04	2.00E-04	2.00E-04	2.40E-04	8.0E-01	2.5E-04	5.5E+02	3.6E-07	1.2E+03	1.7E-07
W-10	VOC	Carbon Tetrachloride	56-23-5	T	B2	10				1.20E-04	3.70E-04	5.0E-03		2.4E+00		4.6E+00	
W-10	VOC	Chlorobenzene	108-90-7	T	D	10				1.50E-04	3.80E-04	1.0E-01		4.7E+02		8.6E+01	
W-10	VOC	Chloroethane	75-00-3	T		10				2.60E-04	2.90E-04	4.3E-01		5.7E+03		4.4E+02	
W-10	VOC	Chloroform	67-66-3	T	B2	10	3	2.00E-04	7.00E-04	1.40E-04	3.50E-04	1.0E-01	5.7E-03	1.8E+02	3.2E-06	1.5E+02	3.8E-06
W-10	VOC	Chloromethane	74-87-3	T	D	10				1.30E-04	3.50E-04	2.6E-01		4.5E+01		4.9E+02	
W-10	VOC	Cumene	98-82-8	T	D	10	1	3.00E-04	3.00E-04	1.20E-04	3.90E-04	8.0E-01	3.8E-04	5.6E+01	5.4E-06	5.6E+01	5.4E-06
W-10	VOC	Cyclohexane	110-82-7	T	ID	10				1.30E-04	3.30E-04						
W-10	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	10				6.20E-04	8.20E-04	2.0E-04		1.2E+00		3.9E-01	
W-10	VOC	Dibromochloromethane	124-48-1	T	C	10				2.60E-04	3.70E-04	1.0E-01		1.1E+02		1.8E+01	
W-10	VOC	1,2-Dibromoethane	106-93-4	T	B2	10				2.20E-04	3.40E-04	1.0E-03		1.5E+01		2.5E-02	
W-10	VOC	1,2-Dichlorobenzene	95-50-1	T	D	10				1.10E-04	3.80E-04	6.0E-01		1.6E+02		1.6E+02	
W-10	VOC	1,3-Dichlorobenzene	541-73-1	T	D	10				1.50E-04	3.80E-04	6.6E-03				2.0E+00	
W-10	VOC	1,4-Dichlorobenzene	106-46-7	T	C	10				1.70E-04	3.80E-04	7.5E-02		7.4E+01		6.4E+00	
W-10	VOC	Dichlorodifluoromethane	75-71-8	T		10				2.60E-04	4.90E-04	1.7E+00		3.0E+02		3.0E+02	
W-10	VOC	1,1-Dichloroethane	75-34-3	T	C	10	3	7.30E-04	1.20E-03	1.60E-04	3.00E-04	8.8E-01	1.4E-03	2.3E+03	5.2E-07	2.4E+03	5.0E-07
W-10	VOC	1,2-Dichloroethane	107-06-2	T	B2	10				2.10E-04	2.80E-04	5.0E-03		5.9E+01		1.9E+01	
W-10	VOC	1,1-Dichloroethene	75-35-4	T	C	10				2.40E-04	3.10E-04	7.0E-03		1.3E+00		1.1E+01	
W-10	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	10				2.20E-04	3.50E-04	7.0E-02		2.1E+02		2.0E+02	
W-10	VOC	trans-1,2-Dichloroethene	156-60-5	T		10				1.50E-04	3.30E-04	1.0E-01		2.0E+02		2.2E+02	
W-10	VOC	1,2-Dichloropropane	78-87-5	T	B2	10				1.70E-04	4.10E-04	5.0E-03		3.6E+01		1.6E+01	
W-10	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	10				2.70E-04	3.50E-04	8.5E-03		2.6E+01		5.5E+00	
W-10	VOC	Ethyl Benzene	100-41-4	T	D	10	4	1.50E-04	1.00E-03	1.20E-04	4.10E-04	7.0E-01	1.4E-03	1.7E+02	5.9E-06	1.7E+02	5.9E-06
W-10	VOC	2-Hexanone	591-78-6	T		10				4.60E-04	5.80E-04	1.0E+00		8.7E+03		5.2E+03	
W-10	VOC	Methyl Acetate	79-20-9	T		10				4.10E-04	5.40E-04						
W-10	VOC	Methyl tert-butyl ether	1634-04-4	T		10	4	6.70E-04	2.00E-02	1.30E-04	2.70E-04	2.4E-01	8.3E-02	4.7E+04	4.3E-07	6.1E+02	3.3E-05
W-10	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	10	1	2.40E-04	2.40E-04	2.30E-04	2.60E-04	1.8E+00	1.3E-04	2.0E+04	1.2E-08	1.3E+04	1.8E-08
W-10	VOC	Methylcyclohexane	108-87-2	T		10				1.50E-04	4.20E-04						
W-10	VOC	Methylene Chloride	75-09-2	T	B2	6				2.90E-04	3.40E-04	5.0E-03		1.4E+03		2.2E+02	
W-10	VOC	Styrene	100-42-5	T		10				1.50E-04	3.50E-04	1.0E-01		3.1E+02		9.7E+00	
W-10	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	10				2.50E-04	3.60E-04	8.5E-03		7.7E+01		4.7E+00	
W-10	VOC	Tetrachloroethene	127-18-4	T	C-B2	10				2.30E-04	4.20E-04	5.0E-03		1.7E+02		1.2E+01	
W-10	VOC	Toluene	108-88-3	T	D	10	4	5.90E-04	1.90E-03	1.80E-04	3.90E-04	1.0E+00	1.9E-03	5.3E+02	3.6E-06	5.3E+02	3.6E-06
W-10	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	10				1.70E-04	4.00E-04	7.0E-02		3.0E+02		1.9E+01	
W-10	VOC	1,1,1-Trichloroethane	71-55-6	T	D	10	2	4.10E-04	6.20E-04	1.50E-04	3.90E-04	2.0E-01	3.1E-03	1.3E+03	4.8E-07	1.3E+03	4.8E-07
W-10	VOC	1,1,2-Trichloroethane	79-00-5	T	C	10				3.00E-04	3.60E-04	5.0E-03		1.1E+02		2.1E+01	
W-10	VOC	Trichloroethene	79-01-6	T	C-B2	10				1.40E-04	4.20E-04	5.0E-03		9.7E+01		2.2E+01	
W-10	VOC	Trichlorofluoromethane	75-69-4	T		10				2.80E-04	5.40E-04	2.6E+00		1.1E+03		1.1E+03	
W-10	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		10				3.20E-04	3.20E-04	1.7E+02		1.7E+02		1.7E+02	
W-10	VOC	Vinyl Chloride	75-01-4	T	A	10				1.50E-04	3.60E-04	2.0E-03		1.3E+01		1.0E+00	
W-10	VOC	Xylenes (total)	1330-20-7	T	ID	10	4	5.80E-04	7.80E-03	3.30E-04	4.40E-04	1.0E+01	7.8E-04	1.9E+02	4.1E-05	1.9E+02	4.1E-05
W-10	SVOC	Acenaphthene	83-32-9	T		10				8.00E-04	8.20E-03	1.3E+00		4.2E+00		4.2E+00	
W-10	SVOC	Acenaphthylene	208-96-8	T	D	10				7.10E-04	2.80E-03	5.2E-02		3.9E+00		3.9E+00	
W-10	SVOC	Acetophenone	98-86-2	T	D	10				2.60E-03	1.00E-02	1.5E+00		6.1E+03		6.1E+03	
W-10	SVOC	Anthracene	120-12-7	T	D	10				8.00E-04	2.70E-03	4.3E-02		4.3E-02		4.3E-02	
W-10	SVOC	Atrazine	1912-24-9	T		10				2.50E-03	1.00E-02	3.0E-03				5.4E+00	
W-10	SVOC	Benzaldehyde	100-52-7	T		10				2.80E-03	1.10E-02						
W-10	SVOC	Benzo(a)anthracene	56-55-3	T	B2	10				7.00E-04	2.80E-03	2.1E-03				9.4E-03	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-10	SVOC	Benzo(a)pyrene	50-32-8	T	B2	10				7.30E-04	2.90E-03	2.0E-03				2.0E-03	
W-10	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	10				9.40E-04	3.80E-03	2.0E-03				2.0E-03	
W-10	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	10				8.50E-04	3.40E-03	5.0E-03				5.0E-03	
W-10	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	10				8.40E-04	3.40E-03	5.0E-03				5.0E-03	
W-10	SVOC	Biphenyl	92-52-4	T	D	10				2.60E-03	1.00E-02						
W-10	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	10				8.70E-04	3.50E-03						
W-10	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	10				9.70E-04	3.90E-03	2.0E-03		2.1E+02		5.7E+00	
W-10	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	10	1	1.50E-01	1.50E-01	2.70E-03	1.00E-02	6.0E-03	**2.5E+01**			3.2E-01	4.7E-01
W-10	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	10				8.80E-04	3.50E-03						
W-10	SVOC	Butylbenzylphthalate	85-68-7	T	C	10				8.80E-04	3.50E-03	2.2E-03				2.7E+00	
W-10	SVOC	Caprolactam	105-60-2	T		10				2.50E-03	1.00E-02	5.8E+00				3.9E+05	
W-10	SVOC	Carbazole	86-74-8	T	B2	10				8.20E-04	3.30E-03	3.5E-02				7.4E+00	
W-10	SVOC	4-Chloro-3-methylphenol	59-50-7	T		10				9.90E-04	4.00E-03	1.5E-01				7.9E+01	
W-10	SVOC	4-Chloroaniline	106-47-8	T		10				6.10E-04	2.40E-03						
W-10	SVOC	2-Chloronaphthalene	91-58-7	T		10				8.50E-04	3.40E-03	1.8E+00				6.7E+00	
W-10	SVOC	2-Chlorophenol	95-57-8	T		10				1.00E-03	4.00E-03	4.5E-02				9.4E+01	
W-10	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		10				7.90E-04	3.20E-03						
W-10	SVOC	Chrysene	218-01-9	T	B2	10				7.50E-04	3.00E-03	5.0E-03				5.0E-03	
W-10	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	10				7.90E-04	3.20E-03	2.0E-03				2.0E-03	
W-10	SVOC	Dibenzofuran	132-64-9	T	D	10				1.10E-03	4.40E-03						
W-10	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	10				9.30E-04	3.70E-03	1.1E-03				1.8E-01	
W-10	SVOC	2,4-Dichlorophenol	120-83-2	T		10				8.50E-04	3.40E-03	7.3E-02				4.8E+01	
W-10	SVOC	Diethylphthalate	84-66-2	T	D	10				6.50E-04	2.60E-03	5.5E+00				1.1E+03	
W-10	SVOC	2,4-Dimethylphenol	105-67-9	T		10				8.50E-04	3.40E-03	3.7E-01				5.2E+02	
W-10	SVOC	Dimethylphthalate	131-11-3	T	D	10				7.60E-04	3.00E-03	7.3E+01				4.2E+03	
W-10	SVOC	Di-n-butylphthalate	84-74-2	T	D	10				6.70E-04	2.70E-03	8.8E-01				1.1E+01	
W-10	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		10				1.30E-03	5.20E-03	2.0E-02				9.5E+00	
W-10	SVOC	2,4-Dinitrophenol	51-28-5	T		10				3.00E-03	1.20E-02						
W-10	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	10				7.90E-04	3.20E-03	7.7E-03				8.6E+00	
W-10	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	10				5.70E-04	2.30E-03						
W-10	SVOC	Di-n-octylphthalate	117-84-0	T		10				1.10E-03	4.40E-03	1.3E-01				4.0E-01	
W-10	SVOC	Fluoranthene	206-44-0	T	D	10	1	8.20E-04	8.20E-04	8.10E-04	3.20E-03	2.1E-01	3.9E-03	2.1E-01	3.9E-03	2.1E-01	3.9E-03
W-10	SVOC	Fluorene	86-73-7	T	D	10	1	1.90E-03	1.90E-03	1.00E-03	4.00E-03	8.8E-01	2.2E-03	2.0E+00	9.5E-04	2.0E+00	9.5E-04
W-10	SVOC	Hexachlorobenzene	118-74-1	T	B2	10				7.40E-04	3.00E-03	1.0E-03		3.0E+00		4.6E-03	
W-10	SVOC	Hexachlorobutadiene	87-68-3	T	C	10				7.30E-04	2.90E-03	1.5E-02		3.2E+00		4.0E-01	
W-10	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	6				1.10E-03	4.40E-03	5.0E-02		4.2E-01		1.6E+00	
W-10	SVOC	Hexachloroethane	67-72-1	T	C	10				7.40E-04	3.00E-03	7.3E-03		5.0E+01		1.9E+00	
W-10	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	10				6.30E-04	2.50E-03	2.0E-03				2.0E-03	
W-10	SVOC	Isophorone	78-59-1	T	C	10				6.30E-04	2.50E-03	7.7E-01				9.9E+02	
W-10	SVOC	2-Methylnaphthalene	91-57-6	T	ID	10	1	7.50E-03	7.50E-03	6.40E-04	6.40E-04	2.6E-01	2.9E-02			2.5E+01	3.0E-04
W-10	SVOC	Methylphenol (total)	1319-77-3	T		10				1.30E-03	5.20E-03	3.7E-01				8.1E+02	
W-10	SVOC	Naphthalene	91-20-3	T	C	10	1	6.90E-03	6.90E-03	7.50E-04	7.50E-04	5.2E-01	1.3E-02	3.1E+01	2.2E-04	3.1E+01	2.2E-04
W-10	SVOC	2-Nitroaniline	88-74-4	T		10				7.00E-04	2.80E-03						
W-10	SVOC	3-Nitroaniline	99-09-2	T	C	10				7.10E-04	2.80E-03						
W-10	SVOC	4-Nitroaniline	100-01-6	T	C	10				1.30E-03	5.20E-03						
W-10	SVOC	Nitrobenzene	98-95-3	T	D	10				8.10E-04	3.20E-03	3.4E-03		5.5E+02		1.1E+01	
W-10	SVOC	2-Nitrophenol	88-75-5	T		10				2.10E-03	8.40E-03	2.0E-02				7.9E+01	
W-10	SVOC	4-Nitrophenol	100-02-7	T		10				1.90E-03	7.60E-03						
W-10	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	10				1.40E-03	5.60E-03	2.7E-01				3.5E+01	
W-10	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	10				6.70E-04	2.70E-03	5.0E-03				3.6E-01	
W-10	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	10				7.80E-04	3.10E-03						
W-10	SVOC	Pentachlorophenol	87-86-5	T	B2	10				2.40E-03	9.60E-03	1.0E-03				2.0E-01	
W-10	SVOC	Phenanthrene	85-01-8	T	D	10				8.20E-04	3.30E-03	5.2E-02		1.0E+00		1.0E+00	
W-10	SVOC	Phenol	108-95-2	T	ID	10				2.60E-03	1.00E-02	4.4E+00				2.9E+04	
W-10	SVOC	Pyrene	129-00-0	T	D	10				1.10E-03	4.40E-03	1.4E-01		1.4E-01		1.4E-01	
W-10	SVOC	2,4,5-Trichlorophenol	95-95-4	T		10				1.20E-03	4.80E-03	7.3E-01				1.7E+02	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

SHALLOW GROUNDWATER SCREENING RESULTS

Area	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Groundwater Volatilization to Indoor Air Criteria (mg/L)	Ratio of Max Detected to Industrial Groundwater Volatilization to Indoor Air Criteria	Groundwater Contact Criteria (mg/L)	Ratio of Max Detected to Groundwater Contact Criteria
W-10	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	10				1.70E-03	6.80E-03	2.0E-01				1.0E+01	
W-10	P/PCB	PCBs (total)	1336-36-3	D	B2	1				8.20E-05	8.20E-05	5.0E-04		4.5E-02		3.3E-03	
W-10	P/PCB	PCBs (total)	1336-36-3	T	B2	10	2	4.09E-04	8.31E-04	8.20E-05	8.20E-05	5.0E-04	**1.7E+00**	4.5E-02	1.8E-02	3.3E-03	2.5E-01
W-10	INORG	Antimony	7440-36-0	D		5				2.20E-03	2.20E-03	6.0E-03				6.8E+01	
W-10	INORG	Antimony	7440-36-0	T		10	1	2.30E-03	2.30E-03	2.20E-03	2.20E-03	6.0E-03	3.8E-01			6.8E+01	3.4E-05
W-10	INORG	Arsenic	7440-38-2	D	A	5	2	5.00E-03	5.91E-02	3.90E-03	3.90E-03	5.0E-02	**1.2E+00**			4.3E+00	1.4E-02
W-10	INORG	Arsenic	7440-38-2	T	A	10	4	4.90E-03	6.33E-02	2.10E-03	3.90E-03	5.0E-02	**1.3E+00**			4.3E+00	1.5E-02
W-10	INORG	Barium	7440-39-3	D	D	5	5	1.05E-02	1.09E-01			2.0E+00	5.5E-02			1.4E+04	7.8E-06
W-10	INORG	Barium	7440-39-3	T	D	10	10	1.16E-02	2.15E-01			2.0E+00	1.1E-01			1.4E+04	1.6E-05
W-10	INORG	Beryllium	7440-41-7	D	B1	5				5.40E-04	5.40E-04	4.0E-03				2.9E+02	
W-10	INORG	Beryllium	7440-41-7	T	B1	10				6.00E-04	6.00E-04	4.0E-03				2.9E+02	
W-10	INORG	Cadmium	7440-43-9	D	B1	5				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
W-10	INORG	Cadmium	7440-43-9	T	B1	10				2.80E-04	2.80E-04	5.0E-03				1.9E+02	
W-10	INORG	Chromium (total)	7440-47-3	D		5	1	5.30E-03	6.30E-03	1.40E-03	1.40E-03	1.0E-01	6.5E-02			4.6E+02	1.4E-05
W-10	INORG	Chromium (total)	7440-47-3	T		10	3	5.60E-03	1.84E-02	1.40E-03	1.30E-03	1.0E-01	1.8E-01			4.6E+02	4.0E-05
W-10	INORG	Cobalt	7440-48-4	D	B1	5	2	5.10E-03	7.40E-03	1.30E-03	1.30E-03	4.0E-02	2.8E-01			2.4E+03	4.6E-06
W-10	INORG	Cobalt	7440-48-4	T	B1	10	3	5.30E-03	1.14E-02	7.40E-04	1.30E-03	4.0E-02	2.9E-01			2.4E+03	4.8E-06
W-10	INORG	Copper	7440-50-8	D	D	5	1	4.60E-03	4.60E-03	4.20E-03	4.20E-03	1.4E+00	3.3E-03			7.4E+03	6.2E-07
W-10	INORG	Copper	7440-50-8	T	D	10	1	4.30E-03	4.30E-03	1.70E-03	4.20E-03	1.4E+00	3.1E-03			7.4E+03	5.8E-07
W-10	INORG	Lead	7439-92-1	D	B2	5				2.50E-03	2.50E-03	4.0E-03					
W-10	INORG	Lead	7439-92-1	T	B2	10				1.60E-03	2.50E-03	4.0E-03					
W-10	INORG	Manganese	7439-96-5	D	D	5	5	1.09E-02	4.83E-01			8.6E-01	5.6E-01			9.1E+03	5.3E-05
W-10	INORG	Manganese	7439-96-5	T	D	10	10	9.90E-03	5.11E-01			8.6E-01	5.9E-01			9.1E+03	5.6E-05
W-10	INORG	Mercury	7439-97-6	D	D	5				6.90E-05	6.90E-05	2.0E-03		5.6E-02		5.6E-02	
W-10	INORG	Mercury	7439-97-6	T	D	10	2	7.50E-05	9.10E-05	6.90E-05	8.70E-05	2.0E-03	4.6E-02	5.6E-02	1.6E-03	5.6E-02	1.6E-03
W-10	INORG	Nickel	7440-02-0	D	A	5	3	3.10E-03	2.42E-02	2.20E-03	2.20E-03	1.0E-01	2.4E-01			7.4E+04	3.3E-07
W-10	INORG	Nickel	7440-02-0	T	A	10	5	3.50E-03	2.47E-02	2.20E-03	2.90E-03	1.0E-01	2.5E-01			7.4E+04	3.3E-07
W-10	INORG	Selenium	7782-49-2	D	D	5				4.50E-03	4.50E-03	5.0E-02				9.7E+02	
W-10	INORG	Selenium	7782-49-2	T	D	10	1	4.90E-03	4.90E-03	4.50E-03	4.70E-03	5.0E-02	9.8E-02			9.7E+02	5.1E-06
W-10	INORG	Silver	7440-22-4	D	D	5				1.50E-03	1.50E-03	3.4E-02				1.5E+03	
W-10	INORG	Silver	7440-22-4	T	D	10				9.80E-04	1.50E-03	3.4E-02				1.5E+03	
W-10	INORG	Thallium	7440-28-0	D		5	2	2.80E-05	5.50E-03	1.80E-05	1.80E-05	2.0E-03	**2.8E+00**			1.3E+01	4.2E-04
W-10	INORG	Thallium	7440-28-0	T		10	1	6.80E-03	6.80E-03	1.80E-05	3.30E-05	2.0E-03	**3.4E+00**			1.3E+01	5.2E-04
W-10	INORG	Vanadium	7440-62-2	D		5	2	1.70E-03	2.40E-03	8.20E-04	8.20E-04	4.5E-03	5.3E-01			9.7E+02	2.5E-06
W-10	INORG	Vanadium	7440-62-2	T		10	3	1.20E-03	3.00E-03	6.70E-04	8.20E-04	4.5E-03	6.7E-01			9.7E+02	3.1E-06
W-10	INORG	Zinc	7440-66-6	D	D	5				1.20E-02	1.20E-02	2.4E+00				1.1E+05	
W-10	INORG	Zinc	7440-66-6	T	D	10	1	1.46E-02	1.46E-02	1.20E-02	1.40E-02	2.4E+00	6.1E-03			1.1E+05	1.3E-07
W-10	CDD/F	2,3,7,8-TCDD Equivalent	1746-01-6-TEF	T	B2	9	3	1.74E-09	4.88E-09	2.71E-09	3.99E-08	3.0E-08	1.6E-01			1.0E-08	4.9E-01

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Notes:
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to Polychlorinated biphenyls (PCBs) for cancer effects and Aroclor 1254 for noncancer effects.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The MDEQ Drinking Water Criteria for Chromium III was calculated by ENVIRON to be account for valence specific toxicity.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 5-2b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
SWHI	Deep	VOC	Acetone	67-64-1	T	ID	12	9	2.40E-02	7.10E+00	5.10E-04	3.40E-03	7.3E-01	**9.7E+00**	2.1E+00	**3.4E+00**
SWHI	Deep	VOC	Benzene	71-43-2	T	A	12	2	2.60E-04	1.60E-03	1.60E-04	8.30E-02	5.0E-03	3.2E-01	5.0E-03	3.2E-01
SWHI	Deep	VOC	Bromodichloromethane	75-27-4	T	B2	12				1.70E-04	8.30E-02	1.0E-01		1.0E-01	
SWHI	Deep	VOC	Bromoform	75-25-2	T	B2	12				1.80E-04	8.30E-02	1.0E-01		1.0E-01	
SWHI	Deep	VOC	Bromomethane	74-83-9	T	D	12				2.00E-04	8.30E-02	1.0E-02		2.9E-02	
SWHI	Deep	VOC	2-Butanone	78-93-3	T	ID	12				4.10E-04	8.30E-01	1.3E+01		3.8E+01	
SWHI	Deep	VOC	Carbon Disulfide	75-15-0	T		12				2.00E-04	8.30E-02	8.0E-01		2.3E+00	
SWHI	Deep	VOC	Carbon Tetrachloride	56-23-5	T	B2	12				1.20E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	Chlorobenzene	108-90-7	T	D	12				1.40E-04	8.30E-02	1.0E-01		1.0E-01	
SWHI	Deep	VOC	Chloroethane	75-00-3	T		12				2.60E-04	8.30E-02	4.3E-01		1.7E+00	
SWHI	Deep	VOC	Chloroform	67-66-3	T	B2	12	1	3.55E-04	3.55E-04	1.40E-04	8.30E-02	1.0E-01	3.6E-03	1.0E-01	3.6E-03
SWHI	Deep	VOC	Chloromethane	74-87-3	T	D	12				1.30E-04	8.30E-02	2.6E-01		1.1E+00	
SWHI	Deep	VOC	Cumene	98-82-8	T	D	12				1.20E-04	8.30E-02	8.0E-01		2.3E+00	
SWHI	Deep	VOC	Cyclohexane	110-82-7	T	ID	12				1.20E-04	8.30E-02				
SWHI	Deep	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	12				5.20E-04	1.70E-01	2.0E-04		2.0E-04	
SWHI	Deep	VOC	Dibromochloromethane	124-48-1	T	C	12				2.60E-04	8.30E-02	1.0E-01		1.0E-01	
SWHI	Deep	VOC	1,2-Dibromoethane	106-93-4	T	B2	12				2.20E-04	8.30E-02	1.0E-03		1.0E-03	
SWHI	Deep	VOC	1,2-Dichlorobenzene	95-50-1	T	D	12				1.10E-04	8.30E-02	6.0E-01		6.0E-01	
SWHI	Deep	VOC	1,3-Dichlorobenzene	541-73-1	T	D	12				1.50E-04	8.30E-02	6.6E-03		1.9E-02	
SWHI	Deep	VOC	1,4-Dichlorobenzene	106-46-7	T	C	12				1.70E-04	8.30E-02	7.5E-02		7.5E-02	
SWHI	Deep	VOC	Dichlorodifluoromethane	75-71-8	T		12				2.60E-04	1.70E-01	1.7E+00		4.8E+00	
SWHI	Deep	VOC	1,1-Dichloroethane	75-34-3	T		12				1.60E-04	8.30E-02	8.8E-01		2.5E+00	
SWHI	Deep	VOC	1,2-Dichloroethane	107-06-2	T	B2	12				2.10E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	1,1-Dichloroethene	75-35-4	T	C	12				2.40E-04	8.30E-02	7.0E-03		7.0E-03	
SWHI	Deep	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	12				2.20E-04	4.20E-02	7.0E-02		7.0E-02	
SWHI	Deep	VOC	trans-1,2-Dichloroethene	156-60-5	T		12				1.50E-04	4.20E-02	1.0E-01		1.0E-01	
SWHI	Deep	VOC	1,2-Dichloropropane	78-87-5	T	B2	12				1.70E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	12				2.70E-04	8.30E-02	8.5E-03		3.5E-02	
SWHI	Deep	VOC	Ethyl Benzene	100-41-4	T	D	12				1.20E-04	8.30E-02	7.0E-01		7.0E-01	
SWHI	Deep	VOC	2-Hexanone	591-78-6	T		12				4.60E-04	8.30E-01	1.0E+00		2.9E+00	
SWHI	Deep	VOC	Methyl Acetate	79-20-9	T		12				4.10E-04	8.30E-01				
SWHI	Deep	VOC	Methyl tert-butyl ether	1634-04-4	T		12				1.30E-04	4.20E-01	2.4E-01		6.9E-01	
SWHI	Deep	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	12				2.30E-04	8.30E-01	1.8E+00		5.2E+00	
SWHI	Deep	VOC	Methylcyclohexane	108-87-2	T		12				1.50E-04	8.30E-02				
SWHI	Deep	VOC	Methylene Chloride	75-09-2	T	B2	12				2.90E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	Styrene	100-42-5	T		12				1.50E-04	8.30E-02	1.0E-01		1.0E-01	
SWHI	Deep	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	12				2.50E-04	8.30E-02	8.5E-03		3.5E-02	
SWHI	Deep	VOC	Tetrachloroethene	127-18-4	T	C-B2	12				2.30E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	Toluene	108-88-3	T	D	12	3	4.30E-04	1.00E-03	1.80E-04	8.30E-02	1.0E+00	1.0E-03	1.0E+00	1.0E-03
SWHI	Deep	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	12				1.70E-04	8.30E-02	7.0E-02		7.0E-02	
SWHI	Deep	VOC	1,1,1-Trichloroethane	71-55-6	T	D	12				1.50E-04	8.30E-02	2.0E-01		2.0E-01	
SWHI	Deep	VOC	1,1,2-Trichloroethane	79-00-5	T	C	12				3.00E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	Trichloroethene	79-01-6	T	C-B2	12				1.40E-04	8.30E-02	5.0E-03		5.0E-03	
SWHI	Deep	VOC	Trichlorofluoromethane	75-69-4	T		12				2.80E-04	8.30E-02	2.6E+00		7.3E+00	
SWHI	Deep	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		12				3.20E-04	8.30E-02	1.7E+02		1.7E+02	
SWHI	Deep	VOC	Vinyl Chloride	75-01-4	T	A	12				1.50E-04	8.30E-02	2.0E-03		2.0E-03	
SWHI	Deep	VOC	Xylenes (total)	1330-20-7	T	ID	12	3	3.50E-04	6.10E-04	3.30E-04	8.30E-02	1.0E+01	6.1E-05	1.0E+01	6.1E-05
SWHI	Deep	SVOC	Acenaphthene	83-32-9	T		12				8.00E-04	5.00E-03	1.3E+00		3.8E+00	
SWHI	Deep	SVOC	Acenaphthylene	208-96-8	T	D	12				7.10E-04	5.00E-03	5.2E-02		1.5E-01	
SWHI	Deep	SVOC	Acetophenone	98-86-2	T	D	12				2.60E-03	1.00E-02	1.5E+00		4.4E+00	
SWHI	Deep	SVOC	Anthracene	120-12-7	T	D	12				6.80E-04	5.00E-03	4.3E-02		4.3E-02	
SWHI	Deep	SVOC	Atrazine	1912-24-9	T		12				2.50E-03	5.00E-03	3.0E-03		3.0E-03	
SWHI	Deep	SVOC	Benzaldehyde	100-52-7	T		12				2.80E-03	1.00E-02				
SWHI	Deep	SVOC	Benzo(a)anthracene	56-55-3	T	B2	12				7.00E-04	5.00E-03	2.1E-03		8.5E-03	
SWHI	Deep	SVOC	Benzo(a)pyrene	50-32-8	T	B2	12				7.30E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Deep	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	12				9.40E-04	5.00E-03	2.0E-03		2.0E-03	
SWHI	Deep	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	12				8.50E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Deep	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	12				8.40E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Deep	SVOC	Biphenyl	92-52-4	T	D	12				2.60E-03	1.00E-02				

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TABLE 5-2b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
SWHI	Deep	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	12				8.70E-04	5.00E-03				
SWHI	Deep	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	12				9.70E-04	5.00E-03	2.0E-03		8.3E-03	
SWHI	Deep	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	12	1	3.90E-03	3.90E-03	2.70E-03	5.00E-03	6.0E-03	6.5E-01	6.0E-03	6.5E-01
SWHI	Deep	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	12				8.80E-04	5.00E-03				
SWHI	Deep	SVOC	Butylbenzylphthalate	85-68-7	T	C	12				8.80E-04	5.00E-03	1.2E+00		2.7E+00	
SWHI	Deep	SVOC	Caprolactam	105-60-2	T		12	5	9.70E-03	5.40E-0	2.50E-03	1.00E-02	5.8E+00	9.3E-02	1.7E+01	3.2E-02
SWHI	Deep	SVOC	Carbazole	86-74-8	T	B2	12				8.20E-04	1.00E-02	8.5E-02		3.5E-01	
SWHI	Deep	SVOC	4-Chloro-3-methylphenol	59-50-7	T		12				9.90E-04	5.00E-03	1.5E-01		4.2E-01	
SWHI	Deep	SVOC	4-Chloroaniline	106-47-8	T		12				6.10E-04	1.00E-02				
SWHI	Deep	SVOC	2-Chloronaphthalene	91-58-7	T		12				8.50E-04	5.00E-03	1.8E+00		5.2E+00	
SWHI	Deep	SVOC	2-Chlorophenol	95-57-8	T		12				1.00E-03	5.00E-03	4.5E-02		1.3E-01	
SWHI	Deep	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		12				7.90E-04	5.00E-03				
SWHI	Deep	SVOC	Chrysene	218-01-9	T	B2	12				7.50E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Deep	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	12				7.60E-04	5.00E-03	2.0E-03		2.0E-03	
SWHI	Deep	SVOC	Dibenzofuran	132-64-9	T	D	12				1.10E-03	5.00E-03				
SWHI	Deep	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	12				9.30E-04	2.00E-02	1.1E-03		4.3E-03	
SWHI	Deep	SVOC	2,4-Dichlorophenol	120-83-2	T		12				8.50E-04	1.00E-02	7.3E-02		2.1E-01	
SWHI	Deep	SVOC	Diethylphthalate	84-66-2	T	D	12				6.50E-04	5.00E-03	5.5E+00		1.6E+01	
SWHI	Deep	SVOC	2,4-Dimethylphenol	105-67-9	T		12				8.50E-04	5.00E-03	3.7E-01		1.0E+00	
SWHI	Deep	SVOC	Dimethylphthalate	131-11-3	T	D	12				7.60E-04	5.00E-03	7.3E+01		2.1E+02	
SWHI	Deep	SVOC	Di-n-butylphthalate	84-74-2	T	D	12				6.70E-04	5.00E-03	8.8E-01		2.5E+00	
SWHI	Deep	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		12				1.30E-03	2.00E-02	2.0E-02		2.0E-02	
SWHI	Deep	SVOC	2,4-Dinitrophenol	51-28-5	T		12				3.00E-03	2.00E-02				
SWHI	Deep	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	12				7.90E-04	5.00E-03	7.7E-03		3.2E-02	
SWHI	Deep	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	12				5.70E-04	5.00E-03				
SWHI	Deep	SVOC	Di-n-octylphthalate	117-84-0	T		12				1.10E-03	5.00E-03	1.3E-01		3.8E-01	
SWHI	Deep	SVOC	Fluoranthene	206-44-0	T	D	12				8.10E-04	5.00E-03	2.1E-01		2.1E-01	
SWHI	Deep	SVOC	Fluorene	86-73-7	T	D	12				1.00E-03	5.00E-03	8.8E-01		2.0E+00	
SWHI	Deep	SVOC	Hexachlorobenzene	118-74-1	T	B2	12				7.40E-04	5.00E-03	1.0E-03		1.0E-03	
SWHI	Deep	SVOC	Hexachlorobutadiene	87-68-3	T	C	12				7.30E-04	5.00E-03	1.5E-02		4.2E-02	
SWHI	Deep	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	12				1.10E-03	5.00E-03	5.0E-02		5.0E-02	
SWHI	Deep	SVOC	Hexachloroethane	67-72-1	T	C	12				7.40E-04	5.00E-03	7.3E-03		2.1E-02	
SWHI	Deep	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	12				6.30E-04	5.00E-03	2.0E-03		2.0E-03	
SWHI	Deep	SVOC	Isophorone	78-59-1	T	C	12	1	2.65E-03	2.65E-03	6.30E-04	5.00E-03	7.7E-01	3.4E-03	3.1E+00	8.5E-04
SWHI	Deep	SVOC	2-Methylnaphthalene	91-57-6	T	ID	12				6.40E-04	5.00E-03	2.6E-01		7.5E-01	
SWHI	Deep	SVOC	Methylphenol (total)	1319-77-3	T		12				1.30E-03	5.00E-03	3.7E-01		1.0E+00	
SWHI	Deep	SVOC	Naphthalene	91-20-3	T	C	12				7.50E-04	5.00E-03	5.2E-01		1.5E+00	
SWHI	Deep	SVOC	2-Nitroaniline	88-74-4	T		12				7.00E-04	2.00E-02				
SWHI	Deep	SVOC	3-Nitroaniline	99-09-2	T	C	12				7.10E-04	2.00E-02				
SWHI	Deep	SVOC	4-Nitroaniline	100-01-6	T	C	12				1.30E-03	2.00E-02				
SWHI	Deep	SVOC	Nitrobenzene	98-95-3	T	D	12				8.10E-04	5.00E-03	3.4E-03		9.6E-03	
SWHI	Deep	SVOC	2-Nitrophenol	88-75-5	T		12				2.10E-03	5.00E-03	2.0E-02		5.8E-02	
SWHI	Deep	SVOC	4-Nitrophenol	100-02-7	T		12				1.90E-03	2.00E-02				
SWHI	Deep	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	12				1.40E-03	5.00E-03	2.7E-01		1.1E+00	
SWHI	Deep	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	12				6.70E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Deep	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	12				7.80E-04	5.00E-03				
SWHI	Deep	SVOC	Pentachlorophenol	87-86-5	T	B2	12				2.40E-03	5.00E-03	1.0E-03		1.0E-03	
SWHI	Deep	SVOC	Phenanthrene	85-01-8	T	D	12				8.20E-04	5.00E-03	5.2E-02		1.5E-01	
SWHI	Deep	SVOC	Phenol	108-95-2	T	ID	12				2.60E-03	5.00E-03	4.4E+00		1.3E+01	
SWHI	Deep	SVOC	Pyrene	129-00-0	T	D	12				1.10E-03	5.00E-03	1.4E-01		1.4E-01	
SWHI	Deep	SVOC	2,4,5-Trichlorophenol	95-95-4	T		12				1.20E-03	5.00E-03	7.3E-01		2.1E+00	
SWHI	Deep	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	12				1.70E-03	5.00E-03	1.2E-01		4.7E-01	
SWHI	Deep	P/PCB	PCBs (total)	1336-36-3	T	B2	1				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
SWHI	Deep	INORG	Antimony	7440-36-0	D		10				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
SWHI	Deep	INORG	Antimony	7440-36-0	T		12				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
SWHI	Deep	INORG	Arsenic	7440-38-2	D	A	10	6	6.90E-03	1.88E-02	3.90E-03	1.00E-02	5.0E-02	3.8E-01	5.0E-02	3.8E-01
SWHI	Deep	INORG	Arsenic	7440-38-2	T	A	12	8	4.70E-03	3.19E-02	3.90E-03	1.00E-02	5.0E-02	6.4E-01	5.0E-02	6.4E-01
SWHI	Deep	INORG	Barium	7440-39-3	D	D	10	10	6.46E-02	3.24E-01			2.0E+00	1.6E-01	2.0E+00	1.6E-01
SWHI	Deep	INORG	Barium	7440-39-3	T	D	12	12	4.88E-02	3.31E-01			2.0E+00	1.7E-01	2.0E+00	1.7E-01

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TABLE 5-2b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
SWHI	Deep	INORG	Beryllium	7440-41-7	D	B1	10				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
SWHI	Deep	INORG	Beryllium	7440-41-7	T	B1	12				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
SWHI	Deep	INORG	Cadmium	7440-43-9	D	B1	10				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Deep	INORG	Cadmium	7440-43-9	T	B1	12	2	3.10E-04	3.30E-04	2.80E-04	5.00E-03	5.0E-03	6.6E-02	5.0E-03	6.6E-02
SWHI	Deep	INORG	Chromium (total)	7440-47-3	D		10	1	1.50E-03	1.50E-03	1.40E-03	1.00E-02	1.0E-01	1.5E-02	1.0E-01	1.5E-02
SWHI	Deep	INORG	Chromium (total)	7440-47-3	T		12	7	3.60E-03	1.13E-02	1.40E-03	1.00E-02	1.0E-01	1.1E-01	1.0E-01	1.1E-01
SWHI	Deep	INORG	Cobalt	7440-48-4	D	B1	10				1.30E-03	2.00E-02	4.0E-02		1.0E-01	
SWHI	Deep	INORG	Cobalt	7440-48-4	T	B1	12	2	1.30E-03	1.80E-03	7.40E-04	2.00E-02	4.0E-02	1.2E-01	1.0E-01	4.8E-02
SWHI	Deep	INORG	Copper	7440-50-8	D	D	10				4.20E-03	5.00E-03	1.4E+00		4.0E+00	
SWHI	Deep	INORG	Copper	7440-50-8	T	D	12	1	3.60E-03	3.60E-03	1.70E-03	5.00E-03	1.4E+00	2.6E-03	4.0E+00	9.0E-04
SWHI	Deep	INORG	Lead	7439-92-1	D	B2	10				2.50E-03	3.00E-03	4.0E-03		4.0E-03	
SWHI	Deep	INORG	Lead	7439-92-1	T	B2	12				1.60E-03	3.00E-03	4.0E-03		4.0E-03	
SWHI	Deep	INORG	Manganese	7439-96-5	D	D	10	10	3.11E-02	2.32E-01			8.6E-01	2.7E-01	2.5E+00	9.3E-02
SWHI	Deep	INORG	Manganese	7439-96-5	T	D	12	12	3.44E-02	2.52E-01			8.6E-01	2.9E-01	2.5E+00	1.0E-01
SWHI	Deep	INORG	Mercury	7439-97-6	D	D	10				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
SWHI	Deep	INORG	Mercury	7439-97-6	T	D	12	1	8.80E-05	8.80E-05	6.90E-05	2.00E-04	2.0E-03	4.4E-02	2.0E-03	4.4E-02
SWHI	Deep	INORG	Nickel	7440-02-0	D	A	10	3	2.40E-03	5.60E-03	2.20E-03	2.00E-02	1.0E-01	5.6E-02	1.0E-01	5.6E-02
SWHI	Deep	INORG	Nickel	7440-02-0	T	A	12	8	2.90E-03	7.40E-03	2.20E-03	2.00E-02	1.0E-01	7.4E-02	1.0E-01	7.4E-02
SWHI	Deep	INORG	Selenium	7782-49-2	D	D	10				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
SWHI	Deep	INORG	Selenium	7782-49-2	T	D	12				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
SWHI	Deep	INORG	Silver	7440-22-4	D	D	10				1.50E-03	5.00E-03	3.4E-02		9.8E-02	
SWHI	Deep	INORG	Silver	7440-22-4	T	D	12				9.80E-04	5.00E-03	3.4E-02		9.8E-02	
SWHI	Deep	INORG	Thallium	7440-28-0	D		11				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
SWHI	Deep	INORG	Thallium	7440-28-0	T		13				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
SWHI	Deep	INORG	Vanadium	7440-62-2	D		10				8.20E-04	1.00E-02	4.5E-03		6.2E-02	
SWHI	Deep	INORG	Vanadium	7440-62-2	T		12				6.70E-04	1.00E-02	4.5E-03		6.2E-02	
SWHI	Deep	INORG	Zinc	7440-66-6	D	D	10				1.20E-02	2.00E-02	2.4E+00		5.0E+00	
SWHI	Deep	INORG	Zinc	7440-66-6	T	D	12	2	1.28E-02	2.76E-02	1.20E-02	2.00E-02	2.4E+00	1.2E-02	5.0E+00	5.5E-03
SWHI	Intermediate	VOC	Acetone	67-64-1	T	ID	8	6	6.50E-01	1.30E+01	1.10E-03	3.60E-02	7.3E-01	**1.8E+01**	2.1E+00	**6.2E+00**
SWHI	Intermediate	VOC	Benzene	71-43-2	T	A	8				3.70E-04	4.00E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	Bromodichloromethane	75-27-4	T	B2	8				3.20E-04	4.20E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	Bromoform	75-25-2	T	B2	8				3.70E-04	4.50E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	Bromomethane	74-83-9	T	D	7				3.00E-04	5.00E-02	1.0E-02		2.9E-02	
SWHI	Intermediate	VOC	2-Butanone	78-93-3	T	ID	8				5.90E-04	1.40E-01	1.3E+01		3.8E+01	
SWHI	Intermediate	VOC	Carbon Disulfide	75-15-0	T		8				2.40E-04	5.00E-02	8.0E-01		2.3E+00	
SWHI	Intermediate	VOC	Carbon Tetrachloride	56-23-5	T	B2	8				3.70E-04	3.00E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	Chlorobenzene	108-90-7	T	D	8				3.80E-04	3.50E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	Chloroethane	75-00-3	T		8				2.90E-04	6.50E-02	4.3E-01		1.7E+00	
SWHI	Intermediate	VOC	Chloroform	67-66-3	T	B2	8				3.50E-04	3.50E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	Chloromethane	74-87-3	T	D	8				4.90E-04	3.20E-02	2.6E-01		1.1E+00	
SWHI	Intermediate	VOC	Cumene	98-82-8	T	D	8				3.90E-04	3.00E-02	8.0E-01		2.3E+00	
SWHI	Intermediate	VOC	Cyclohexane	110-82-7	T	ID	8				3.30E-04	3.20E-02				
SWHI	Intermediate	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	8				8.20E-04	1.60E-01	2.0E-04		2.0E-04	
SWHI	Intermediate	VOC	Dibromochloromethane	124-48-1	T	C	8				3.70E-04	6.50E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	1,2-Dibromoethane	106-93-4	T	B2	8				3.40E-04	5.50E-02	1.0E-03		1.0E-03	
SWHI	Intermediate	VOC	1,2-Dichlorobenzene	95-50-1	T	D	8				3.80E-04	2.80E-02	6.0E-01		6.0E-01	
SWHI	Intermediate	VOC	1,3-Dichlorobenzene	541-73-1	T	D	8				3.80E-04	3.80E-02	6.6E-03		1.9E-02	
SWHI	Intermediate	VOC	1,4-Dichlorobenzene	106-46-7	T	C	8				3.80E-04	4.20E-02	7.5E-02		7.5E-02	
SWHI	Intermediate	VOC	Dichlorodifluoromethane	75-71-8	T		8				4.90E-04	6.50E-02	1.7E+00		4.8E+00	
SWHI	Intermediate	VOC	1,1-Dichloroethane	75-34-3	T	C	8				3.00E-04	4.00E-02	8.8E-01		2.5E+00	
SWHI	Intermediate	VOC	1,2-Dichloroethane	107-06-2	T	B2	8				2.80E-04	5.20E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	1,1-Dichloroethene	75-35-4	T	C	8				3.10E-04	6.00E-02	7.0E-03		7.0E-03	
SWHI	Intermediate	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	8				3.50E-04	5.50E-02	7.0E-02		7.0E-02	
SWHI	Intermediate	VOC	trans-1,2-Dichloroethene	156-60-5	T		8				3.30E-04	3.80E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	1,2-Dichloropropane	78-87-5	T	B2	8				4.10E-04	4.20E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	8				3.50E-04	6.80E-02	8.5E-03		3.5E-02	
SWHI	Intermediate	VOC	Ethyl Benzene	100-41-4	T	D	8	1	6.50E-03	6.50E-03	4.10E-04	3.00E-02	7.0E-01	9.3E-03	7.0E-01	9.3E-03
SWHI	Intermediate	VOC	2-Hexanone	591-78-6	T		8				5.80E-04	1.40E-01	1.0E+00		2.9E+00	
SWHI	Intermediate	VOC	Methyl Acetate	79-20-9	T		8				5.40E-04	1.40E-01				

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
SWHI	Intermediate	VOC	Methyl tert-butyl ether	1634-04-4	T		8				2.70E-04	7.10E-02	2.4E-01		6.9E-01	
SWHI	Intermediate	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	7	1	8.50E-03	8.50E-03	2.60E-04	1.40E-01	1.8E+00	4.7E-03	5.2E+00	1.6E-03
SWHI	Intermediate	VOC	Methylcyclohexane	108-87-2	T		8				4.20E-04	3.80E-02				
SWHI	Intermediate	VOC	Methylene Chloride	75-09-2	T	B2	8				2.90E-04	8.50E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	Styrene	100-42-5	T		8				3.50E-04	3.80E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	8				3.60E-04	6.20E-02	8.5E-03		3.5E-02	
SWHI	Intermediate	VOC	Tetrachloroethene	127-18-4	T	C-B2	8				4.20E-04	5.80E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	Toluene	108-88-3	T	D	8	1	1.90E-02	1.90E-02	3.90E-04	4.50E-02	1.0E+00	1.9E-02	1.0E+00	1.9E-02
SWHI	Intermediate	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	8				4.00E-04	4.20E-02	7.0E-02		7.0E-02	
SWHI	Intermediate	VOC	1,1,1-Trichloroethane	71-55-6	T	D	8				3.90E-04	3.80E-02	2.0E-01		2.0E-01	
SWHI	Intermediate	VOC	1,1,2-Trichloroethane	79-00-5	T	C	8				3.60E-04	7.50E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	Trichloroethene	79-01-6	T	C-B2	8				4.20E-04	3.50E-02	5.0E-03		5.0E-03	
SWHI	Intermediate	VOC	Trichlorofluoromethane	75-69-4	T		8				5.40E-04	7.00E-02	2.6E+00		7.3E+00	
SWHI	Intermediate	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		8				3.20E-04	8.00E-02	1.7E+02		1.7E+02	
SWHI	Intermediate	VOC	Vinyl Chloride	75-01-4	T	A	8				3.60E-04	3.80E-02	2.0E-03		2.0E-03	
SWHI	Intermediate	VOC	Xylenes (total)	1330-20-7	T	ID	8	1	2.50E-02	2.50E-02	4.40E-04	8.20E-02	1.0E+01	2.5E-03	1.0E+01	2.5E-03
SWHI	Intermediate	SVOC	Acenaphthene	83-32-9	T		8				8.00E-04	5.00E-03	1.3E+00		3.8E+00	
SWHI	Intermediate	SVOC	Acenaphthylene	208-96-8	T	D	8				7.10E-04	5.00E-03	5.2E-02		1.5E-01	
SWHI	Intermediate	SVOC	Acetophenone	98-86-2	T	D	8				2.60E-03	1.00E-02	1.5E+00		4.4E+00	
SWHI	Intermediate	SVOC	Anthracene	120-12-7	T	D	8				6.80E-04	5.00E-03	4.3E-02		4.3E-02	
SWHI	Intermediate	SVOC	Atrazine	1912-24-9	T		8				2.50E-03	5.00E-03	3.0E-03		3.0E-03	
SWHI	Intermediate	SVOC	Benzaldehyde	100-52-7	T		8				2.80E-03	1.00E-02				
SWHI	Intermediate	SVOC	Benzo(a)anthracene	56-55-3	T	B2	8				7.00E-04	5.00E-03	2.1E-03		8.5E-03	
SWHI	Intermediate	SVOC	Benzo(a)pyrene	50-32-8	T	B2	8				7.30E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Intermediate	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	8				9.40E-04	5.00E-03	2.0E-03		2.0E-03	
SWHI	Intermediate	SVOC	Benzo(g,h,i)perylene	191-24-2	T		8				8.50E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Intermediate	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	8				8.40E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Intermediate	SVOC	Biphenyl	92-52-4	T	D	8				2.60E-03	1.00E-02				
SWHI	Intermediate	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	8				8.70E-04	5.00E-03				
SWHI	Intermediate	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	8				9.70E-04	5.00E-03	2.0E-03		8.3E-03	
SWHI	Intermediate	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	8				2.70E-03	5.00E-03	6.0E-03		6.0E-03	
SWHI	Intermediate	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	8				8.80E-04	5.00E-03				
SWHI	Intermediate	SVOC	Butylbenzylphthalate	85-68-7	T	C	8				8.80E-04	5.00E-03	1.2E+00		2.7E+00	
SWHI	Intermediate	SVOC	Caprolactam	105-60-2	T		8	5	3.30E-03	8.20E-01	2.50E-03	2.50E-03	5.8E+00	1.4E-01	1.7E+01	4.8E-02
SWHI	Intermediate	SVOC	Carbazole	86-74-8	T	B2	8				8.20E-04	1.00E-02	8.5E-02		3.5E-01	
SWHI	Intermediate	SVOC	4-Chloro-3-methylphenol	59-50-7	T		8				9.90E-04	5.00E-03	1.5E-01		4.2E-01	
SWHI	Intermediate	SVOC	4-Chloroaniline	106-47-8	T		8				6.10E-04	1.00E-02				
SWHI	Intermediate	SVOC	2-Chloronaphthalene	91-58-7	T		8				8.50E-04	5.00E-03	1.8E+00		5.2E+00	
SWHI	Intermediate	SVOC	2-Chlorophenol	95-57-8	T		8				1.00E-03	5.00E-03	4.5E-02		1.3E-01	
SWHI	Intermediate	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		8				7.90E-04	5.00E-03				
SWHI	Intermediate	SVOC	Chrysene	218-01-9	T	B2	8				7.50E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Intermediate	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	8				7.90E-04	5.00E-03	2.0E-03		2.0E-03	
SWHI	Intermediate	SVOC	Dibenzofuran	132-64-9	T	D	8				1.10E-03	5.00E-03				
SWHI	Intermediate	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	8				9.30E-04	2.00E-02	1.1E-03		4.3E-03	
SWHI	Intermediate	SVOC	2,4-Dichlorophenol	120-83-2	T		8				8.50E-04	1.00E-02	7.3E-02		2.1E-01	
SWHI	Intermediate	SVOC	Diethylphthalate	84-66-2	T	D	8				6.50E-04	5.00E-03	5.5E+00		1.6E+01	
SWHI	Intermediate	SVOC	2,4-Dimethylphenol	105-67-9	T		8				8.50E-04	5.00E-03	3.7E-01		1.0E+00	
SWHI	Intermediate	SVOC	Dimethylphthalate	131-11-3	T	D	8				7.60E-04	5.00E-03	7.3E+01		2.1E+02	
SWHI	Intermediate	SVOC	Di-n-butylphthalate	84-74-2	T	D	8				6.70E-04	5.00E-03	8.8E-01		2.5E+00	
SWHI	Intermediate	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		8				1.30E-03	2.00E-02	2.0E-02		2.0E-02	
SWHI	Intermediate	SVOC	2,4-Dinitrophenol	51-28-5	T		8				3.00E-03	2.00E-02				
SWHI	Intermediate	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	8				7.90E-04	5.00E-03	7.7E-03		3.2E-02	
SWHI	Intermediate	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	8				5.70E-04	5.00E-03				
SWHI	Intermediate	SVOC	Di-n-octylphthalate	117-84-0	T		8				1.10E-03	5.00E-03	1.3E-01		3.8E-01	
SWHI	Intermediate	SVOC	Fluoranthene	206-44-0	T	D	8				8.10E-04	5.00E-03	2.1E-01		2.1E-01	
SWHI	Intermediate	SVOC	Fluorene	86-73-7	T	D	8				1.00E-03	5.00E-03	8.8E-01		2.0E+00	
SWHI	Intermediate	SVOC	Hexachlorobenzene	118-74-1	T	B2	8				7.40E-04	5.00E-03	1.0E-03		1.0E-03	
SWHI	Intermediate	SVOC	Hexachlorobutadiene	87-68-3	T	C	8				7.30E-04	5.00E-03	1.5E-02		4.2E-02	
SWHI	Intermediate	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	7				1.10E-03	5.00E-03	5.0E-02		5.0E-02	

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TABLE 5-2b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
SWHI	Intermediate	SVOC	Hexachloroethane	67-72-1	T	C	8				7.40E-04	5.00E-03	7.3E-03		2.1E-02	
SWHI	Intermediate	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	8				6.30E-04	5.00E-03	2.0E-03		2.0E-03	
SWHI	Intermediate	SVOC	Isophorone	78-59-1	T	C	8				6.30E-04	5.00E-03	7.7E-01		3.1E+00	
SWHI	Intermediate	SVOC	2-Methylnaphthalene	91-57-6	T	ID	8				6.40E-04	5.00E-03	2.6E-01		7.5E-01	
SWHI	Intermediate	SVOC	Methylphenol (total)	1319-77-3	T		8				7.90E-03	5.00E-03	3.7E-01		1.0E+00	
SWHI	Intermediate	SVOC	Naphthalene	91-20-3	T	C	8				7.80E-04	5.00E-03	5.2E-01		1.5E+00	
SWHI	Intermediate	SVOC	2-Nitroaniline	88-74-4	T		8				7.00E-04	2.00E-02				
SWHI	Intermediate	SVOC	3-Nitroaniline	99-09-2	T	C	8				7.10E-04	2.00E-02				
SWHI	Intermediate	SVOC	4-Nitroaniline	100-01-6	T	C	8				1.30E-03	2.00E-02				
SWHI	Intermediate	SVOC	Nitrobenzene	98-95-3	T	D	8				8.10E-04	5.00E-03	3.4E-03		9.6E-03	
SWHI	Intermediate	SVOC	2-Nitrophenol	88-75-5	T		8				2.10E-03	5.00E-03	2.0E-02		5.8E-02	
SWHI	Intermediate	SVOC	4-Nitrophenol	100-02-7	T		8				1.90E-03	2.00E-02				
SWHI	Intermediate	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	8				1.40E-03	5.00E-03	2.7E-01		1.1E+00	
SWHI	Intermediate	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	8				6.70E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Intermediate	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	8				7.80E-04	5.00E-03				
SWHI	Intermediate	SVOC	Pentachlorophenol	87-86-5	T	B2	8				2.40E-03	5.00E-03	1.0E-03		1.0E-03	
SWHI	Intermediate	SVOC	Phenanthrene	85-01-8	T	D	8				8.20E-04	5.00E-03	5.2E-02		1.5E-01	
SWHI	Intermediate	SVOC	Phenol	108-95-2	T	ID	8				2.60E-03	5.00E-03	4.4E+00		1.3E+01	
SWHI	Intermediate	SVOC	Pyrene	129-00-0	T	D	8				1.10E-03	5.00E-03	1.4E-01		1.4E-01	
SWHI	Intermediate	SVOC	2,4,5-Trichlorophenol	95-95-4	T		8				1.20E-03	5.00E-03	7.3E-01		2.1E+00	
SWHI	Intermediate	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	8				1.70E-03	5.00E-03	1.2E-01		4.7E-01	
SWHI	Intermediate	P/PCB	PCBs (total)	1336-36-3	T	B2	8				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
SWHI	Intermediate	INORG	Antimony	7440-36-0	D		6				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
SWHI	Intermediate	INORG	Antimony	7440-36-0	T		8				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
SWHI	Intermediate	INORG	Arsenic	7440-38-2	D	A	6	4	6.10E-03	2.74E-02	3.90E-03	3.90E-03	5.0E-02	5.5E-01	5.0E-02	5.5E-01
SWHI	Intermediate	INORG	Arsenic	7440-38-2	T	A	8	4	7.40E-03	2.66E-02	2.10E-03	3.90E-03	5.0E-02	5.3E-01	5.0E-02	5.3E-01
SWHI	Intermediate	INORG	Barium	7440-39-3	D	D	6	6	8.18E-02	3.04E-01			2.0E+00	1.5E-01	2.0E+00	1.5E-01
SWHI	Intermediate	INORG	Barium	7440-39-3	T	D	8	8	1.01E-01	2.88E-01			2.0E+00	1.4E-01	2.0E+00	1.4E-01
SWHI	Intermediate	INORG	Beryllium	7440-41-7	D	B1	6				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
SWHI	Intermediate	INORG	Beryllium	7440-41-7	T	B1	8				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
SWHI	Intermediate	INORG	Cadmium	7440-43-9	D	B1	6				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
SWHI	Intermediate	INORG	Cadmium	7440-43-9	T	B1	8	1	3.30E-04	3.30E-04	2.80E-04	5.00E-03	5.0E-03	6.6E-02	5.0E-03	6.6E-02
SWHI	Intermediate	INORG	Chromium (total)	7440-47-3	D		6				1.40E-03	1.00E-02	1.0E-01		1.0E-01	
SWHI	Intermediate	INORG	Chromium (total)	7440-47-3	T		8	6	1.90E-03	6.05E-02	1.40E-03	1.00E-02	1.0E-01	6.1E-01	1.0E-01	6.1E-01
SWHI	Intermediate	INORG	Cobalt	7440-48-4	D	B1	6	2	1.90E-03	2.10E-03	1.30E-03	2.00E-02	4.0E-02	5.3E-02	1.0E-01	2.1E-02
SWHI	Intermediate	INORG	Cobalt	7440-48-4	T	B1	8	5	1.80E-03	6.20E-03	1.30E-03	2.00E-02	4.0E-02	1.6E-01	1.0E-01	6.2E-02
SWHI	Intermediate	INORG	Copper	7440-50-8	D	D	6				4.20E-03	5.00E-03	1.4E+00		4.0E+00	
SWHI	Intermediate	INORG	Copper	7440-50-8	T	D	8	3	5.60E-03	9.90E-03	1.70E-03	4.20E-03	1.4E+00	7.1E-03	4.0E+00	2.5E-03
SWHI	Intermediate	INORG	Lead	7439-92-1	D	B2	6				2.50E-03	3.00E-03	4.0E-03		4.0E-03	
SWHI	Intermediate	INORG	Lead	7439-92-1	T	B2	8	1	2.80E-03	2.80E-03	1.60E-03	3.00E-03	4.0E-03	7.0E-01	4.0E-03	7.0E-01
SWHI	Intermediate	INORG	Manganese	7439-96-5	D	D	6	6	3.49E-02	2.19E-01			8.6E-01	2.5E-01	2.5E+00	8.8E-02
SWHI	Intermediate	INORG	Manganese	7439-96-5	T	D	8	8	3.75E-02	3.52E-01			8.6E-01	4.1E-01	2.5E+00	1.4E-01
SWHI	Intermediate	INORG	Mercury	7439-97-6	D	D	6				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
SWHI	Intermediate	INORG	Mercury	7439-97-6	T	D	8				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
SWHI	Intermediate	INORG	Nickel	7440-02-0	D	A	6	3	2.30E-03	2.32E-02	2.20E-03	2.00E-02	1.0E-01	2.3E-01	1.0E-01	2.3E-01
SWHI	Intermediate	INORG	Nickel	7440-02-0	T	A	8	7	2.30E-03	5.90E-02	2.20E-03	2.20E-03	1.0E-01	5.9E-01	1.0E-01	5.9E-01
SWHI	Intermediate	INORG	Selenium	7782-49-2	D	D	6				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
SWHI	Intermediate	INORG	Selenium	7782-49-2	T	D	8				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
SWHI	Intermediate	INORG	Silver	7440-22-4	D	D	6				1.50E-03	5.00E-03	3.4E-02		9.8E-02	
SWHI	Intermediate	INORG	Silver	7440-22-4	T	D	8				9.80E-04	5.00E-03	3.4E-02		9.8E-02	
SWHI	Intermediate	INORG	Thallium	7440-28-0	D		6	2	6.80E-04	6.10E-03	1.80E-05	1.00E-02	2.0E-03	**3.1E+00**	2.0E-03	**3.1E+00**
SWHI	Intermediate	INORG	Thallium	7440-28-0	T		8	1	9.20E-05	9.20E-05	1.80E-05	1.00E-02	2.0E-03	4.6E-02	2.0E-03	4.6E-02
SWHI	Intermediate	INORG	Vanadium	7440-62-2	D		6				8.20E-04	1.00E-02	4.5E-03		6.2E-02	
SWHI	Intermediate	INORG	Vanadium	7440-62-2	T		8	2	2.20E-03	3.40E-03	6.70E-04	1.00E-02	4.5E-03	7.6E-01	6.2E-02	5.5E-02
SWHI	Intermediate	INORG	Zinc	7440-66-6	D	D	6	1	1.56E-02	1.56E-02	1.20E-02	2.00E-02	2.4E+00	6.5E-03	5.0E+00	3.1E-03
SWHI	Intermediate	INORG	Zinc	7440-66-6	T	D	8	4	1.34E-02	3.03E-02	1.20E-02	2.00E-02	2.4E+00	1.3E-02	5.0E+00	6.1E-03
W-01	Deep	VOC	Acetone	67-64-1	T	ID	11	5	4.50E-02	3.10E+00	5.10E-04	3.70E-01	7.3E-01	**4.2E+00**	2.1E+00	**1.5E+00**
W-01	Deep	VOC	Benzene	71-43-2	T	A	11	2	5.60E-04	4.50E-03	1.60E-04	1.20E-01	5.0E-03	9.0E-01	5.0E-03	9.0E-01
W-01	Deep	VOC	Bromodichloromethane	75-27-4	T	B2	10				1.70E-04	4.00E-02	1.0E-01		1.0E-01	

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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-01	Deep	VOC	Bromoform	75-25-2	T	B2	11				1.80E-04	1.20E-01	1.0E-01		1.0E-01	
W-01	Deep	VOC	Bromomethane	74-83-9	T	D	10				2.00E-04	1.00E-01	1.0E-02		2.9E-02	
W-01	Deep	VOC	2-Butanone	78-93-3	T	ID	11	1	9.60E-04	9.60E-04	4.10E-04	4.00E-01	1.3E+01	7.4E-05	3.8E+01	2.5E-05
W-01	Deep	VOC	Carbon Disulfide	75-15-0	T		11	1	9.40E-03	9.40E-03	2.00E-04	8.00E-02	8.0E-01	1.2E-02	2.3E+00	4.1E-03
W-01	Deep	VOC	Carbon Tetrachloride	56-23-5	T	B2	11				1.20E-04	1.20E-01	5.0E-03		5.0E-03	
W-01	Deep	VOC	Chlorobenzene	108-90-7	T	D	11				1.30E-04	1.30E-01	1.0E-01		1.0E-01	
W-01	Deep	VOC	Chloroethane	75-00-3	T		11				2.60E-04	9.70E-02	4.3E-01		1.7E+00	
W-01	Deep	VOC	Chloroform	67-66-3	T	B2	11	1	1.60E-04	1.60E-04	3.50E-04	1.20E-01	1.0E-01	1.6E-03	1.0E-01	1.6E-03
W-01	Deep	VOC	Chloromethane	74-87-3	T	D	11				1.30E-04	1.60E-01	2.6E-01		1.1E+00	
W-01	Deep	VOC	Cumene	98-82-8	T	D	11				1.20E-04	1.30E-01	8.0E-01		2.3E+00	
W-01	Deep	VOC	Cyclohexane	110-82-7	T	ID	11				1.30E-04	1.10E-01				
W-01	Deep	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	11				6.20E-04	2.70E-01	2.0E-04		2.0E-04	
W-01	Deep	VOC	Dibromochloromethane	124-48-1	T	C	11				2.60E-04	1.20E-01	1.0E-01		1.0E-01	
W-01	Deep	VOC	1,2-Dibromoethane	106-93-4	T	B2	11				2.20E-04	1.10E-01	1.0E-03		1.0E-03	
W-01	Deep	VOC	1,2-Dichlorobenzene	95-50-1	T	D	11				1.10E-04	1.30E-01	6.0E-01		6.0E-01	
W-01	Deep	VOC	1,3-Dichlorobenzene	541-73-1	T	D	11				1.50E-04	1.30E-01	6.6E-03		1.9E-02	
W-01	Deep	VOC	1,4-Dichlorobenzene	106-46-7	T		11				1.70E-04	1.30E-01	7.5E-02		7.5E-02	
W-01	Deep	VOC	Dichlorodifluoromethane	75-71-8	T		11				2.60E-04	1.60E-01	1.7E+00		4.8E+00	
W-01	Deep	VOC	1,1-Dichloroethane	75-34-3	T	C	11				1.60E-04	1.00E-01	8.8E-01		2.5E+00	
W-01	Deep	VOC	1,2-Dichloroethane	107-06-2	T	B2	11				2.10E-04	9.30E-02	5.0E-03		5.0E-03	
W-01	Deep	VOC	1,1-Dichloroethene	75-35-4	T	C	11				2.40E-04	4.00E-02	7.0E-03		7.0E-03	
W-01	Deep	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	11				2.20E-04	2.00E-02	7.0E-02		7.0E-02	
W-01	Deep	VOC	trans-1,2-Dichloroethene	156-60-5	T		11				1.50E-04	1.10E-01	1.0E-01		1.0E-01	
W-01	Deep	VOC	1,2-Dichloropropane	78-87-5	T	B2	11				1.70E-04	1.40E-01	5.0E-03		5.0E-03	
W-01	Deep	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	10				3.50E-04	1.20E-01	8.5E-03		3.5E-02	
W-01	Deep	VOC	Ethyl Benzene	100-41-4	T	D	10				1.20E-04	1.40E-01	7.0E-01		7.0E-01	
W-01	Deep	VOC	2-Hexanone	591-78-6	T		11				4.60E-04	4.00E-01	1.0E+00		2.9E+00	
W-01	Deep	VOC	Methyl Acetate	79-20-9	T		11				4.10E-04	4.00E-01				
W-01	Deep	VOC	Methyl tert-butyl ether	1634-04-4	T		11				1.30E-04	2.00E-01	2.4E-01		6.9E-01	
W-01	Deep	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	8	1	3.20E-04	3.20E-04	2.60E-04	4.00E-01	1.8E+00	1.8E-04	5.2E+00	6.2E-05
W-01	Deep	VOC	Methylcyclohexane	108-87-2	T		11				1.50E-04	1.40E-01				
W-01	Deep	VOC	Methylene Chloride	75-09-2	T	B2	11	1	1.60E-03	1.60E-03	2.90E-04	9.70E-02	5.0E-03	3.2E-01	5.0E-03	3.2E-01
W-01	Deep	VOC	Styrene	100-42-5	T		11				1.50E-04	1.20E-01	1.0E-01		1.0E-01	
W-01	Deep	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	11				2.50E-04	1.20E-01	8.5E-03		3.5E-02	
W-01	Deep	VOC	Tetrachloroethene	127-18-4	T	C-B2	10				4.20E-04	1.40E-01	5.0E-03		5.0E-03	
W-01	Deep	VOC	Toluene	108-88-3	T	D	11				1.80E-04	1.30E-01	1.0E+00		1.0E+00	
W-01	Deep	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	11				1.70E-04	1.30E-01	7.0E-02		7.0E-02	
W-01	Deep	VOC	1,1,1-Trichloroethane	71-55-6	T	D	11				1.50E-04	1.30E-01	2.0E-01		2.0E-01	
W-01	Deep	VOC	1,1,2-Trichloroethane	79-00-5	T	C	11				3.00E-04	1.20E-01	5.0E-03		5.0E-03	
W-01	Deep	VOC	Trichloroethene	79-01-6	T	C-B2	11				1.40E-04	1.40E-01	5.0E-03		5.0E-03	
W-01	Deep	VOC	Trichlorofluoromethane	75-69-4	T		11				2.80E-04	1.80E-01	2.6E+00		7.3E+00	
W-01	Deep	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		11				3.20E-04	1.10E-01	1.7E+02		1.7E+02	
W-01	Deep	VOC	Vinyl Chloride	75-01-4	T	A	11				1.50E-04	1.20E-01	2.0E-03		2.0E-03	
W-01	Deep	VOC	Xylenes (total)	1330-20-7	T	ID	11				3.30E-04	1.50E-01	1.0E+01		1.0E+01	
W-01	Deep	SVOC	Acenaphthene	83-32-9	T		11				8.00E-04	5.00E-03	1.3E+00		3.8E+00	
W-01	Deep	SVOC	Acenaphthylene	208-96-8	T	D	11				7.10E-04	5.00E-03	5.2E-02		1.5E-01	
W-01	Deep	SVOC	Acetophenone	98-86-2	T	D	11				2.60E-03	1.00E-02	1.5E+00		4.4E+00	
W-01	Deep	SVOC	Anthracene	120-12-7	T	D	11				6.80E-04	5.00E-03	4.3E-02		4.3E-02	
W-01	Deep	SVOC	Atrazine	1912-24-9	T		11				2.50E-03	5.00E-03	3.0E-03		3.0E-03	
W-01	Deep	SVOC	Benzaldehyde	100-52-7	T		11				2.80E-03	1.00E-02				
W-01	Deep	SVOC	Benzo(a)anthracene	56-55-3	T	B2	11				7.00E-04	5.00E-03	2.1E-03		8.5E-03	
W-01	Deep	SVOC	Benzo(a)pyrene	50-32-8	T	B2	11				7.30E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	11				9.40E-04	5.00E-03	2.0E-03		2.0E-03	
W-01	Deep	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	11				8.50E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	11				8.40E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	SVOC	Biphenyl	92-52-4	T	D	11				2.60E-03	1.00E-02				
W-01	Deep	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	11				8.70E-04	5.00E-03				
W-01	Deep	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	11				9.70E-04	5.00E-03	2.0E-03		8.3E-03	
W-01	Deep	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	11	1	2.90E-03	2.90E-03	2.70E-03	5.00E-03	6.0E-03	4.8E-01	6.0E-03	4.8E-01

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-01	Deep	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	11				8.80E-04	5.00E-03				
W-01	Deep	SVOC	Butylbenzylphthalate	85-68-7	T	C	11				8.80E-04	5.00E-03	1.2E+00		2.7E+00	
W-01	Deep	SVOC	Caprolactam	105-60-2	T		11				2.50E-03	1.00E-02	5.8E+00		1.7E+01	
W-01	Deep	SVOC	Carbazole	86-74-8	T	B2	11				8.20E-04	1.00E-02	8.5E-02		3.5E-01	
W-01	Deep	SVOC	4-Chloro-3-methylphenol	59-50-7	T		11				8.90E-04	5.00E-03	1.5E-01		4.2E-01	
W-01	Deep	SVOC	4-Chloroaniline	106-47-8	T		11				6.10E-04	1.00E-02				
W-01	Deep	SVOC	2-Chloronaphthalene	91-58-7	T		11				8.50E-04	5.00E-03	1.8E+00		5.2E+00	
W-01	Deep	SVOC	2-Chlorophenol	95-57-8	T		11				1.00E-03	5.00E-03	4.5E-02		1.3E-01	
W-01	Deep	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		11				7.90E-04	5.00E-03				
W-01	Deep	SVOC	Chrysene	218-01-9	T	B2	11				7.50E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	11				7.90E-04	5.00E-03	2.0E-03		2.0E-03	
W-01	Deep	SVOC	Dibenzofuran	132-64-9	T	D	11				1.10E-03	5.00E-03				
W-01	Deep	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	11				9.30E-04	2.00E-02	1.1E-03		4.3E-03	
W-01	Deep	SVOC	2,4-Dichlorophenol	120-83-2	T		11				8.50E-04	1.00E-02	7.3E-02		2.1E-01	
W-01	Deep	SVOC	Diethylphthalate	84-66-2	T	D	11	1	7.10E-04	7.10E-04	6.50E-04	5.00E-03	5.5E+00	1.3E-04	1.6E+01	4.4E-05
W-01	Deep	SVOC	2,4-Dimethylphenol	105-67-9	T		11				8.50E-04	5.00E-03	3.7E-01		1.0E+00	
W-01	Deep	SVOC	Dimethylphthalate	131-11-3	T		11				7.60E-04	5.00E-03	7.3E+01		2.1E+02	
W-01	Deep	SVOC	Di-n-butylphthalate	84-74-2	T	D	11				6.70E-04	5.00E-03	8.8E-01		2.5E+00	
W-01	Deep	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		11				1.30E-03	2.00E-02	2.0E-02		2.0E-02	
W-01	Deep	SVOC	2,4-Dinitrophenol	51-28-5	T		11				3.00E-03	2.00E-02				
W-01	Deep	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	11				7.90E-04	5.00E-03	7.7E-03		3.2E-02	
W-01	Deep	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	11				5.70E-04	5.00E-03				
W-01	Deep	SVOC	Di-n-octylphthalate	117-84-0	T		11				1.10E-03	5.00E-03	1.3E-01		3.8E-01	
W-01	Deep	SVOC	Fluoranthene	206-44-0	T	D	11				8.10E-04	5.00E-03	2.1E-01		2.1E-01	
W-01	Deep	SVOC	Fluorene	86-73-7	T	D	11				1.00E-03	5.00E-03	8.8E-01		2.0E+00	
W-01	Deep	SVOC	Hexachlorobenzene	118-74-1	T	B2	11				7.40E-04	5.00E-03	1.0E-03		1.0E-03	
W-01	Deep	SVOC	Hexachlorobutadiene	87-68-3	T	C	11				7.30E-04	5.00E-03	1.5E-02		4.2E-02	
W-01	Deep	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	10				1.10E-03	5.00E-03	5.0E-02		5.0E-02	
W-01	Deep	SVOC	Hexachloroethane	67-72-1	T	C	11				7.40E-04	5.00E-03	7.3E-03		2.1E-02	
W-01	Deep	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	11				6.30E-04	5.00E-03	2.0E-03		2.0E-03	
W-01	Deep	SVOC	Isophorone	78-59-1	T	C	11				6.30E-04	5.00E-03	7.7E-01		3.1E+00	
W-01	Deep	SVOC	2-Methylnaphthalene	91-57-6	T	ID	11				6.40E-04	5.00E-03	2.6E-01		7.5E-01	
W-01	Deep	SVOC	Methylphenol (total)	1319-77-3	T		11				1.30E-03	5.00E-03	3.7E-01		1.0E+00	
W-01	Deep	SVOC	Naphthalene	91-20-3	T	C	11				7.50E-04	5.00E-03	5.2E-01		1.5E+00	
W-01	Deep	SVOC	2-Nitroaniline	88-74-4	T		11				7.00E-04	2.00E-02				
W-01	Deep	SVOC	3-Nitroaniline	99-09-2	T	C	11				7.10E-04	2.00E-02				
W-01	Deep	SVOC	4-Nitroaniline	100-01-6	T	C	11				1.30E-03	2.00E-02				
W-01	Deep	SVOC	Nitrobenzene	98-95-3	T	D	11				8.10E-04	5.00E-03	3.4E-03		9.6E-03	
W-01	Deep	SVOC	2-Nitrophenol	88-75-5	T		11				2.10E-03	5.00E-03	2.0E-02		5.8E-02	
W-01	Deep	SVOC	4-Nitrophenol	100-02-7	T		11				1.90E-03	2.00E-02				
W-01	Deep	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	11				1.40E-03	5.00E-03	2.7E-01		1.1E+00	
W-01	Deep	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	11				6.70E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	11				7.80E-04	5.00E-03				
W-01	Deep	SVOC	Pentachlorophenol	87-86-5	T	B2	11				2.40E-03	5.00E-03	1.0E-03		1.0E-03	
W-01	Deep	SVOC	Phenanthrene	85-01-8	T	D	11				8.20E-04	5.00E-03	5.2E-02		1.5E-01	
W-01	Deep	SVOC	Phenol	108-95-2	T	ID	11	4	5.20E-03	8.80E-03	2.60E-03	5.00E-03	4.4E+00	2.0E-03	1.3E+01	6.8E-04
W-01	Deep	SVOC	Pyrene	129-00-0	T	D	11				1.10E-03	5.00E-03	1.4E-01		1.4E-01	
W-01	Deep	SVOC	2,4,5-Trichlorophenol	95-95-4	T		11				1.20E-03	5.00E-03	7.3E-01		2.1E+00	
W-01	Deep	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	11				1.70E-03	5.00E-03	1.2E-01		4.7E-01	
W-01	Deep	P/PCB	PCBs (total)	1336-36-3	D	B2	1				4.00E-04	4.00E-04	5.0E-04		5.0E-04	
W-01	Deep	P/PCB	PCBs (total)	1336-36-3	T	B2	11				8.20E-05	4.00E-04	5.0E-04		5.0E-04	
W-01	Deep	INORG	Antimony	7440-36-0	D		5	1	2.30E-03	2.30E-03	2.20E-03	2.50E-02	6.0E-03	3.8E-01	6.0E-03	3.8E-01
W-01	Deep	INORG	Antimony	7440-36-0	T		11				2.20E-03	2.50E-02	6.0E-03		6.0E-03	
W-01	Deep	INORG	Arsenic	7440-38-2	D	A	5	2	4.40E-03	7.10E-03	3.90E-03	1.00E-02	5.0E-02	1.4E-01	5.0E-02	1.4E-01
W-01	Deep	INORG	Arsenic	7440-38-2	T	A	11	3	4.40E-03	1.45E-02	3.90E-03	1.00E-02	5.0E-02	2.9E-01	5.0E-02	2.9E-01
W-01	Deep	INORG	Barium	7440-39-3	D	D	5	5	1.15E-01	3.73E-01			2.0E+00	1.9E-01	2.0E+00	1.9E-01
W-01	Deep	INORG	Barium	7440-39-3	T	D	11	11	1.26E-01	4.58E-01			2.0E+00	2.3E-01	2.0E+00	2.3E-01
W-01	Deep	INORG	Beryllium	7440-41-7	D	B1	5				5.40E-04	1.00E-03	4.0E-03		4.0E-03	
W-01	Deep	INORG	Beryllium	7440-41-7	T	B1	11				5.40E-04	1.00E-03	4.0E-03		4.0E-03	

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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-01	Deep	INORG	Cadmium	7440-43-9	D	B1	5				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	INORG	Cadmium	7440-43-9	T	B1	11				2.80E-04	5.00E-03	5.0E-03		5.0E-03	
W-01	Deep	INORG	Chromium (total)	7440-47-3	D		5	1	2.30E-03	2.30E-03	1.40E-03	1.00E-02	1.0E-01	2.3E-02	1.0E-01	2.3E-02
W-01	Deep	INORG	Chromium (total)	7440-47-3	T		11	8	2.30E-03	9.10E-03	1.40E-03	1.00E-02	1.0E-01	9.1E-02	1.0E-01	9.1E-02
W-01	Deep	INORG	Cobalt	7440-48-4	D	B1	5	1	2.40E-03	2.40E-03	2.30E-03	2.00E-02	4.0E-02	6.0E-02	1.0E-01	2.4E-02
W-01	Deep	INORG	Cobalt	7440-48-4	T	B1	11	5	7.60E-04	2.20E-03	7.60E-04	2.00E-02	4.0E-02	5.5E-02	1.0E-01	2.2E-02
W-01	Deep	INORG	Copper	7440-50-8	D	D	5				4.20E-03	5.00E-03	1.4E+00		4.0E+00	
W-01	Deep	INORG	Copper	7440-50-8	T	D	11				1.70E-03	5.00E-03	1.4E+00		4.0E+00	
W-01	Deep	INORG	Lead	7439-92-1	D	B2	5				2.50E-03	3.00E-03	4.0E-03		4.0E-03	
W-01	Deep	INORG	Lead	7439-92-1	T	B2	11	1	1.60E-03	1.60E-03	1.60E-03	3.00E-03	4.0E-03	4.0E-01	4.0E-03	4.0E-01
W-01	Deep	INORG	Manganese	7439-96-5	D	D	5	4	5.45E-02	7.03E-02	9.00E-04	9.00E-04	8.6E-01	8.2E-02	2.5E+00	2.8E-02
W-01	Deep	INORG	Manganese	7439-96-5	T	D	11	8	2.81E-02	7.13E-02	6.80E-04	9.00E-04	8.6E-01	8.3E-02	2.5E+00	2.8E-02
W-01	Deep	INORG	Mercury	7439-97-6	D	D	5	1	7.20E-05	7.20E-05	6.90E-05	6.90E-05	2.0E-03	3.6E-02	2.0E-03	3.6E-02
W-01	Deep	INORG	Mercury	7439-97-6	T	D	11				6.90E-05	2.00E-04	2.0E-03		2.0E-03	
W-01	Deep	INORG	Nickel	7440-02-0	D	A	5	1	6.40E-03	6.40E-03	2.20E-03	2.00E-02	1.0E-01	6.4E-02	1.0E-01	6.4E-02
W-01	Deep	INORG	Nickel	7440-02-0	T	A	11	7	3.00E-03	9.90E-03	2.20E-03	2.00E-02	1.0E-01	9.9E-02	1.0E-01	9.9E-02
W-01	Deep	INORG	Selenium	7782-49-2	D	D	5				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
W-01	Deep	INORG	Selenium	7782-49-2	T	D	11				4.50E-03	5.00E-03	5.0E-02		5.0E-02	
W-01	Deep	INORG	Silver	7440-22-4	D	D	5				1.50E-03	5.00E-03	3.4E-02		9.8E-02	
W-01	Deep	INORG	Silver	7440-22-4	T	D	11				9.80E-04	5.00E-03	3.4E-02		9.8E-02	
W-01	Deep	INORG	Thallium	7440-28-0	D	D	5				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
W-01	Deep	INORG	Thallium	7440-28-0	T	D	11				1.80E-05	1.00E-02	2.0E-03		2.0E-03	
W-01	Deep	INORG	Vanadium	7440-62-2	D	D	5				8.20E-04	1.00E-02	4.5E-03		6.2E-02	
W-01	Deep	INORG	Vanadium	7440-62-2	T	D	11				6.70E-04	1.00E-02	4.5E-03		6.2E-02	
W-01	Deep	INORG	Zinc	7440-66-6	D	D	5	1	2.36E-02	2.36E-02	1.20E-02	2.00E-02	2.4E+00	9.8E-03	5.0E+00	4.7E-03
W-01	Deep	INORG	Zinc	7440-66-6	T	D	11	1	1.65E-02	1.65E-02	1.20E-02	2.00E-02	2.4E+00	6.9E-03	5.0E+00	3.3E-03
W-01	Intermediate	VOC	Acetone	67-64-1	T	ID	4	1	3.80E-02	3.80E-02	5.10E-04	7.30E-03	7.3E-01	5.2E-02	2.1E+00	1.8E-02
W-01	Intermediate	VOC	Benzene	71-43-2	T	A	4				1.60E-04	2.30E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	Bromodichloromethane	75-27-4	T	B2	4				1.70E-04	2.40E-03	1.0E-01		1.0E-01	
W-01	Intermediate	VOC	Bromoform	75-25-2	T	B2	4				1.80E-04	2.60E-03	1.0E-01		1.0E-01	
W-01	Intermediate	VOC	Bromomethane	74-83-9	T	D	3				2.00E-04	2.90E-03	1.0E-02		2.9E-02	
W-01	Intermediate	VOC	2-Butanone	78-93-3	T	ID	4				4.10E-04	5.90E-03	1.3E+01		3.8E+01	
W-01	Intermediate	VOC	Carbon Disulfide	75-15-0	T		4				2.00E-04	2.90E-03	8.0E-01		2.3E+00	
W-01	Intermediate	VOC	Carbon Tetrachloride	56-23-5	T	B2	4				1.20E-04	1.70E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	Chlorobenzene	108-90-7	T	D	4				1.40E-04	2.00E-03	1.0E-01		1.0E-01	
W-01	Intermediate	VOC	Chloroethane	75-00-3	T		4				2.60E-04	3.70E-03	4.3E-01		1.7E+00	
W-01	Intermediate	VOC	Chloroform	67-66-3	T	B2	4	1	1.70E-04	1.70E-04	3.50E-04	2.00E-03	1.0E-01	1.7E-03	1.0E-01	1.7E-03
W-01	Intermediate	VOC	Chloromethane	74-87-3	T	D	4	1	2.10E-04	2.10E-04	4.90E-04	1.90E-03	2.6E-01	8.1E-04	1.1E+00	1.9E-04
W-01	Intermediate	VOC	Cumene	98-82-8	T	D	4				1.20E-04	1.70E-03	8.0E-01		2.3E+00	
W-01	Intermediate	VOC	Cyclohexane	110-82-7	T	ID	4				1.30E-04	1.90E-03				
W-01	Intermediate	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	4				6.20E-04	8.90E-03	2.0E-04		2.0E-04	
W-01	Intermediate	VOC	Dibromochloromethane	124-48-1	T	C	4				2.60E-04	3.70E-03	1.0E-01		1.0E-01	
W-01	Intermediate	VOC	1,2-Dibromoethane	106-93-4	T	B2	4				2.20E-04	3.10E-03	1.0E-03		1.0E-03	
W-01	Intermediate	VOC	1,2-Dichlorobenzene	95-50-1	T	D	4				1.10E-04	1.60E-03	6.0E-01		6.0E-01	
W-01	Intermediate	VOC	1,3-Dichlorobenzene	541-73-1	T	D	4				1.50E-04	2.10E-03	6.6E-03		1.9E-02	
W-01	Intermediate	VOC	1,4-Dichlorobenzene	106-46-7	T	C	4				1.70E-04	2.40E-03	7.5E-02		7.5E-02	
W-01	Intermediate	VOC	Dichlorodifluoromethane	75-71-8	T		4				2.60E-04	3.70E-03	1.7E+00		4.8E+00	
W-01	Intermediate	VOC	1,1-Dichloroethane	75-34-3	T	C	4				1.60E-04	2.30E-03	8.8E-01		2.5E+00	
W-01	Intermediate	VOC	1,2-Dichloroethane	107-06-2	T	B2	4				2.10E-04	3.00E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	1,1-Dichloroethene	75-35-4	T	C	4				2.40E-04	3.40E-03	7.0E-03		7.0E-03	
W-01	Intermediate	VOC	cis-1,2-Dichloroethene	156-59-2	T	D	4				2.20E-04	3.10E-03	7.0E-02		7.0E-02	
W-01	Intermediate	VOC	trans-1,2-Dichloroethene	156-60-5	T		4				1.50E-04	2.10E-03	1.0E-01		1.0E-01	
W-01	Intermediate	VOC	1,2-Dichloropropane	78-87-5	T	B2	4				1.70E-04	2.40E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	4				2.70E-04	3.90E-03	8.5E-03		3.5E-02	
W-01	Intermediate	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	1.70E-03	7.0E-01		7.0E-01	
W-01	Intermediate	VOC	2-Hexanone	591-78-6	T		4				4.60E-04	6.60E-03	1.0E+00		2.9E+00	
W-01	Intermediate	VOC	Methyl Acetate	79-20-9	T		4				4.10E-04	5.90E-03				
W-01	Intermediate	VOC	Methyl tert-butyl ether	1634-04-4	T		4				1.30E-04	1.90E-03	2.4E-01		6.9E-01	
W-01	Intermediate	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	3				2.30E-04	3.30E-03	1.8E+00		5.2E+00	

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TABLE 5-2b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-01	Intermediate	VOC	Methylcyclohexane	108-87-2	T		4				1.50E-04	2.10E-03				
W-01	Intermediate	VOC	Methylene Chloride	75-09-2	T	B2	3				2.90E-04	4.90E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	Styrene	100-42-5	T		4				1.50E-04	2.10E-03	1.0E-01		1.0E-01	
W-01	Intermediate	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	4				2.50E-04	3.60E-03	8.5E-03		3.5E-02	
W-01	Intermediate	VOC	Tetrachloroethene	127-18-4	T	C-B2	4				2.30E-04	3.30E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	Toluene	108-88-3	T	D	4				1.30E-04	2.60E-03	1.0E+00		1.0E+00	
W-01	Intermediate	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	4				1.70E-04	2.40E-03	7.0E-02		7.0E-02	
W-01	Intermediate	VOC	1,1,1-Trichloroethane	71-55-6	T	D	4				1.50E-04	2.10E-03	2.0E-01		2.0E-01	
W-01	Intermediate	VOC	1,1,2-Trichloroethane	79-00-5	T	C	4				3.00E-04	4.30E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	Trichloroethene	79-01-6	T	C-B2	4				1.40E-04	2.00E-03	5.0E-03		5.0E-03	
W-01	Intermediate	VOC	Trichlorofluoromethane	75-69-4	T		4				2.80E-04	4.00E-03	2.6E+00		7.3E+00	
W-01	Intermediate	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		4				3.20E-04	4.60E-03	1.7E+02		1.7E+02	
W-01	Intermediate	VOC	Vinyl Chloride	75-01-4	T	A	4				1.50E-04	2.10E-03	2.0E-03		2.0E-03	
W-01	Intermediate	VOC	Xylenes (total)	1330-20-7	T	D	4				3.30E-04	4.70E-03	1.0E+01		1.0E+01	
W-01	Intermediate	SVOC	Acenaphthene	83-32-9	T	D	4				8.00E-04	8.00E-04	1.3E+00		3.8E+00	
W-01	Intermediate	SVOC	Acenaphthylene	208-96-8	T	D	4				7.10E-04	7.10E-04	5.2E-02		1.5E-01	
W-01	Intermediate	SVOC	Acetophenone	98-86-2	T	D	4				2.60E-03	2.60E-03	1.5E+00		4.4E+00	
W-01	Intermediate	SVOC	Anthracene	120-12-7	T	D	4				6.80E-04	6.80E-04	4.3E-02		4.3E-02	
W-01	Intermediate	SVOC	Atrazine	1912-24-9	T		4				2.50E-03	2.50E-03	3.0E-03		3.0E-03	
W-01	Intermediate	SVOC	Benzaldehyde	100-52-7	T		4				2.80E-03	2.80E-03				
W-01	Intermediate	SVOC	Benzo(a)anthracene	56-55-3	T	B2	4				7.00E-04	7.00E-04	2.1E-03		8.5E-03	
W-01	Intermediate	SVOC	Benzo(a)pyrene	50-32-8	T	B2	4				7.30E-04	7.30E-04	5.0E-03		5.0E-03	
W-01	Intermediate	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	4				9.40E-04	9.40E-04	2.0E-03		2.0E-03	
W-01	Intermediate	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	4				8.50E-04	8.50E-04	5.0E-03		5.0E-03	
W-01	Intermediate	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	4				8.40E-04	8.40E-04	5.0E-03		5.0E-03	
W-01	Intermediate	SVOC	Biphenyl	92-52-4	T		4				2.60E-03	2.60E-03				
W-01	Intermediate	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	4				8.70E-04	8.70E-04				
W-01	Intermediate	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	4				9.70E-04	9.70E-04	2.0E-03		8.3E-03	
W-01	Intermediate	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	4	1	8.80E-03	8.80E-03	2.70E-03	2.70E-03	6.0E-03	**1.5E+00**	6.0E-03	**1.5E+00**
W-01	Intermediate	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	4				8.80E-04	8.80E-04				
W-01	Intermediate	SVOC	Butylbenzylphthalate	85-68-7	T	C	4				8.80E-04	8.80E-04	1.2E+00		2.7E+00	
W-01	Intermediate	SVOC	Caprolactam	105-60-2	T		4	3	6.70E-03	3.90E-02	2.50E-03	2.50E-03	5.8E+00	6.7E-03	1.7E+01	2.3E-03
W-01	Intermediate	SVOC	Carbazole	86-74-8	T	B2	4				8.20E-04	8.20E-04	8.5E-02		3.5E-01	
W-01	Intermediate	SVOC	4-Chloro-3-methylphenol	59-50-7	T		4				9.90E-04	9.90E-04	1.5E-01		4.2E-01	
W-01	Intermediate	SVOC	4-Chloroaniline	106-47-8	T		4				6.10E-04	6.10E-04				
W-01	Intermediate	SVOC	2-Chloronaphthalene	91-58-7	T		4				8.50E-04	8.50E-04	1.8E+00		5.2E+00	
W-01	Intermediate	SVOC	2-Chlorophenol	95-57-8	T		4				1.00E-03	1.00E-03	4.5E-02		1.3E-01	
W-01	Intermediate	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		4				7.90E-04	7.90E-04				
W-01	Intermediate	SVOC	Chrysene	218-01-9	T	B2	4				7.50E-04	7.50E-04	5.0E-03		5.0E-03	
W-01	Intermediate	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	4				7.90E-04	7.90E-04	2.0E-03		2.0E-03	
W-01	Intermediate	SVOC	Dibenzofuran	132-64-9	T	D	4				1.10E-03	1.10E-03				
W-01	Intermediate	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	4				9.30E-04	9.30E-04	1.1E-03		4.3E-03	
W-01	Intermediate	SVOC	2,4-Dichlorophenol	120-83-2	T		4				8.50E-04	8.50E-04	7.3E-02		2.1E-01	
W-01	Intermediate	SVOC	Diethylphthalate	84-66-2	T	D	4				6.50E-04	6.50E-04	5.5E+00		1.6E+01	
W-01	Intermediate	SVOC	2,4-Dimethylphenol	105-67-9	T		4				8.50E-04	8.50E-04	3.7E-01		1.0E+00	
W-01	Intermediate	SVOC	Dimethylphthalate	131-11-3	T	D	4				7.60E-04	7.60E-04	7.3E+01		2.1E+02	
W-01	Intermediate	SVOC	Di-n-butylphthalate	84-74-2	T	D	4				6.70E-04	6.70E-04	8.8E-01		2.5E+00	
W-01	Intermediate	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		4				1.30E-03	1.30E-03	2.0E-02		2.0E-02	
W-01	Intermediate	SVOC	2,4-Dinitrophenol	51-28-5	T		4				3.00E-03	3.00E-03				
W-01	Intermediate	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	4				7.90E-04	7.90E-04	7.7E-03		3.2E-02	
W-01	Intermediate	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	4				5.70E-04	5.70E-04				
W-01	Intermediate	SVOC	Di-n-octylphthalate	117-84-0	T		4				1.10E-03	1.10E-03	1.3E-01		3.8E-01	
W-01	Intermediate	SVOC	Fluoranthene	206-44-0	T	D	4				8.10E-04	8.10E-04	2.1E-01		2.1E-01	
W-01	Intermediate	SVOC	Fluorene	86-73-7	T	D	4				1.00E-03	1.00E-03	8.8E-01		2.0E+00	
W-01	Intermediate	SVOC	Hexachlorobenzene	118-74-1	T	B2	4				7.40E-04	7.40E-04	1.0E-03		1.0E-03	
W-01	Intermediate	SVOC	Hexachlorobutadiene	87-68-3	T	C	4				7.30E-04	7.30E-04	1.5E-02		4.2E-02	
W-01	Intermediate	SVOC	Hexachlorocyclopentadiene	77-47-4	T	D	4				1.10E-03	1.10E-03	5.0E-02		5.0E-02	
W-01	Intermediate	SVOC	Hexachloroethane	67-72-1	T	C	4				7.40E-04	7.40E-04	7.3E-03		2.1E-02	
W-01	Intermediate	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	4				6.30E-04	6.30E-04	2.0E-03		2.0E-03	

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GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-01	Intermediate	SVOC	Isophorone	78-59-1	T	C	4				6.30E-04	6.30E-04	7.7E-01		3.1E+00	
W-01	Intermediate	SVOC	2-Methylnaphthalene	91-57-6	T	ID	4				6.40E-04	6.40E-04	2.6E-01		7.5E-01	
W-01	Intermediate	SVOC	Methylphenol (total)	1319-77-3	T		4	1	2.65E-03	2.65E-03	1.30E-03	1.30E-03	3.7E-01	7.2E-03	1.0E+00	2.7E-03
W-01	Intermediate	SVOC	Naphthalene	91-20-3	T	C	4				7.50E-04	7.50E-04	5.2E-01		1.5E+00	
W-01	Intermediate	SVOC	2-Nitroaniline	88-74-4	T		4				7.00E-04	7.00E-04				
W-01	Intermediate	SVOC	3-Nitroaniline	99-09-2	T	C	4				7.10E-04	7.10E-04				
W-01	Intermediate	SVOC	4-Nitroaniline	100-01-6	T	C	4				1.30E-03	1.30E-03				
W-01	Intermediate	SVOC	Nitrobenzene	98-95-3	T	D	4				8.10E-04	8.10E-04	3.4E-03		9.6E-03	
W-01	Intermediate	SVOC	2-Nitrophenol	88-75-5	T		4				2.10E-03	2.10E-03	2.0E-02		5.8E-02	
W-01	Intermediate	SVOC	4-Nitrophenol	100-02-7	T		4				1.90E-03	1.90E-03				
W-01	Intermediate	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	4				1.40E-03	1.40E-03	2.7E-01		1.1E+00	
W-01	Intermediate	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	4				6.70E-04	6.70E-04	5.0E-03		5.0E-03	
W-01	Intermediate	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	4				7.80E-04	7.80E-04				
W-01	Intermediate	SVOC	Pentachlorophenol	87-86-5	T	B2	4				2.40E-03	2.40E-03	1.0E-03		1.0E-03	
W-01	Intermediate	SVOC	Phenanthrene	85-01-8	T	D	4				8.20E-04	8.20E-04	5.2E-02		1.5E-01	
W-01	Intermediate	SVOC	Phenol	108-95-2	T	ID	4	1	7.00E-03	7.00E-03	2.60E-03	2.60E-03	4.4E+00	1.6E-03	1.3E+01	5.4E-04
W-01	Intermediate	SVOC	Pyrene	129-00-0	T	D	4				1.10E-03	1.10E-03	1.4E-01		1.4E-01	
W-01	Intermediate	SVOC	2,4,5-Trichlorophenol	95-95-4	T		4				1.20E-03	1.20E-03	7.3E-01		2.1E+00	
W-01	Intermediate	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	4				1.70E-03	1.70E-03	1.2E-01		4.7E-01	
W-01	Intermediate	P/PCB	PCBs (total)	1336-36-3	D	B2	4				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
W-01	Intermediate	P/PCB	PCBs (total)	1336-36-3	T	B2	4				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
W-01	Intermediate	INORG	Antimony	7440-36-0	D		4				2.20E-03	2.20E-03	6.0E-03		6.0E-03	
W-01	Intermediate	INORG	Antimony	7440-36-0	T		4				2.20E-03	3.40E-03	6.0E-03		6.0E-03	
W-01	Intermediate	INORG	Arsenic	7440-38-2	D	A	2	1	6.20E-03	6.20E-03	3.90E-03	3.90E-03	5.0E-02	1.2E-01	5.0E-02	1.2E-01
W-01	Intermediate	INORG	Arsenic	7440-38-2	T	A	4	3	2.70E-03	5.20E-03	2.10E-03	2.10E-03	5.0E-02	1.0E-01	5.0E-02	1.0E-01
W-01	Intermediate	INORG	Barium	7440-39-3	D		2	2	4.00E-02	4.04E-01			2.0E+00	2.0E-01	2.0E+00	2.0E-01
W-01	Intermediate	INORG	Barium	7440-39-3	T	D	4	4	6.77E-02	4.32E-01			2.0E+00	2.2E-01	2.0E+00	2.2E-01
W-01	Intermediate	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	5.40E-04	4.0E-03		4.0E-03	
W-01	Intermediate	INORG	Beryllium	7440-41-7	T	B1	4				5.40E-04	6.00E-04	4.0E-03		4.0E-03	
W-01	Intermediate	INORG	Cadmium	7440-43-9	D	B1	2	1	2.80E-04	2.80E-04	2.80E-04	2.80E-04	5.0E-03	5.6E-02	5.0E-03	5.6E-02
W-01	Intermediate	INORG	Cadmium	7440-43-9	T	B1	4	2	2.80E-04	5.70E-04	2.80E-04	2.80E-04	5.0E-03	1.1E-01	5.0E-03	1.1E-01
W-01	Intermediate	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.40E-03	1.0E-01		1.0E-01	
W-01	Intermediate	INORG	Chromium (total)	7440-47-3	T		4	1	6.80E-03	6.80E-03	1.40E-03	1.50E-03	1.0E-01	6.8E-02	1.0E-01	6.8E-02
W-01	Intermediate	INORG	Cobalt	7440-48-4	D	B1	2				1.30E-03	1.30E-03	4.0E-02		1.0E-01	
W-01	Intermediate	INORG	Cobalt	7440-48-4	T	B1	4	1	1.40E-03	1.40E-03	7.40E-04	1.30E-03	4.0E-02	3.5E-02	1.0E-01	1.4E-02
W-01	Intermediate	INORG	Copper	7440-50-8	D	D	2				4.20E-03	4.20E-03	1.4E+00		4.0E+00	
W-01	Intermediate	INORG	Copper	7440-50-8	T	D	4				1.70E-03	4.20E-03	1.4E+00		4.0E+00	
W-01	Intermediate	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	2.50E-03	4.0E-03		4.0E-03	
W-01	Intermediate	INORG	Lead	7439-92-1	T	B2	4	1	1.35E-02	1.35E-02	1.60E-03	2.50E-03	4.0E-03	**3.4E+00**	4.0E-03	**3.4E+00**
W-01	Intermediate	INORG	Manganese	7439-96-5	D	D	2	2	2.80E-03	1.59E-01			8.6E-01	1.8E-01	2.5E+00	6.4E-02
W-01	Intermediate	INORG	Manganese	7439-96-5	T	D	4	4	6.31E-02	1.77E-01			8.6E-01	2.1E-01	2.5E+00	7.1E-02
W-01	Intermediate	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	6.90E-05	2.0E-03		2.0E-03	
W-01	Intermediate	INORG	Mercury	7439-97-6	T	D	4				6.90E-05	8.70E-05	2.0E-03		2.0E-03	
W-01	Intermediate	INORG	Nickel	7440-02-0	D	A	2				2.20E-03	2.20E-03	1.0E-01		1.0E-01	
W-01	Intermediate	INORG	Nickel	7440-02-0	T	A	4	1	5.70E-03	5.70E-03	2.20E-03	2.90E-03	1.0E-01	5.7E-02	1.0E-01	5.7E-02
W-01	Intermediate	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	4.50E-03	5.0E-02		5.0E-02	
W-01	Intermediate	INORG	Selenium	7782-49-2	T	D	4				4.50E-03	4.70E-03	5.0E-02		5.0E-02	
W-01	Intermediate	INORG	Silver	7440-22-4	D	D	2				1.50E-03	1.50E-03	3.4E-02		9.8E-02	
W-01	Intermediate	INORG	Silver	7440-22-4	T	D	4				9.80E-04	1.50E-03	3.4E-02		9.8E-02	
W-01	Intermediate	INORG	Thallium	7440-28-0	D		2				1.80E-05	5.00E-03	2.0E-03		2.0E-03	
W-01	Intermediate	INORG	Thallium	7440-28-0	T		4	1	4.40E-05	4.40E-05	3.30E-05	5.00E-03	2.0E-03	2.2E-02	2.0E-03	2.2E-02
W-01	Intermediate	INORG	Vanadium	7440-62-2	D		2	1	2.50E-03	2.50E-03	8.20E-04	8.20E-04	4.5E-03	5.6E-01	6.2E-02	4.0E-02
W-01	Intermediate	INORG	Vanadium	7440-62-2	T		4	1	4.90E-03	4.90E-03	6.70E-04	8.20E-04	4.5E-03	**1.1E+00**	6.2E-02	7.9E-02
W-01	Intermediate	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	1.20E-02	2.4E+00		5.0E+00	
W-01	Intermediate	INORG	Zinc	7440-66-6	T	D	4	1	5.92E-01	5.92E-01	1.20E-02	1.40E-02	2.4E+00	2.5E-01	5.0E+00	1.2E-01
W-09	Deep	VOC	Acetone	67-64-1	T	ID	6	2	6.60E-04	1.60E-03	1.10E-03	1.10E-03	7.3E-01	2.2E-03	2.1E+00	7.6E-04
W-09	Deep	VOC	Benzene	71-43-2	T	A	6				1.60E-04	3.70E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	Bromodichloromethane	75-27-4	T	B2	6				1.70E-04	3.20E-04	1.0E-01		1.0E-01	
W-09	Deep	VOC	Bromoform	75-25-2	T	B2	6				1.80E-04	3.70E-04	1.0E-01		1.0E-01	

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PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-09	Deep	VOC	Bromomethane	74-83-9	T	D	6				2.00E-04	3.00E-04	1.0E-02		2.9E-02	
W-09	Deep	VOC	2-Butanone	78-93-3	T	ID	6				4.10E-04	5.90E-04	1.3E+01		3.8E+01	
W-09	Deep	VOC	Carbon Disulfide	75-15-0	T		6	3	2.40E-04	9.30E-04	2.00E-04	2.40E-04	8.0E-01	1.2E-03	2.3E+00	4.0E-04
W-09	Deep	VOC	Carbon Tetrachloride	56-23-5	T	B2	6				1.20E-04	3.70E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	Chlorobenzene	108-90-7	T	D	6				1.40E-04	3.80E-04	1.0E-01		1.0E-01	
W-09	Deep	VOC	Chloroethane	75-00-3	T		6				2.60E-04	2.90E-04	4.3E-01		1.7E+00	
W-09	Deep	VOC	Chloroform	67-66-3	T	B2	6	1	2.80E-04	2.80E-04	1.40E-04	3.50E-04	1.0E-01	2.8E-03	1.0E-01	2.8E-03
W-09	Deep	VOC	Chloromethane	74-87-3	T	D	6				1.30E-04	4.90E-04	2.6E-01		1.1E+00	
W-09	Deep	VOC	Cumene	98-82-8	T	D	6				1.20E-04	3.90E-04	8.0E-01		2.3E+00	
W-09	Deep	VOC	Cyclohexane	110-82-7	T	ID	6				1.30E-04	3.30E-04				
W-09	Deep	VOC	1,2-Dibromo-3-chloropropane	96-12-8	T	B2	6				6.20E-04	8.20E-04	2.0E-04		2.0E-04	
W-09	Deep	VOC	Dibromochloromethane	124-48-1	T	C	6				2.60E-04	3.70E-04	1.0E-01		1.0E-01	
W-09	Deep	VOC	1,2-Dibromoethane	106-93-4	T	B2	6				2.20E-04	3.40E-04	1.0E-03		1.0E-03	
W-09	Deep	VOC	1,2-Dichlorobenzene	95-50-1	T	D	6				1.40E-04	3.80E-04	6.0E-01		6.0E-01	
W-09	Deep	VOC	1,3-Dichlorobenzene	541-73-1	T	D	6				1.50E-04	3.80E-04	6.6E-03		1.9E-02	
W-09	Deep	VOC	1,4-Dichlorobenzene	106-46-7	T	C	6				1.70E-04	3.80E-04	7.5E-02		7.5E-02	
W-09	Deep	VOC	Dichlorodifluoromethane	75-71-8	T		6				2.60E-04	4.90E-04	1.7E+00		4.8E+00	
W-09	Deep	VOC	1,1-Dichloroethane	75-34-3	T	C	6				1.60E-04	3.00E-04	8.8E-01		2.5E+00	
W-09	Deep	VOC	1,2-Dichloroethane	107-06-2	T	B2	6				2.10E-04	2.80E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	1,1-Dichloroethene	75-35-4	T	C	6				2.40E-04	3.10E-04	7.0E-03		7.0E-03	
W-09	Deep	VOC	cis-1,2-Dichloroethene	156-59-2	T		5				2.20E-04	3.50E-04	7.0E-02		7.0E-02	
W-09	Deep	VOC	trans-1,2-Dichloroethene	156-60-5	T		5				1.50E-04	3.30E-04	1.0E-01		1.0E-01	
W-09	Deep	VOC	1,2-Dichloropropane	78-87-5	T	B2	6				1.70E-04	4.10E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	1,3-Dichloropropene (total)	542-75-6	T	B2	6				2.70E-04	3.50E-04	8.5E-03		3.5E-02	
W-09	Deep	VOC	Ethyl Benzene	100-41-4	T	D	4				1.20E-04	4.10E-04	7.0E-01		7.0E-01	
W-09	Deep	VOC	2-Hexanone	591-78-6	T		6				4.60E-04	5.80E-04	1.0E+00		2.9E+00	
W-09	Deep	VOC	Methyl Acetate	79-20-9	T		6				4.10E-04	5.40E-04				
W-09	Deep	VOC	Methyl tert-butyl ether	1634-04-4	T		6	4	2.40E-04	5.20E-03	2.70E-04	2.70E-04	2.4E-01	2.2E-02	6.9E-01	7.5E-03
W-09	Deep	VOC	4-Methyl-2-pentanone	108-10-1	T	ID	6				2.30E-04	2.60E-04	1.8E+00		5.2E+00	
W-09	Deep	VOC	Methylcyclohexane	108-87-2	T		6				1.50E-04	4.20E-04				
W-09	Deep	VOC	Methylene Chloride	75-09-2	T	B2	7	1	1.80E-02	1.80E-02	2.80E-04	3.40E-04	5.0E-03	**3.6E+00**	5.0E-03	**3.6E+00**
W-09	Deep	VOC	Styrene	100-42-5	T		6				1.50E-04	3.50E-04	1.0E-01		1.0E-01	
W-09	Deep	VOC	1,1,2,2-Tetrachloroethane	79-34-5	T	C	6				2.50E-04	3.60E-04	8.5E-03		3.5E-02	
W-09	Deep	VOC	Tetrachloroethene	127-18-4	T	C-B2	6				2.30E-04	4.20E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	Toluene	108-88-3	T	D	6				1.80E-04	3.90E-04	1.0E+00		1.0E+00	
W-09	Deep	VOC	1,2,4-Trichlorobenzene	120-82-1	T	D	6				1.70E-04	4.00E-04	7.0E-02		7.0E-02	
W-09	Deep	VOC	1,1,1-Trichloroethane	71-55-6	T	D	6				1.50E-04	3.90E-04	2.0E-01		2.0E-01	
W-09	Deep	VOC	1,1,2-Trichloroethane	79-00-5	T	C	6				3.00E-04	3.60E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	Trichloroethene	79-01-6	T	C-B2	6				1.40E-04	4.20E-04	5.0E-03		5.0E-03	
W-09	Deep	VOC	Trichlorofluoromethane	75-69-4	T		6				2.80E-04	5.40E-04	2.6E+00		7.3E+00	
W-09	Deep	VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	T		6				3.20E-04	3.20E-04	1.7E+02		1.7E+02	
W-09	Deep	VOC	Vinyl Chloride	75-01-4	T	A	6				1.50E-04	3.60E-04	2.0E-03		2.0E-03	
W-09	Deep	VOC	Xylenes (total)	1330-20-7	T	ID	6				3.30E-04	4.40E-04	1.0E+01		1.0E+01	
W-09	Deep	SVOC	Acenaphthene	83-32-9	T		6				8.00E-04	8.00E-04	1.3E+00		3.8E+00	
W-09	Deep	SVOC	Acenaphthylene	208-96-8	T	D	6				7.10E-04	7.10E-04	5.2E-02		1.5E-01	
W-09	Deep	SVOC	Acetophenone	98-86-2	T	D	6				2.60E-03	2.60E-03	1.5E+00		4.4E+00	
W-09	Deep	SVOC	Anthracene	120-12-7	T	D	6				6.80E-04	6.80E-04	4.3E-02		4.3E-02	
W-09	Deep	SVOC	Atrazine	1912-24-9	T		6				2.50E-03	2.50E-03	3.0E-03		3.0E-03	
W-09	Deep	SVOC	Benzaldehyde	100-52-7	T		6				2.80E-03	2.80E-03				
W-09	Deep	SVOC	Benzo(a)anthracene	56-55-3	T	B2	6				7.00E-04	7.00E-04	2.1E-03		8.5E-03	
W-09	Deep	SVOC	Benzo(a)pyrene	50-32-8	T	B2	6				7.30E-04	7.30E-04	5.0E-03		5.0E-03	
W-09	Deep	SVOC	Benzo(b)fluoranthene	205-99-2	T	B2	6				9.40E-04	9.40E-04	2.0E-03		2.0E-03	
W-09	Deep	SVOC	Benzo(g,h,i)perylene	191-24-2	T	D	6				8.50E-04	8.50E-04	5.0E-03		5.0E-03	
W-09	Deep	SVOC	Benzo(k)fluoranthene	207-08-9	T	B2	6				8.40E-04	8.40E-04	5.0E-03		5.0E-03	
W-09	Deep	SVOC	Biphenyl	92-52-4	T	D	6				2.60E-03	2.60E-03				
W-09	Deep	SVOC	bis(2-Chloroethoxy)methane	111-91-1	T	D	6				8.70E-04	8.70E-04				
W-09	Deep	SVOC	bis(2-Chloroethyl) ether	111-44-4	T	B2	5				9.70E-04	9.70E-04	2.0E-03		8.3E-03	
W-09	Deep	SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	T	B2	6				2.70E-03	2.70E-03	6.0E-03		6.0E-03	
W-09	Deep	SVOC	4-Bromophenyl-phenyl ether	101-55-3	T	D	6				8.80E-04	8.80E-04				

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INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-09	Deep	SVOC	Butylbenzylphthalate	85-68-7	T	C	6				8.80E-04	8.80E-04	1.2E+00		2.7E+00	
W-09	Deep	SVOC	Caprolactam	105-60-2	T		6	1	3.10E-03	3.10E-03	2.50E-03	2.50E-03	5.8E+00	5.3E-04	1.7E+01	1.8E-04
W-09	Deep	SVOC	Carbazole	86-74-8	T	B2	6				8.20E-04	8.20E-04	8.5E-02		3.5E-01	
W-09	Deep	SVOC	4-Chloro-3-methylphenol	59-50-7	T		6				9.90E-04	9.90E-04	1.5E-01		4.2E-01	
W-09	Deep	SVOC	4-Chloroaniline	106-47-8	T		6				6.10E-04	6.10E-04				
W-09	Deep	SVOC	2-Chloronaphthalene	91-58-7	T		6				8.50E-04	8.50E-04	1.8E+00		5.2E+00	
W-09	Deep	SVOC	2-Chlorophenol	95-57-8	T		6				1.00E-03	1.00E-03	4.5E-02		1.3E-01	
W-09	Deep	SVOC	4-Chlorophenyl-phenyl ether	7005-72-3	T		6				7.90E-04	7.90E-04				
W-09	Deep	SVOC	Chrysene	218-01-9	T	B2	6				7.50E-04	7.50E-04	5.0E-03		5.0E-03	
W-09	Deep	SVOC	Dibenz(a,h)anthracene	53-70-3	T	B2	6				7.90E-04	7.90E-04	2.0E-03		2.0E-03	
W-09	Deep	SVOC	Dibenzofuran	132-64-9	T	D	6				1.10E-03	1.10E-03				
W-09	Deep	SVOC	3,3'-Dichlorobenzidine	91-94-1	T	B2	6				9.30E-04	9.30E-04	1.1E-03		4.3E-03	
W-09	Deep	SVOC	2,4-Dichlorophenol	120-83-2	T		6				8.50E-04	8.50E-04	7.3E-02		2.1E-01	
W-09	Deep	SVOC	Diethylphthalate	84-66-2	T	D	6				6.50E-04	6.50E-04	5.5E+00		1.6E+01	
W-09	Deep	SVOC	2,4-Dimethylphenol	105-67-9	T		6				8.50E-04	8.50E-04	3.7E-01		1.0E+00	
W-09	Deep	SVOC	Dimethylphthalate	131-11-3	T	D	6				7.60E-04	7.60E-04	7.3E+01		2.1E+02	
W-09	Deep	SVOC	Di-n-butylphthalate	84-74-2	T	D	6				6.70E-04	6.70E-04	8.8E-01		2.5E+00	
W-09	Deep	SVOC	4,6-Dinitro-2-methylphenol	534-52-1	T		6				1.30E-03	1.30E-03	2.0E-02		2.0E-02	
W-09	Deep	SVOC	2,4-Dinitrophenol	51-28-5	T		6				3.00E-03	3.00E-03				
W-09	Deep	SVOC	2,4-Dinitrotoluene	121-14-2	T	B2	6				7.90E-04	7.90E-04	7.7E-03		3.2E-02	
W-09	Deep	SVOC	2,6-Dinitrotoluene	606-20-2	T	B2	6				5.70E-04	5.70E-04				
W-09	Deep	SVOC	Di-n-octylphthalate	117-84-0	T		5				1.10E-03	1.10E-03	1.3E-01		3.8E-01	
W-09	Deep	SVOC	Fluoranthene	206-44-0	T	D	6				8.10E-04	8.10E-04	2.1E-01		2.1E-01	
W-09	Deep	SVOC	Fluorene	86-73-7	T	D	6				1.00E-03	1.00E-03	8.8E-01		2.0E+00	
W-09	Deep	SVOC	Hexachlorobenzene	118-74-1	T	B2	6				7.40E-04	7.40E-04	1.0E-03		1.0E-03	
W-09	Deep	SVOC	Hexachlorobutadiene	87-68-3	T	C	5				7.30E-04	7.30E-04	1.5E-02		4.2E-02	
W-09	Deep	SVOC	Hexachlorocyclopentadiene	77-47-4	T	E	5				1.10E-03	1.10E-03	5.0E-02		5.0E-02	
W-09	Deep	SVOC	Hexachloroethane	67-72-1	T	C	6				7.40E-04	7.40E-04	7.3E-03		2.1E-02	
W-09	Deep	SVOC	Indeno(1,2,3-cd)pyrene	193-39-5	T	B2	6				6.30E-04	6.30E-04	2.0E-03		2.0E-03	
W-09	Deep	SVOC	Isophorone	78-59-1	T	C	6				6.30E-04	6.30E-04	7.7E-01		3.1E+00	
W-09	Deep	SVOC	2-Methylnaphthalene	91-57-6	T	ID	5				6.40E-04	6.40E-04	2.6E-01		7.5E-01	
W-09	Deep	SVOC	Methylphenol (total)	1319-77-3	T		6				1.30E-03	1.30E-03	3.7E-01		1.0E+00	
W-09	Deep	SVOC	Naphthalene	91-20-3	T	C	5				7.50E-04	7.50E-04	5.2E-01		1.5E+00	
W-09	Deep	SVOC	2-Nitroaniline	88-74-4	T		6				7.00E-04	7.00E-04				
W-09	Deep	SVOC	3-Nitroaniline	99-09-2	T	C	6				7.10E-04	7.10E-04				
W-09	Deep	SVOC	4-Nitroaniline	100-01-6	T	C	6				1.30E-03	1.30E-03				
W-09	Deep	SVOC	Nitrobenzene	98-95-3	T	D	6				8.10E-04	8.10E-04	3.4E-03		9.6E-03	
W-09	Deep	SVOC	2-Nitrophenol	88-75-5	T		6				2.10E-03	2.10E-03	2.0E-02		5.8E-02	
W-09	Deep	SVOC	4-Nitrophenol	100-02-7	T		6				1.90E-03	1.90E-03				
W-09	Deep	SVOC	N-Nitrosodiphenylamine	86-30-6	T	B2	6				1.40E-03	1.40E-03	2.7E-01		1.1E+00	
W-09	Deep	SVOC	N-Nitroso-di-n-propylamine	621-64-7	T	B2	6				6.70E-04	6.70E-04	5.0E-03		5.0E-03	
W-09	Deep	SVOC	2,2'-oxybis(1-Chloropropane)	108-60-1	T	C	6				7.80E-04	7.80E-04				
W-09	Deep	SVOC	Pentachlorophenol	87-86-5	T	B2	6				2.40E-03	2.40E-03	1.0E-03		1.0E-03	
W-09	Deep	SVOC	Phenanthrene	85-01-8	T	D	6				8.20E-04	8.20E-04	5.2E-02		1.5E-01	
W-09	Deep	SVOC	Phenol	108-95-2	T	ID	6				2.60E-03	2.60E-03	4.4E+00		1.3E+01	
W-09	Deep	SVOC	Pyrene	129-00-0	T	D	6				1.10E-03	1.10E-03	1.4E-01		1.4E-01	
W-09	Deep	SVOC	2,4,5-Trichlorophenol	95-95-4	T		6				1.20E-03	1.20E-03	7.3E-01		2.1E+00	
W-09	Deep	SVOC	2,4,6-Trichlorophenol	88-06-2	T	B2	6				1.70E-03	1.70E-03	1.2E-01		4.7E-01	
W-09	Deep	P/PCB	PCBs (total)	1336-36-3	T	B2	6				8.20E-05	8.20E-05	5.0E-04		5.0E-04	
W-09	Deep	INORG	Antimony	7440-36-0	D		2	1	2.70E-03	2.70E-03	2.20E-03	2.20E-03	6.0E-03	4.5E-01	6.0E-03	4.5E-01
W-09	Deep	INORG	Antimony	7440-36-0	T		6	1	4.90E-03	4.90E-03	2.20E-03	3.40E-03	6.0E-03	8.2E-01	6.0E-03	8.2E-01
W-09	Deep	INORG	Arsenic	7440-38-2	D	A	2	2	5.20E-03	2.59E-02			5.0E-02	5.2E-01	5.0E-02	5.2E-01
W-09	Deep	INORG	Arsenic	7440-38-2	T	A	6	5	3.10E-03	3.95E-02	2.10E-03	2.10E-03	5.0E-02	7.9E-01	5.0E-02	7.9E-01
W-09	Deep	INORG	Barium	7440-39-3	D	D	2	2	9.89E-02	2.02E-01			2.0E+00	1.0E-01	2.0E+00	1.0E-01
W-09	Deep	INORG	Barium	7440-39-3	T	D	6	6	3.60E-02	5.85E-01			2.0E+00	2.9E-01	2.0E+00	2.9E-01
W-09	Deep	INORG	Beryllium	7440-41-7	D	B1	2				5.40E-04	5.40E-04	4.0E-03		4.0E-03	
W-09	Deep	INORG	Beryllium	7440-41-7	T	B1	6				5.40E-04	6.00E-04	4.0E-03		4.0E-03	
W-09	Deep	INORG	Cadmium	7440-43-9	D	B1	2				2.80E-04	2.80E-04	5.0E-03		5.0E-03	
W-09	Deep	INORG	Cadmium	7440-43-9	T	B1	6	1	3.00E-04	3.00E-04	2.80E-04	2.80E-04	5.0E-03	6.0E-02	5.0E-03	6.0E-02

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TABLE 5-2b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

INTERMEDIATE AND DEEP GROUNDWATER SCREENING RESULTS

Area	Wellzone	Chem Group	Chemical	CASRN	Meas Basis	Carc Class	Analyzed	Detected	Min Detected (mg/L)	Max Detected (mg/L)	Min QL (mg/L)	Max QL (mg/L)	Residential Drinking Water Criteria (mg/L)	Ratio of Max Detected to Residential Drinking Water Criteria	Industrial Drinking Water Criteria (mg/L)	Ratio of Max Detected to Industrial Drinking Water Criteria
W-09	Deep	INORG	Chromium (total)	7440-47-3	D		2				1.40E-03	1.40E-03	1.0E-01		1.0E-01	
W-09	Deep	INORG	Chromium (total)	7440-47-3	T		6	5	2.80E-03	8.40E-03	1.40E-03	1.40E-03	1.0E-01	8.4E-02	1.0E-01	8.4E-02
W-09	Deep	INORG	Cobalt	7440-48-4	D	B1	2				1.30E-03	1.30E-03	4.0E-02		1.0E-01	
W-09	Deep	INORG	Cobalt	7440-48-4	T	B1	6	3	7.60E-04	8.40E-03	7.40E-04	1.30E-03	4.0E-02	2.1E-01	1.0E-01	8.4E-02
W-09	Deep	INORG	Copper	7440-50-8	D	D	2				4.20E-03	4.20E-03	1.4E+00		4.0E+00	
W-09	Deep	INORG	Copper	7440-50-8	T	D	6				1.70E-03	4.20E-03	1.4E+00		4.0E+00	
W-09	Deep	INORG	Lead	7439-92-1	D	B2	2				2.50E-03	2.50E-03	4.0E-03		4.0E-03	
W-09	Deep	INORG	Lead	7439-92-1	T	B2	6				1.60E-03	2.50E-03	4.0E-03		4.0E-03	
W-09	Deep	INORG	Manganese	7439-96-5	D	D	2	1	6.18E-02	6.18E-02	9.00E-04	9.00E-04	8.6E-01	7.2E-02	2.5E+00	2.5E-02
W-09	Deep	INORG	Manganese	7439-96-5	T	D	6	5	4.61E-02	2.55E-01	9.00E-04	9.00E-04	8.6E-01	3.0E-01	2.5E+00	1.0E-01
W-09	Deep	INORG	Mercury	7439-97-6	D	D	2				6.90E-05	6.90E-05	2.0E-03		2.0E-03	
W-09	Deep	INORG	Mercury	7439-97-6	T	D	6				6.90E-05	8.70E-05	2.0E-03		2.0E-03	
W-09	Deep	INORG	Nickel	7440-02-0	D	A	2				2.20E-03	2.20E-03	1.0E-01		1.0E-01	
W-09	Deep	INORG	Nickel	7440-02-0	T	A	6	4	3.10E-03	9.30E-03	2.20E-03	2.90E-03	1.0E-01	9.3E-02	1.0E-01	9.3E-02
W-09	Deep	INORG	Selenium	7782-49-2	D	D	2				4.50E-03	4.50E-03	5.0E-02		5.0E-02	
W-09	Deep	INORG	Selenium	7782-49-2	T	D	6				4.50E-03	4.70E-03	5.0E-02		5.0E-02	
W-09	Deep	INORG	Silver	7440-22-4	D	D	2				1.50E-03	1.50E-03	3.4E-02		9.8E-02	
W-09	Deep	INORG	Silver	7440-22-4	T	D	6	1	1.30E-03	1.30E-03	9.80E-04	1.50E-03	3.4E-02	3.8E-02	9.8E-02	1.3E-02
W-09	Deep	INORG	Thallium	7440-28-0	D		2				1.80E-05	1.80E-05	2.0E-03		2.0E-03	
W-09	Deep	INORG	Thallium	7440-28-0	T		6				1.80E-05	3.30E-05	2.0E-03		2.0E-03	
W-09	Deep	INORG	Vanadium	7440-62-2	D		2				8.20E-04	8.20E-04	4.5E-03		6.2E-02	
W-09	Deep	INORG	Vanadium	7440-62-2	T		6				6.70E-04	8.20E-04	4.5E-03		6.2E-02	
W-09	Deep	INORG	Zinc	7440-66-6	D	D	2				1.20E-02	1.20E-02	2.4E+00		5.0E+00	
W-09	Deep	INORG	Zinc	7440-66-6	T	D	6				1.20E-02	1.40E-02	2.4E+00		5.0E+00	

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Notes:
The Screening Criteria for Pyrene were used as surrogates for Phenanthrene and Benzo(g,h,i)perylene.
The Screening Criteria for Naphthalene were used as surrogates for 2-Methylnaphthalene.
The Screening Criteria for Chromium VI was used as a surrogate for Chromium (total).
The concentrations for the Methylphenol (2, 3, & 4) were summed before comparing to the Screening Criteria for 4-Methylphenol.
The concentrations for all PCB isomers were summed before comparing to Polychlorinated biphenyls (PCBs) for cancer effects and Aroclor 1254 for noncancer effects.
The concentrations for the Xylene isomers (m/p and o) were summed before comparing to the Screening Criteria.
The concentrations for the 1,3-Dichloropropene isomers (cis and trans) were summed before comparing to the Screening Criteria.
The MDEQ Drinking Water Criteria for Chromium III was calculated by ENVIRON to be account for valence specific toxicity.

Chem Group - Chemical Group
Meas Basis - Measured Basis; T = Total, D = Dissolved
Carc Class - EPA Weight-of-Evidence Cancer Classification
Min QL - Minimum Quantitation Limit
Max QL - Maximum Quantitation Limit

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TABLE 5-3

GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

ESTIMATED CUMULATIVE CANCER RISK AND HI FOR AOIs WITH "CONTAMINATED" SOIL - BASED ON MAXIMUM CONCENTRATIONS

AOI	Matrix	Industrial Cumulative Risk	Industrial HI
F-07	Soil	2E-05	5E-01
F-08	Soil	1E-05	1E-02
F-15	Soil	3E-05	2E-01
M-02	Soil	2E-05	1E+00
M-07	Soil	2E-05	1E-01
M-09	Soil	1E-06	9E-02
M-16	Soil	2E-06	1E-01
P-09	Soil	1E-04	1E+00
P-10	Soil	4E-06	7E-02
P-11	Soil	2E-05	7E-01
SWDF	Soil	1E-06	4E-02
W-01	Soil	**3E-04**	**2E+01**
W-08	Soil	7E-05	**3E+00**
W-09	Soil	**6E-04**	**4E+01**
Area of Ind Redevelopment	Soil	**7E-04**	**5E+01**

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TABLE 5-4a
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

ESTIMATED CUMULATIVE CANCER RISK AND HI FOR AOIs WITH CONTAMINATED" SOIL - BASED ON MAXIMUM CONCENTRATIONS AND 95% UCLs

AOI	Matrix	Industrial Cumulative Risk	Industrial HI
P-09	Soil	9E-05	4E-01
W-01 (routine wrkr)	Soil	4E-05	1E+00
W-01 (const wrkr)	Soil	1E-04	**3E+00**
W-08	Soil	7E-05	9E-01
W-09	Soil	4E-05	9E-01
Area of Ind Redevelopment	Soil	4E-05	1E+00

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TABLE 5-4b
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

ESTIMATES OF HIGH-END CUMULATIVE CANCER RISK AND HAZARD INDEX FOR AOI W-1 CONSTRUCTION

		Soil Ingestion	Soil Dermal Contact	Soil Inhalation	SUM Soil Pathways
AOI W-01	Cancer Risk	3E-06	3E-07	6E-06	9E-06
AOI W-01	Hazard Index (HI)	3E-01	1E-02	2E-01	5E-01

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TABLE 5-4c
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

ESTIMATES OF HIGH-END CUMULATIVE CANCER RISK AND HAZARD INDEX FOR AREA OF INDUSTRIAL REDEVELOPMENT CONSTRUCTION

		Soil Ingestion	Soil Dermal Contact	Soil Inhalation	SUM Soil Pathways
Area of Ind Redevelopment	Cancer Risk	5E-06	8E-07	3E-06	9E-06
Area of Ind Redevelopment	Hazard Index (HI)	4E-01	3E-02	6E-01	1E+00

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TABLE 5-5
GENERAL MOTORS CORPORATION
PONTIAC NORTH CAMPUS - PONTIAC, MICHIGAN

RCRA FACILITY INVESTIGATION

ESTIMATES OF HIGH-END CUMULATIVE CANCER RISK AND HAZARD INDEX BY AOI FOR NAPL AREAS 4 AND 5

		Smear Zone Soil Ingestion	Smear Zone Soil Dermal Contact		NAPL Dermal Contact	NAPL Vapor Inhalation	SUM Total
M-02 NAPL	Cancer Risk	1E-06	2E-07		3E-05	1E-06	4E-05
M-02 NAPL	Hazard Index (HI)	1E-01	4E-02		4E-02	4E-02	3E-01
M-16 NAPL	Cancer Risk	7E-07	1E-07		2E-05	6E-08	2E-05
M-16 NAPL	Hazard Index (HI)	7E-02	2E-02		5E-02	1E-02	1E-01

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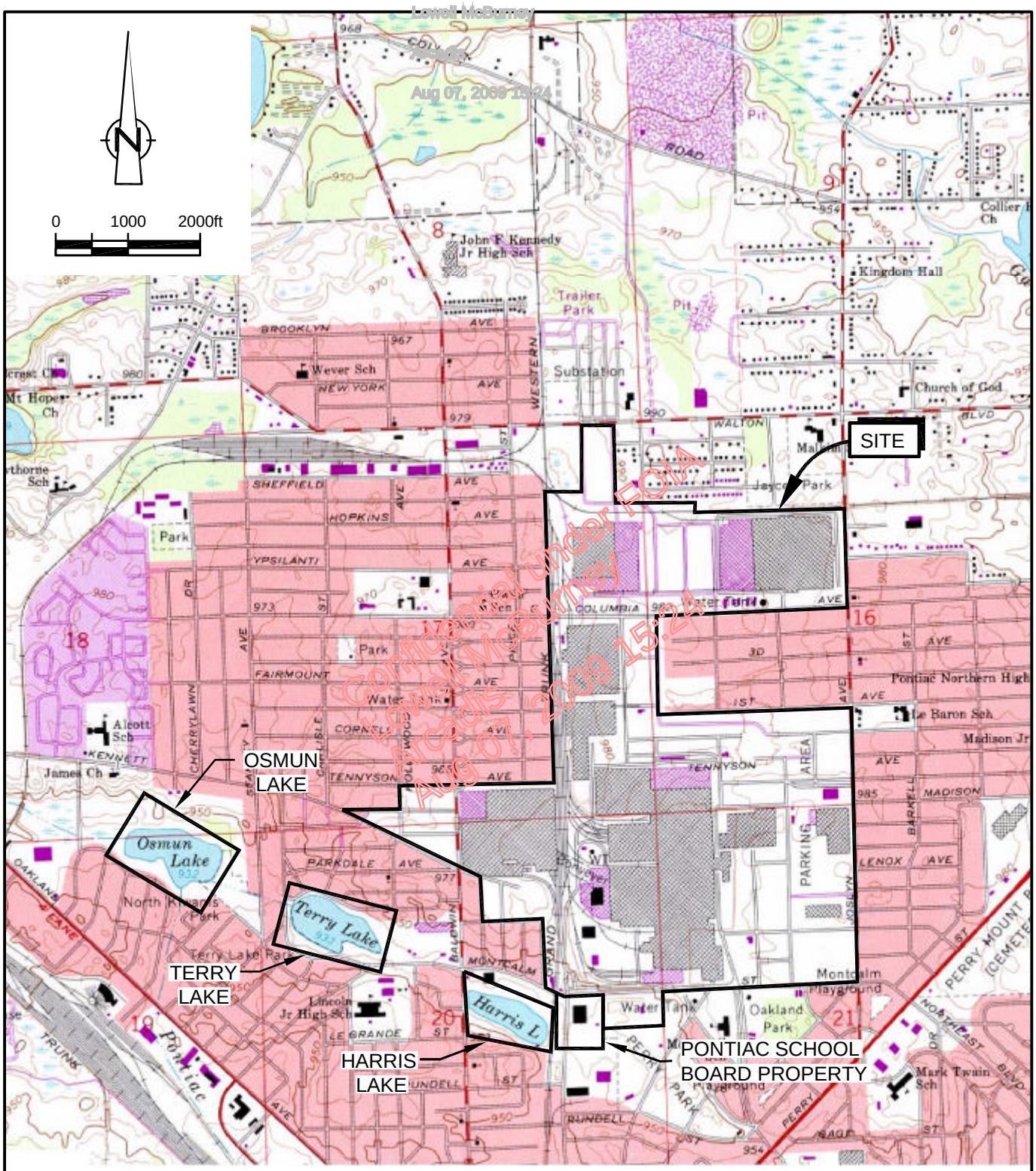
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SOURCE: USGS QUADRANGLE MAP;
PONTIAC NORTH, MICHIGAN



GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

SITE LOCATION

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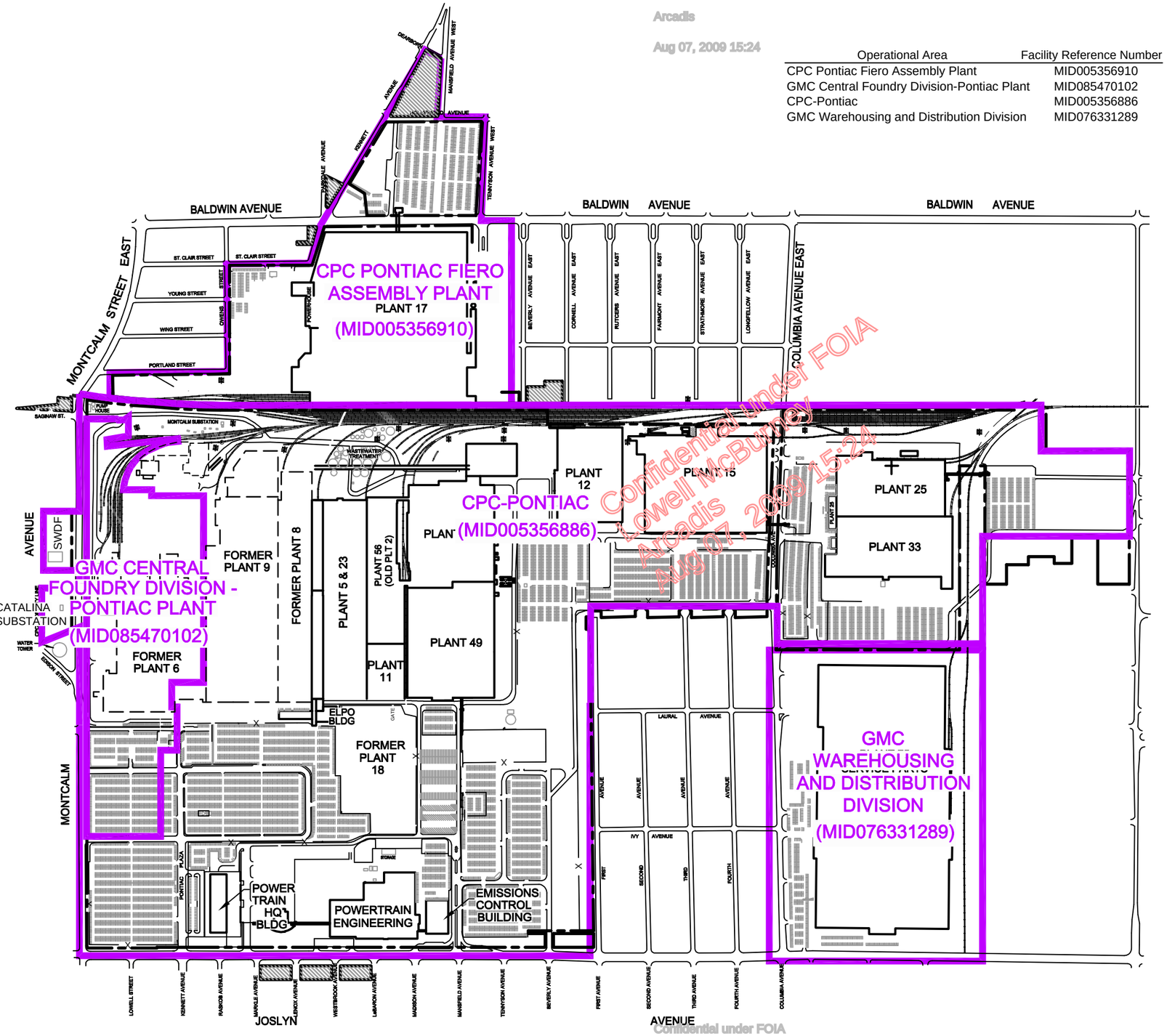
FIGURE
1-1

17487-22(013)GN-WA001 NOV 24/2003

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Operational Area	Facility Reference Number
CPC Pontiac Fiero Assembly Plant	MID005356910
GMC Central Foundry Division-Pontiac Plant	MID085470102
CPC-Pontiac	MID005356886
GMC Warehousing and Distribution Division	MID076331289



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0 400 800ft

LEGEND

- PROPERTY BOUNDARY
- RAILROAD TRACKS
- FENCE
- FACILITY BOUNDARY
- FOOTPRINT OF FORMER STRUCTURE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

SITE FACILITIES

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FIGURE 1-2

17487-22(013)GN-WA002 NOV 24/2003

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0 400 800ft

LEGEND

OPERATIONAL AREA BOUNDARY

OFFSITE AREA BOUNDARY

FIERO (FORMER PONTIAC FIERO ASSEMBLY)
DA (DEMOLITION AREA)
MFD (METAL FABRICATION DIVISION)
POWERTRAIN
SPO (SERVICE PARTS OPERATIONS)

HARRIS LAKE
HARRIS LAKE
PONTIAC SCHOOL BOARD PROPERTY
SWDF
CATALINA SUBSTATION
FIERO
PLANT 17
FIERO
INDUSTRIAL WASTEWATER TREATMENT PLANT
PLANT 14
PLANT 12
PLANT 15
MFD
PLANT 25
PLANT 33
SPO
FORMER PLANT 9
DA
FORMER PLANT 8
PLANT 56 (FORMERLY PLANT 2)
PLANT 5 & 23
PLANT 49
PLANT 11
FORMER PLANT 6
FORMER PLANT 9
ELPO BUILDING
FORMER PLANT 18
POWERTRAIN
POWERTRAIN HEADQUARTERS BUILDING
CAFETERIA
POWERTRAIN BUILDING
EMISSIONS CONTROL BUILDING
SPO
PLANT 75
SERVICE PARTS OPERATIONS
BALDWIN AVENUE
ST. LOUIS STREET
WOOD STREET
PORTLAND STREET
SAGINAW STREET
HOLLYWOOD AVENUE
GLENWOOD AVENUE
JOSLYN AVENUE
IVY AVENUE
LAUREL AVENUE
FIRST AVENUE
SECOND AVENUE
THIRD AVENUE
FOURTH AVENUE
COLUMBIA AVENUE
WALTON BLVD.
HIGHWOOD BLVD.
MAIN STREET
WILLIAM STREET
CHURCH STREET
PARK PLACE
PARK STREET
MONTCALM STREET
CASS AVENUE
GENET STREET
SAGINAW AVENUE
WILLIS AVENUE
CENTRAL AVENUE
WOODWARD AVENUE
MADISON AVENUE
WESTFIELD AVENUE
EDISON AVENUE
BEVERLY AVENUE

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GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

SITE OPERATIONAL AREAS AND OFFSITE AREAS

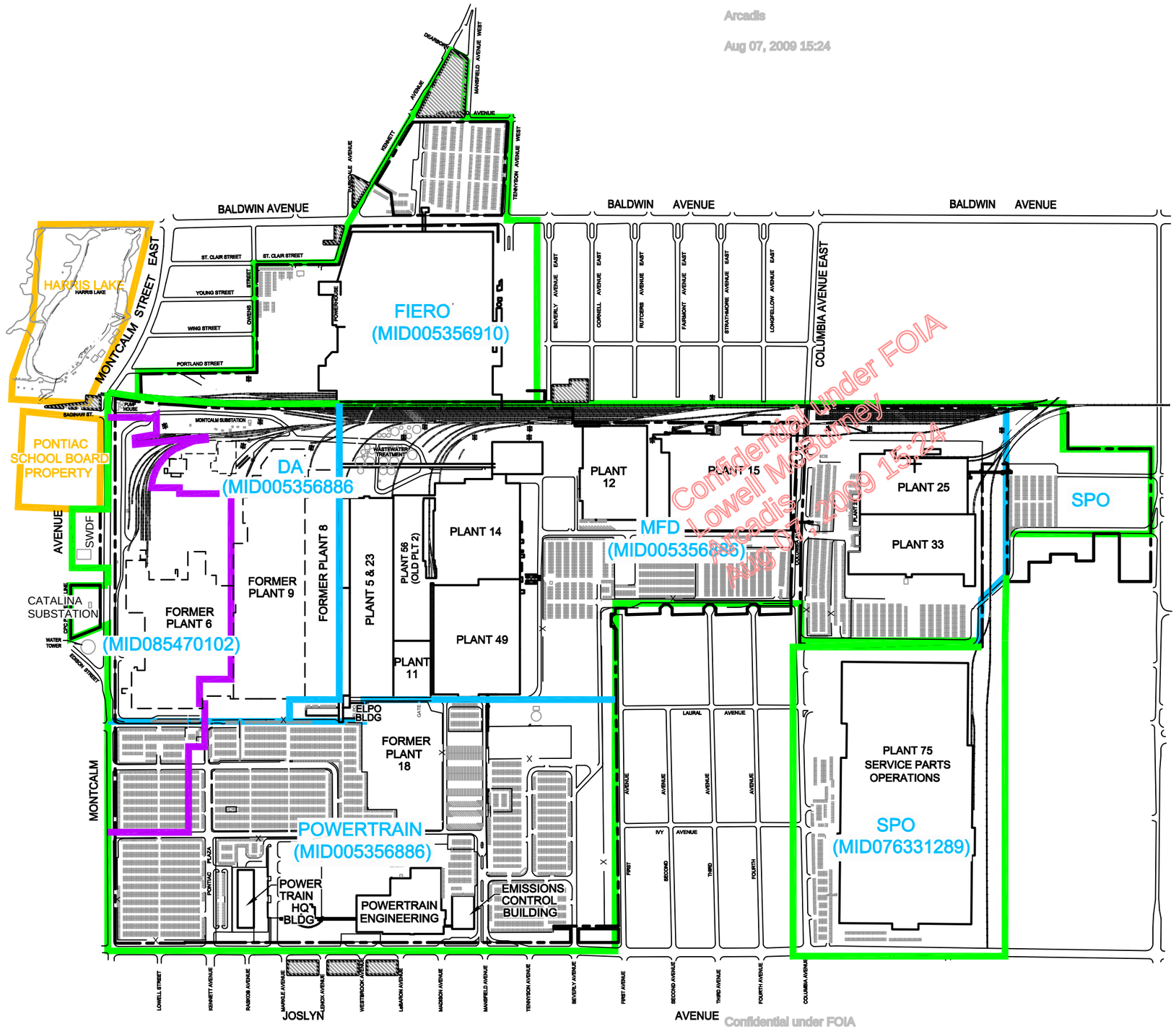
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FIGURE 1-3

17487-22(013)GN-WA003 NOV 24/2003

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N

0 400 800ft

LEGEND

- FOOTPRINT OF FORMER STRUCTURE
- PROPERTY BOUNDARY
- RAILROAD TRACKS
- FENCE
- OPERATIONAL AREA BOUNDARY
- FACILITY BOUNDARY
- COMMON OPERATIONAL AREA AND FACILITY BOUNDARY
- OFFSITE AREA BOUNDARY

FIERO (FORMER PONTIAC FIERO ASSEMBLY)
DA (DEMOLITION AREA)
MFD (METAL FABRICATION DIVISION)
POWERTRAIN
SPO (SERVICE PARTS OPERATIONS)

Operational Area	Facility USEPA ID Number
Fiero	MID005356910
Demolition Area (DA)	MID005356886
	MID085470102
Metal Fabrication Division (MFD)	MID005356886
Powertrain	MID005356886
	MID085470102
Service Parts Operations (SPO)	MID076331289

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

SUMMARY OF SITE OPERATIONAL AREAS AND FACILITIES

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FIGURE 1-4

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WALTON AVENUE
HIGH AVENUE
HIGHWOOD BLVD.
M-4
M-25
M-16
M-5
PLANT 25
PLANT 33
PLANT 75
PSERVICE PARTS OPERATIONS
JOSLYN AVENUE
M-23
COLUMBIA AVENUE
LAUREL AVENUE
IVY AVENUE
FOURTH AVENUE
PLANT 15
THIRD AVENUE
M-17
SECOND AVENUE
M-11
M-24
PLANT 8
FIRST AVENUE
BEVERLY AVENUE
TENNYSON AVENUE
MANSFIELD AVENUE
EMISSIONS CONTROL BUILDING
P-6
MADISON AVENUE
LEBARON AVENUE
WESBROOK AVENUE
LENOX AVENUE
MARKLE AVENUE
RASKOB AVENUE
KENNET STREET
LOWELL STREET
F-8
F-13
TENNYSON AVENUE WEST
HOLLYWOOD AVENUE
PLANT 17 FIERO
KENNET AVENUE
PLANT 49
PLANT 14
M-13
M-21
PLANT 56 (FORMERLY PLANT 2)
PLANT 1
M-9
P-11
P-9
P-10
FORMER PLANT 18
POWERTRAIN BUILDING
M-2
M-1
INDUSTRIAL WASTEWATER TREATMENT PLANT
PLANT 5 & 23
M-19
M-7
ELPO BUILDING
F-7
F-15
F-14
F-12
W-3
W-5 FORMER PLANT 8
W-6
W-8
FORMER PLANT 9
CAFETERIA
POWERTRAIN HEADQUARTERS BUILDING
W-13
OWENS STREET
FORMER PLANT 6
W-11
W-10
W-1
W-9
PONTIAC PLAZA
BALDWIN AVENUE
ST. MARY STREET
YOUNG STREET
WINS STREET
PORTLAND STREET
MONTCALM STREET EAST
HARRIS LAKE
MONTCALM AVENUE
SAGINAW STREET
PONTIAC SCHOOL BOARD PROPERTY
SWDF
WATER TOWER
EDISON STREET
GLENWOOD AVENUE
OUTFALL 001
HARRIS LAKE

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Legend:

- RAILROAD
- ROADS
- BUILDINGS
- AOI AND OFFSITE AREAS
- **W- 9** AOI ID

0 125 250 500 750 1,000
Feet

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PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AREAS OF INTEREST AND OFFSITE AREAS

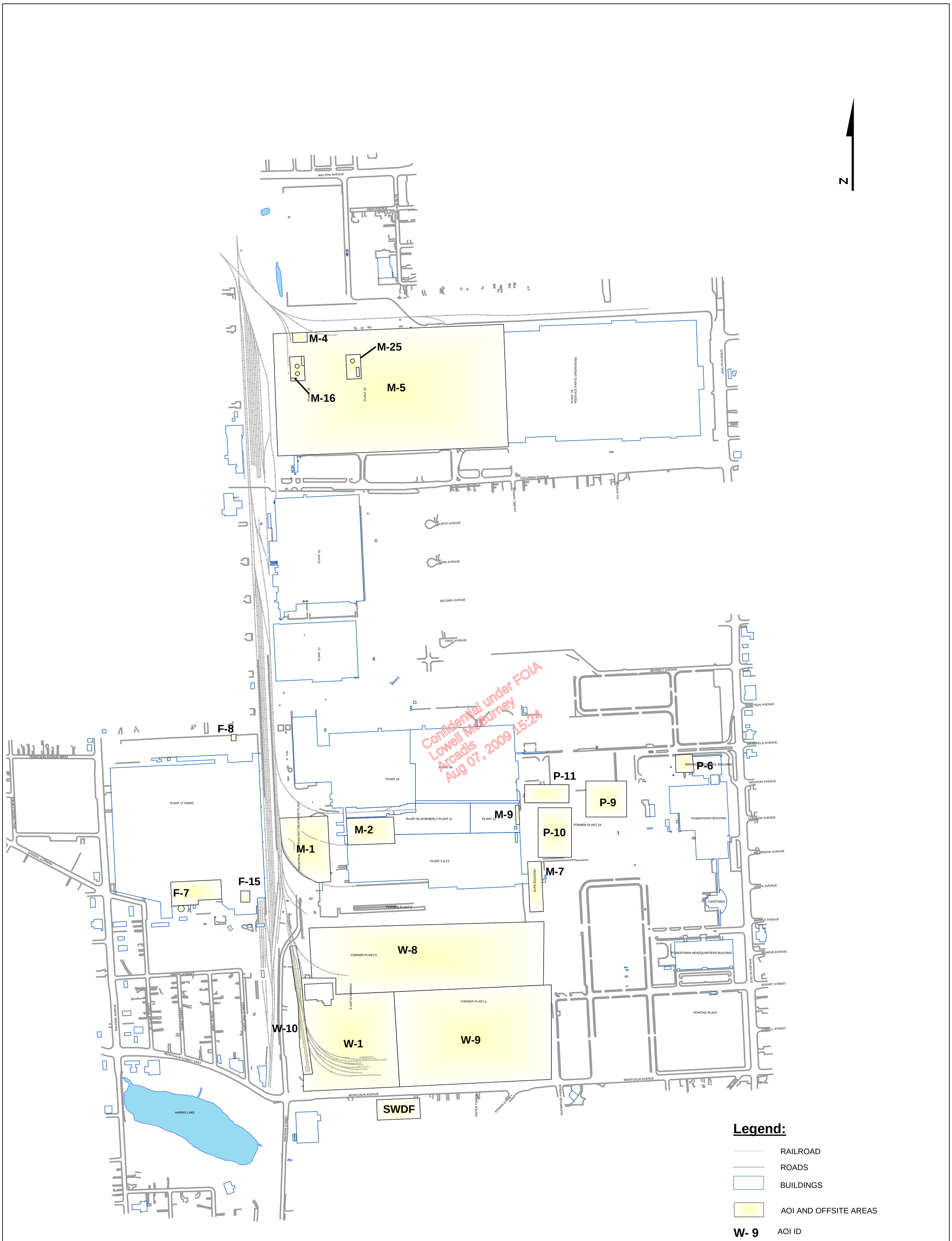
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Figure
1-5

11/24/03 SYR-85 EIB TBR
PNC - 64411.310
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PNC - 64411.310
PNC/RFI_NOV03/MXD/PontiacAOI.mxd

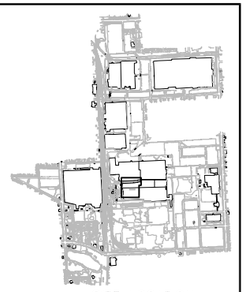
GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOIs IN THE SUPPLEMENTAL RFI REPORT

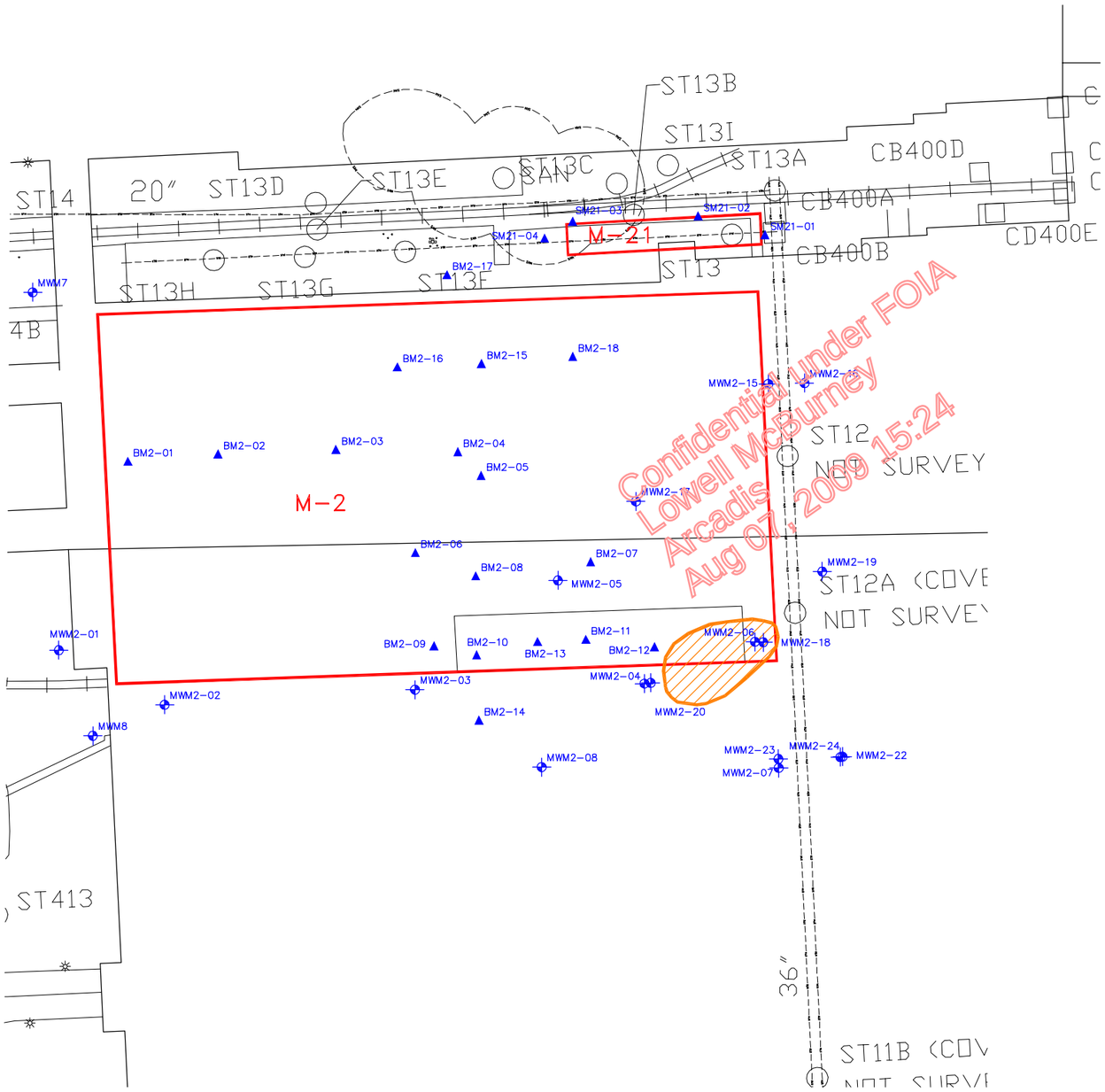
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Figure
1-6

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SITE LOCATION



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LEGEND:

- MWM2-05 — GROUNDWATER MONITORING WELL LOCATION
- BM2-12 — SOIL BORING LOCATION
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- APPROXIMATE AOI AREA
- M-2 = FORMER PLATING OPERATION AREA
- M-21 = ELECTRICAL SUBSTATION

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.

0 40' 80'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

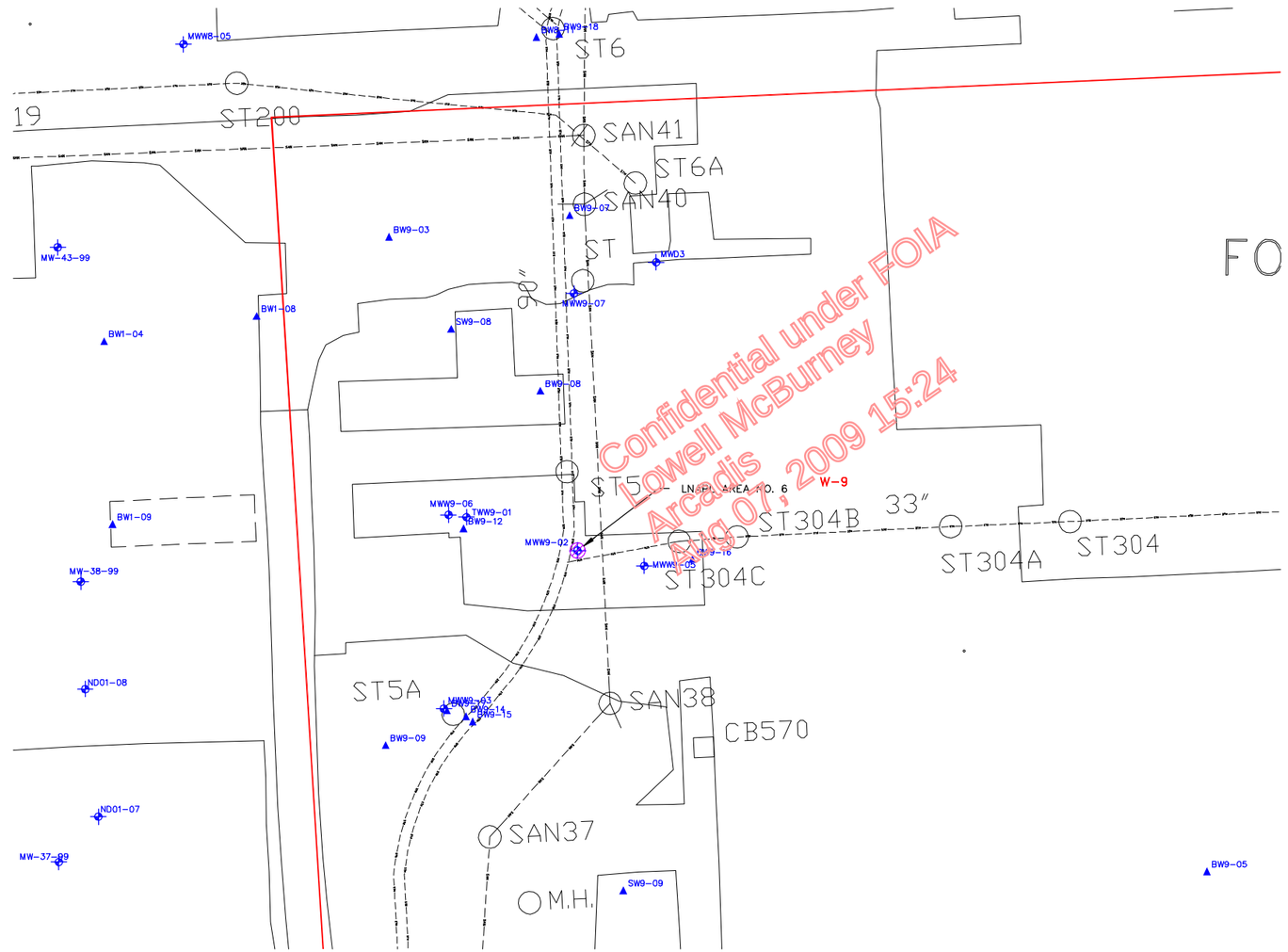
LNAPL AREA NO. 4

ENCORE

FIGURE 2-1

X: 64411X00, X01, X06.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS SDL GMS
64411210/RFI-ADDM/64411G01.DWG

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SITE LOCATION

LEGEND:

MWM2-05 — GROUNDWATER MONITORING WELL LOCATION

BM2-12 — SOIL BORING LOCATION

LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)

APPROXIMATE AOI AREA

W-9 = FORMER CENTRAL FOUNDRY

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED MAY 2003.

0 40' 80'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

LNAPL AREA NO. 6

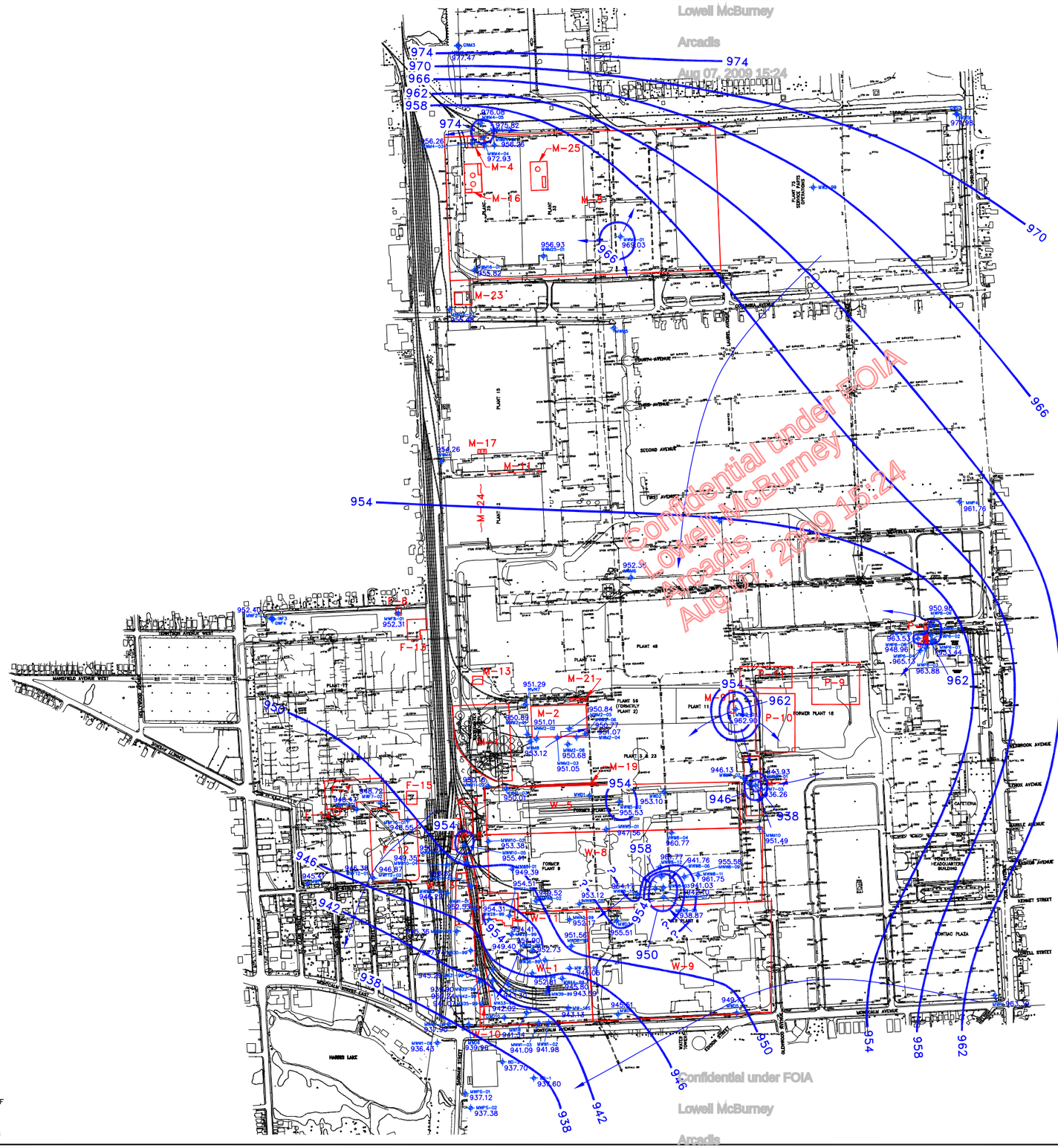
ENCORE

FIGURE
2-2

X: 64411x00, X01, X06.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/25/03 SYR-85-NES DJP GMS
64411210/RFI-ADDM/64411G02.DWG

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LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- FENCED AREA
- APPROXIMATE AOI AREA
- 951.29 GROUNDWATER ELEVATION IN FEET
- 946 GROUNDWATER ELEVATION CONTOUR LINE IN FEET (4-FOOT INTERVAL UNLESS OTHERWISE INDICATED)
- GROUNDWATER FLOW DIRECTION

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED NOVEMBER 11, 2002.

0 400' 800'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

GROUNDWATER FLOW CONTOUR MAP- NOVEMBER 2002

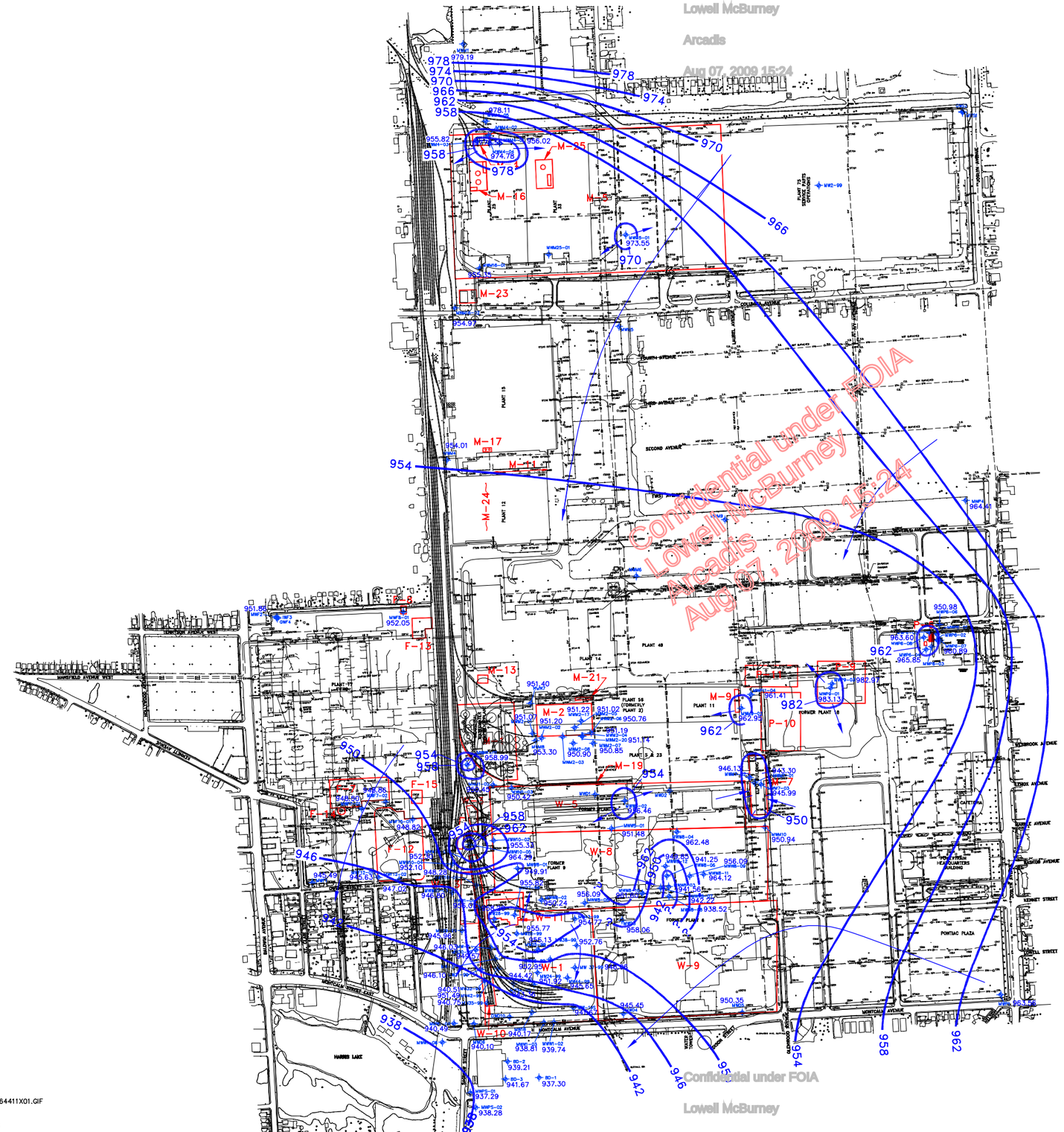
ENCORE

FIGURE 3-1

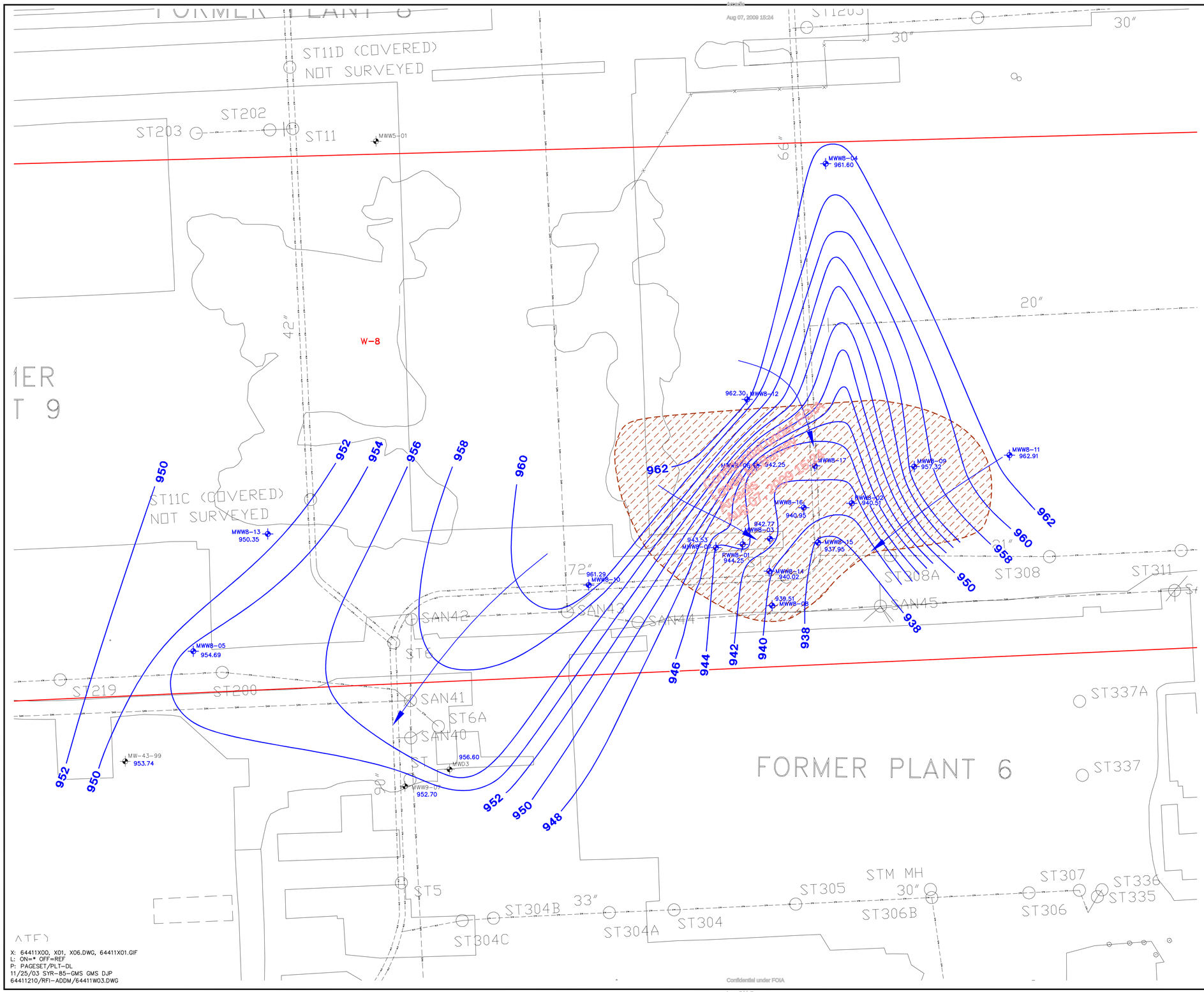
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11/24/03 SYR-84-RCB RCB GMS
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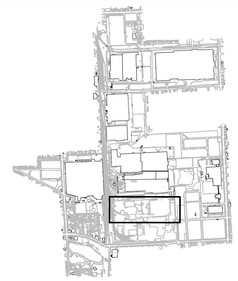
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978
974
970
966
962
958
954
950
946
942
938
934
M-16
M-25
M-23
M-17
M-24
M-21
M-2
M-19
M-9
P-10
W-13
W-5
W-8
W-1
W-9
W-10
F-13
F-15
F-12
F-7
F-8
973.55
974.78
978.11
956.02
954.01
964.91
951.40
951.22
951.02
950.76
951.19
951.14
950.90
950.85
958.99
953.30
962.95
961.41
983.13
982.47
963.60
965.88
950.98
964.59
964.44
946.13
943.30
945.99
950.94
962.48
951.48
956.46
955.34
964.29
952.10
945.49
940.63
947.09
946.60
955.24
956.09
955.77
956.13
952.76
958.06
941.25
956.09
964.12
942.22
938.52
945.45
950.35
940.49
940.10
938.81
939.74
941.67
939.21
937.30
937.29
938.28
964.46
951.85
952.05
948.84
948.50
951.07
951.20
951.29
951.27
951.41
951.07
951.29
951.27
951.41
951.07
951.29
951.27
951.41
951.07

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LEGEND:

- MWW8-04 — GROUNDWATER MONITORING WELL LOCATION
- APPROXIMATE AOI AREA
- W-8 = FORMER PLANT 9 BASEMENT AST
- 957.32 — GROUNDWATER ELEVATION IN FEET
- 950 — GROUNDWATER ELEVATION CONTOUR LINE IN FEET
- GROUNDWATER FLOW DIRECTION
- APPROXIMATE EXTENT OF LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL)

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED OCTOBER 27 & 28, 2003. WHERE LNAPL WAS PRESENT, AN EQUIVALENT GROUNDWATER ELEVATION WAS CALCULATED USING AN ESTIMATED SPECIFIC DENSITY FOR THE LNAPL OF 0.8".

0 50' 100'
SCALE: 1"=50'

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI W-8 GROUNDWATER FLOW CONTOUR MAP

ENCORE

FIGURE 3-3

ATF)

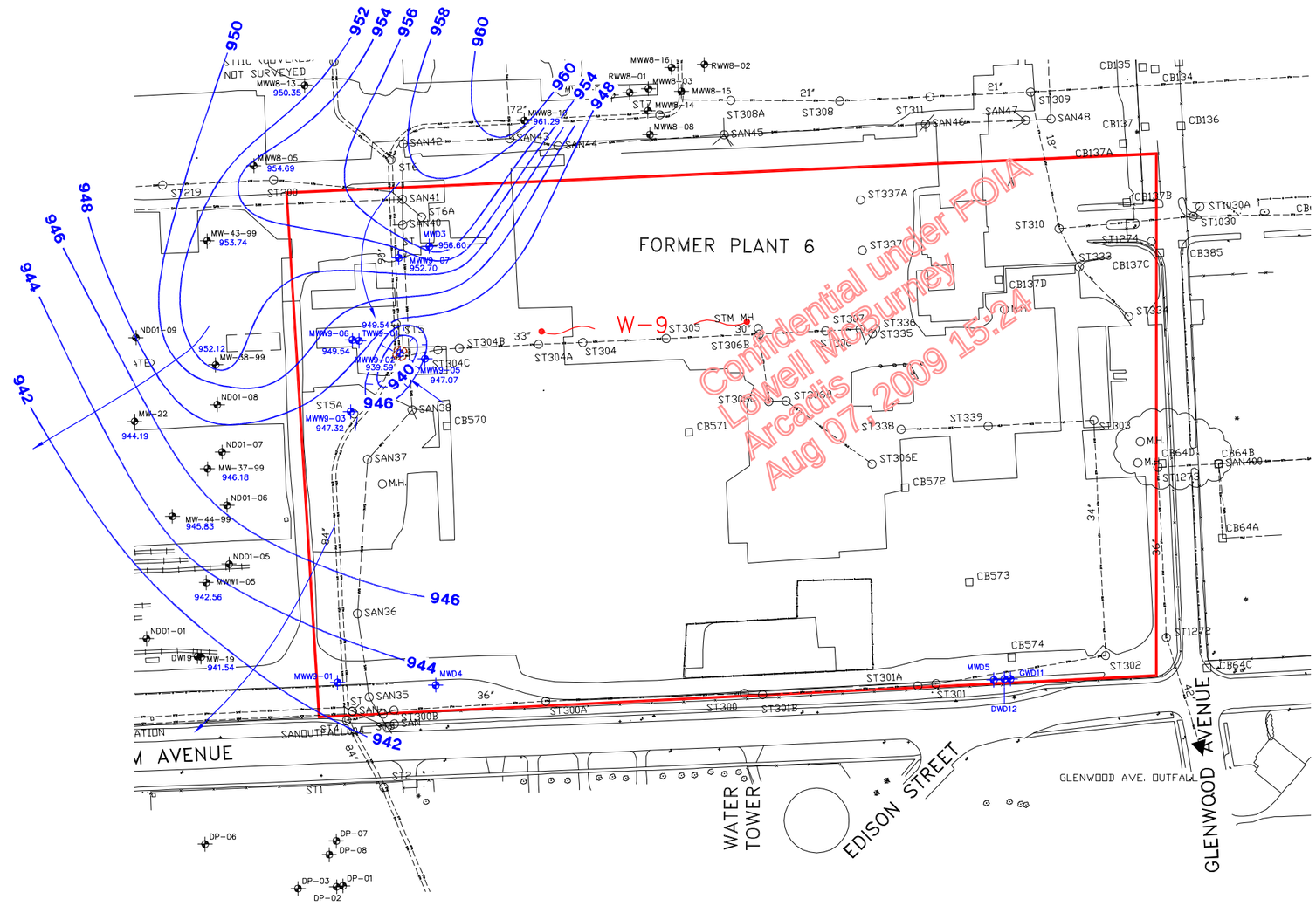
X: 64411X00, X01, X06.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS GMS DJP
64411210/RFI-ADDM/64411W03.DWG

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SITE LOCATION



LEGEND:

- MWW9-01 — GROUNDWATER MONITORING WELL LOCATION
- APPROXIMATE AOI AREA
- W-9 = FORMER CENTRAL FOUNDRY
- 947.32 — GROUNDWATER ELEVATION IN FEET
- 948 — GROUNDWATER ELEVATION CONTOUR LINE IN FEET
- GROUNDWATER FLOW DIRECTION
- APPROXIMATE EXTENT OF LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL)

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED OCTOBER 27 & 28, 2003. WHERE LNAPL WAS PRESENT, AN EQUIVALENT GROUNDWATER ELEVATION WAS CALCULATED USING AN ESTIMATED SPECIFIC DENSITY FOR THE LNAPL OF 0.8".

0 100' 200'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI W-9 GROUNDWATER FLOW CONTOUR MAP

ENCORE

FIGURE 3-4

X: 64411X00, X01, X06.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/24/03 SYR-85-GMS DMW GMS
64411210/RFI-ADDM/64411W02.DWG

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SITE LOCATION

LEGEND:

MWM2–05 — GROUNDWATER MONITORING WELL LOCATION

BM2–12 — SOIL BORING LOCATION

APPROXIMATE AOI AREA

M–2 = FORMER PLATING OPERATION AREA

950.7 — GROUNDWATER ELEVATION CONTOUR

(950.74) — GROUNDWATER ELEVATION

GROUNDWATER FLOW DIRECTION

APPROXIMATE EXTENT OF LIGHT NON–AQUEOUS PHASE LIQUID (LNAPL)

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS CALCULATED FROM WATER LEVELS COLLECTED ON AUGUST 27, 2003.

0 30' 60'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI M-2 GROUNDWATER FLOW CONTOUR MAP

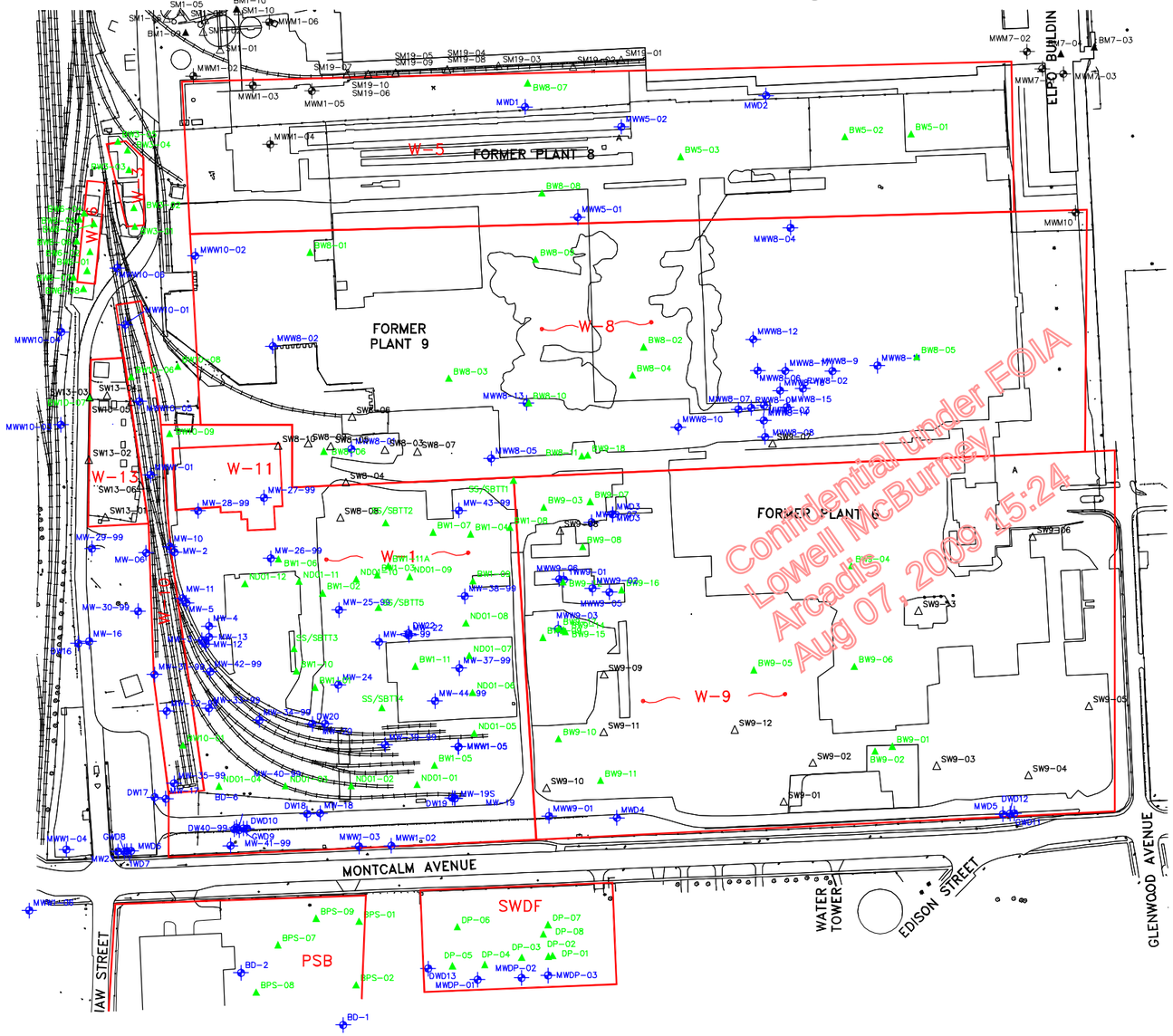
ENCORE

FIGURE 3-5

X: 64411X00, 64411X01.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS DJP GMS
6441121O/RFI-ADDM/64411W05.DWG

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SITE LOCATION

LEGEND:

- MWM16-02 — MONITORING WELL SAMPLE LOCATION
- BW5-01 — SOIL BORING LOCATION
- SW13-05 — SURFACE SOIL SAMPLE LOCATION
- FENCED AREA
- APPROXIMATE AOI AREA

W-1 = WEST YARD
W-3 = FORMER PLANT 8 FLAMMABLE LIQUID STORAGE TANK FARM
W-5 = FORMER PLANT 8 BASEMENT AST AREA
W-6 = FORMER PLANT 8 FLAMMABLE MATERIALS STORAGE AREA
W-8 = FORMER PLANT 9 BASEMENT AST
W-9 = FORMER CENTRAL FOUNDRY
W-10 = RAILROAD MARSHALLING AREA
W-11 = SALVAGE YARD SUMP DRAIN
W-13 = MONTCALM SUBSTATION
SWDF = STORM WATER DETENTION FACILITY
PSB = PONTIAC SCHOOL BOARD

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.

0 150' 300'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

DA AND SWDF SAMPLE LOCATIONS

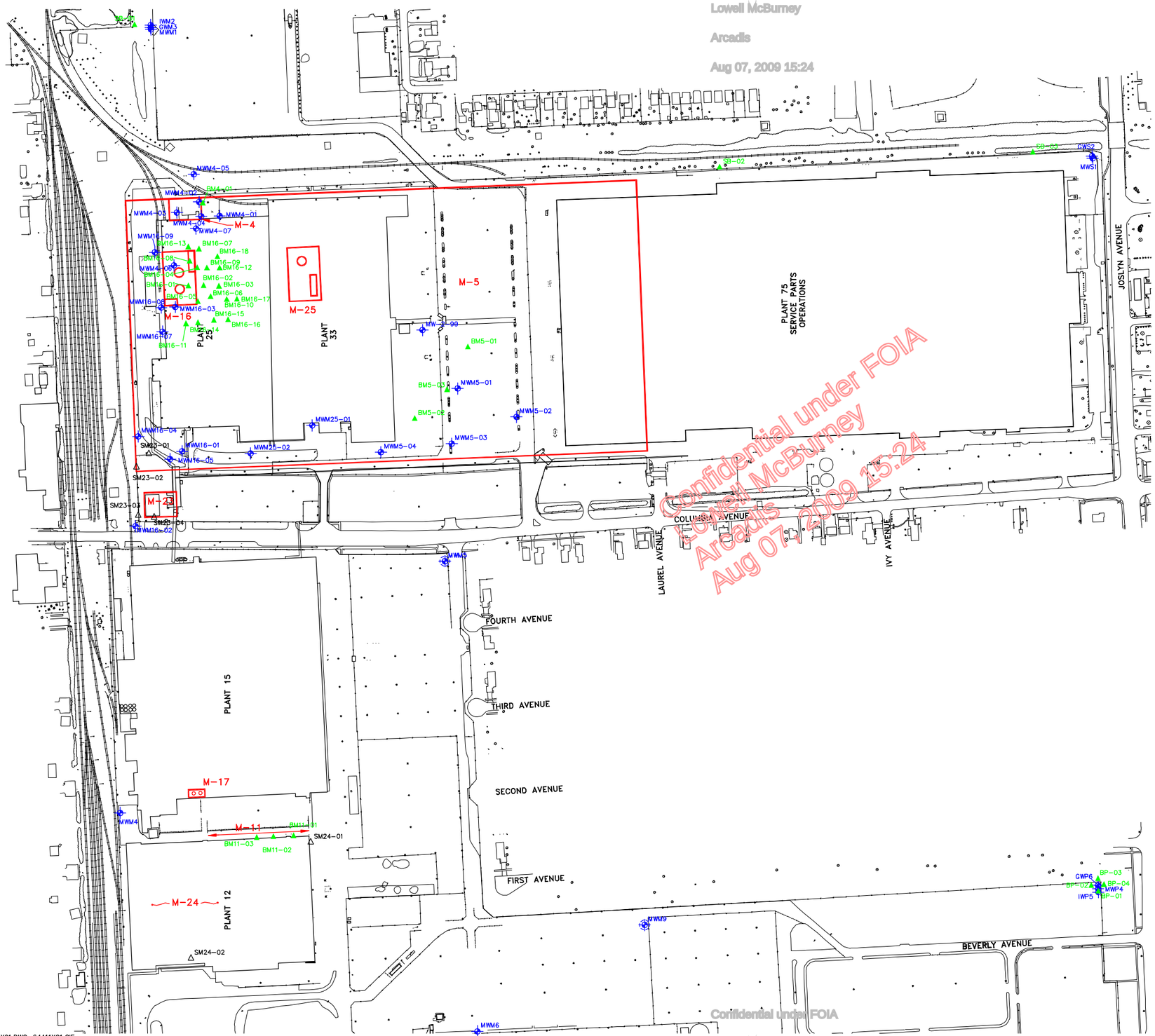
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FIGURE 4-2

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS DJP GMS
6441121G/RFI-ADDM/64411C02.DWG

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SITE LOCATION

MWM16-02 — MONITORING WELL SAMPLE LOCATION

MWM9 — ADANDONED MONITORING WELL LOCATION

BM5-02 — SOIL BORING SAMPLE LOCATION

SM23-03 — SURFACE SOIL SAMPLE LOCATION

APPROXIMATE AOI AREA

M-4 = PLANT 25 FORMER GASOLINE UST AND CURRENT GASOLINE AST
M-5 = FORMER A2 FILL AREA
M-11 = PLANT 12 FORMER GASOLINE STORAGE AREA
M-16 = PLANT 25 BASEMENT SUMP AREA
M-17 = FORMER GASOLINE AST
M-23 = ELECTRICAL SUBSTATION
M-24 = PCB SPILL AREA
M-25 = PLANT 33 BASEMENT SUMP AREA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.

0 200' 400'
GRAPHIC SCALE

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS DJP GMS
64411210/RFI-ADDM/64411C03.DWG

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

MFD (NORTHERN SECTION) AND SPO SAMPLING LOCATIONS

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FIGURE 4-3

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PLANT 49

PLANT 14

PLANT 56
(FORMERLY
PLANT 2)

PLANT 11

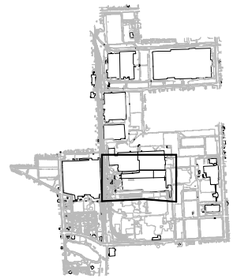
PLANT 5 & 23

FORMER PLANT 8

INDUSTRIAL WASTEWATER TREATMENT PLANT

ELPO BUILDING

M-1 M-2 M-7 M-9 M-13 M-19 M-21



SITE LOCATION

LEGEND:

MWM16-02 ⊕ MONITORING WELL SAMPLE LOCATION

BM5-02 ▲ SOIL BORING SAMPLE LOCATION

SM23-03 △ SURFACE SOIL SAMPLE LOCATION

□ APPROXIMATE AOI AREA

M-1 = POWERHOUSE BASEMENT SUMPS
M-2 = FORMER PLATING OPERATION AREA
M-7 = ELPO BUILDING/FLAMMABLE LIQUID STORAGE BUILDING
M-9 = PLANT 11 OIL CONTAINMENT AREA
M-13 = FORMER FUEL AST
M-19 = ELECTRICAL SUBSTATION
M-21 = RAILROAD TRACKS

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.

0 100' 200'
GRAPHIC SCALE

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X: 64411X0D, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS DJP GMS
64411210/RFI-ADDM/64411C04.DWG

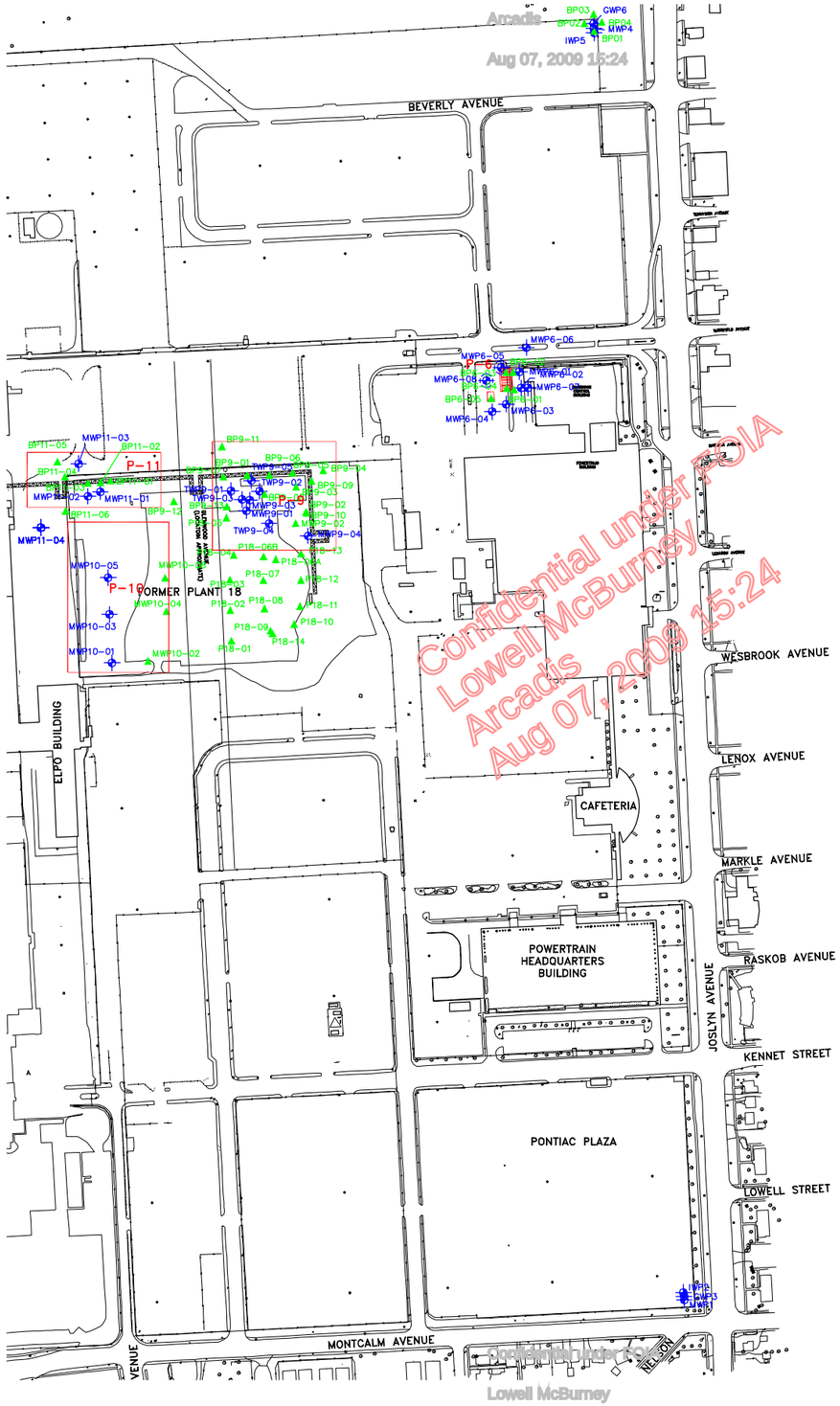
GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

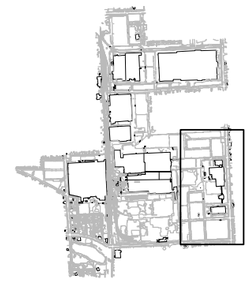
MFD (SOUTHERN SECTION) SAMPLE LOCATIONS

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FIGURE
4-4

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SITE LOCATION

LEGEND:

- MWM16-02 — MONITORING WELL SAMPLE LOCATION
- MWP6-05 — ABANDONED MONITORING WELL SAMPLE LOCATION
- BM5-02 — SOIL BORING SAMPLE LOCATION
- APPROXIMATE AOI AREA
- P-6 = FORMER UST FARM AND STUDDARD SOLVENT AST
- P-9 = PIPELINE RELEASE
- P-10 = FORMER PLANT 18
- P-11 = TRESTLE PIPELINE RELEASE

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.

0 200' 400'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

POWERTRAIN SAMPLE LOCATIONS

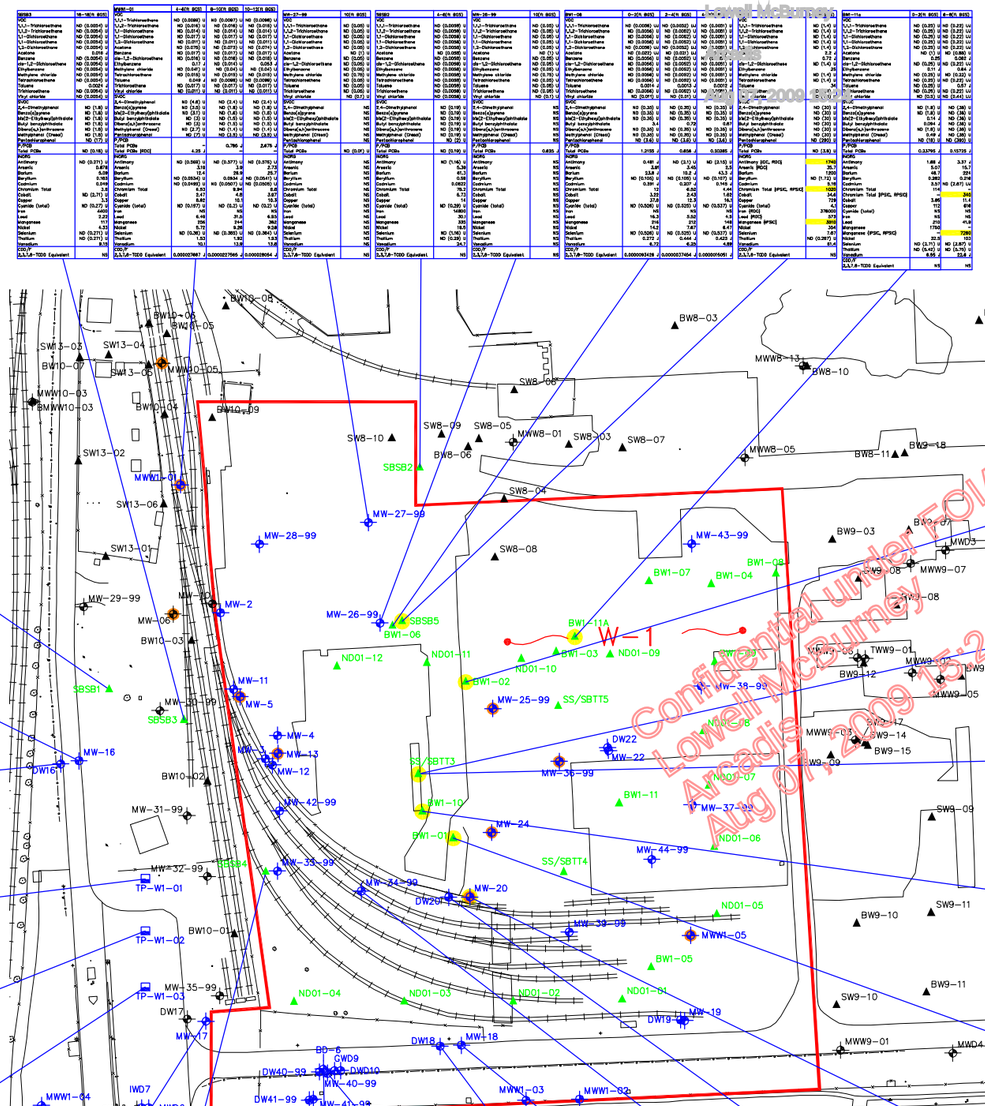
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FIGURE 4-5

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS DJP GMS
64411210/RFI-ADDM/64411C05.DWG

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SITE LOCATION

LEGEND:

- MW-19 — GROUNDWATER MONITORING WELL LOCATION
- P18-01 — SOIL BORING LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- APPROXIMATE AOI AREA
- W-1 = WEST YARD

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.
8. R – DATA REJECTED FROM DATA VALIDATION.

0 100' 200'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI W-1 - SOIL

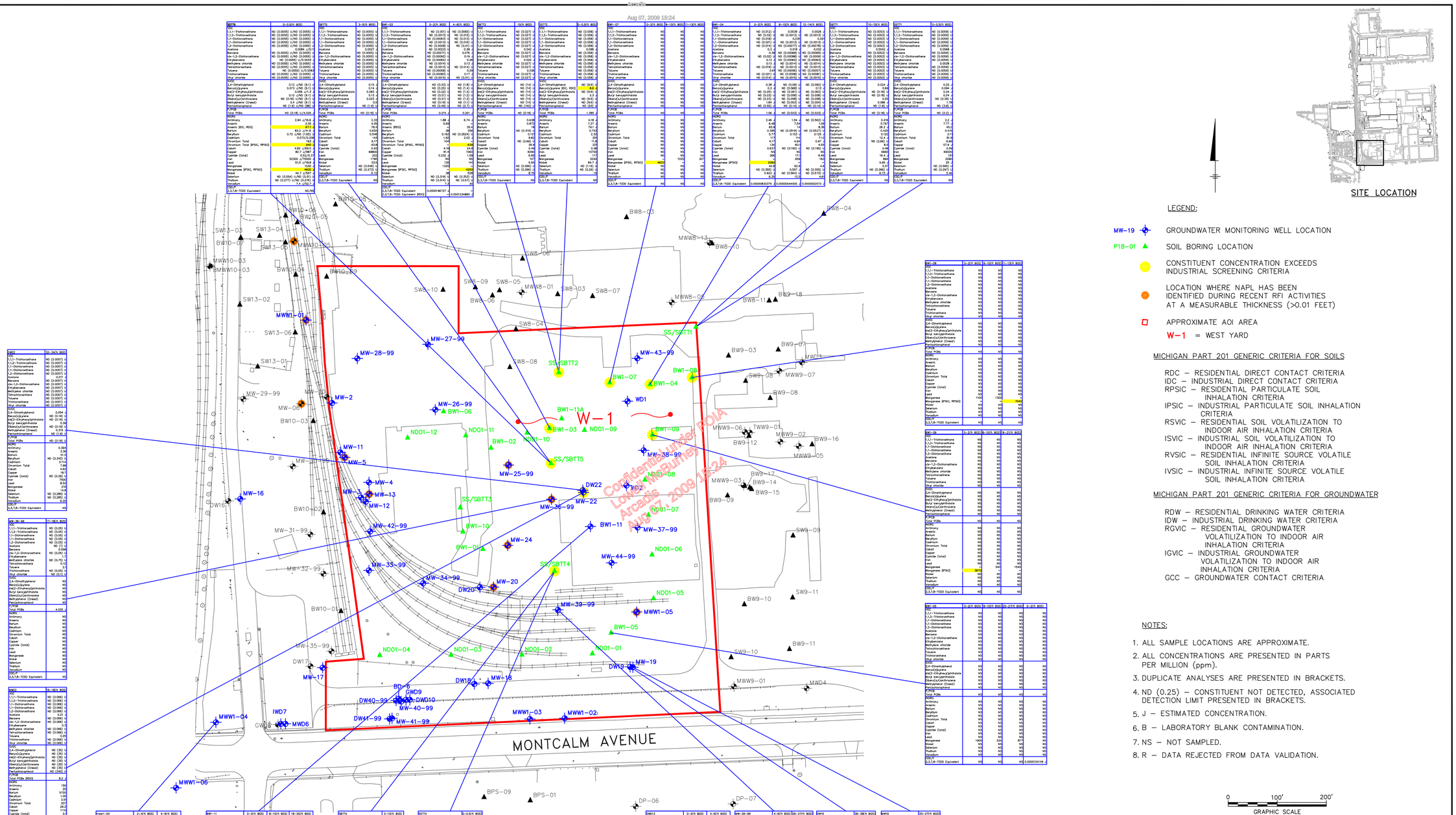
ENCORE

FIGURE 4-8A

X: 64411X0D, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS DJP GMS
64411210/RFI-ADDM/64411C08.DWG

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SITE LOCATION

LEGEND:

- MW-19 — GROUNDWATER MONITORING WELL LOCATION
- P18-01 — SOIL BORING LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- APPROXIMATE AOI AREA
- W-1 = WEST YARD

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.
8. R – DATA REJECTED FROM DATA VALIDATION.

0 100' 200'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS CMP

AOI W-1 - SOIL

ENCORE

FIGURE
4-8B

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS GMS SDL
64411210/RFI-ADDM/64411C09.DWG

Confidential under FOIA
Lowell McBurney
Arcadis
Aug 07, 2009 15:24

Confidential under FOIA

David McBurney
Arcadis
Aug 07, 2009 15:24

MW-30-99	8/25/01	1/7/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	0.041 J	ND (0.01) U
Benzene	0.00038 J	0.0007 J
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	0.00084 J
SVOC		
2,4-Dimethylphenol	ND (0.035) U	ND (0.02) U
Benzo(a)pyrene	ND (0.035) U	ND (0.02) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.02) U
Butyl benzylphthalate	ND (0.035) U	ND (0.02) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.02) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.02) U
Pentachlorophenol	ND (0.035) U	ND (0.02) U
PCBs		
Total PCBs	ND (0.0004) U	ND (0.0004) U
RCRA		
Antimony	ND (0.035) U	ND (0.035) U
Arsenic	0.037 J	0.039 J
Barium	0.191	0.333
Beryllium	ND (0.001) U	0.0012 J
Cadmium	ND (0.005) U	0.0004 J
Chromium, Total	0.0014 J	0.0028 J
Cobalt	ND (0.005) U	ND (0.005) U
Copper	ND (0.005) U	ND (0.005) U
Cyanide (total)	ND (0.01) U	ND (0.01) U
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese [RDW]	0.993	0.941
Nickel	ND (0.005) U	ND (0.005) U
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U
Thallium [IDW, RDW]	0.0018 J	0.0007 J
Vanadium	ND (0.01) U	0.001 J
SVOC		
2,3,7,8-TCDD Equivalent	ND (0.000000098) U	0.000000002768 J

MW-31-99	8/28/01	1/7/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	0.0023 J
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	0.00043 J	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	0.0028 J	ND (0.01) U
Benzene	0.00038 J	ND (0.001) U
cis-1,2-Dichloroethene	0.00043 J	ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	0.00043 J	0.0007 J
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride [IDW, RDW]	0.0009	0.0009
SVOC		
2,4-Dimethylphenol	ND (0.035) U	ND (0.02) U
Benzo(a)pyrene	ND (0.035) U	ND (0.02) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.02) U
Butyl benzylphthalate	ND (0.035) U	ND (0.02) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.02) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.02) U
Pentachlorophenol	ND (0.035) U	ND (0.02) U
PCBs		
Total PCBs	ND (0.0004) U	ND (0.0004) U
RCRA		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.005 J	0.004 J
Barium	0.21	0.147
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.01) U	ND (0.01) U
Chromium, Total	ND (0.01) U	ND (0.01) U
Cobalt	ND (0.005) U	ND (0.005) U
Copper	ND (0.005) U	ND (0.005) U
Cyanide (total)	0.008 J	0.0058 J
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.174	0.153
Nickel	0.0028 J	0.0033 J
Selenium	ND (0.005) U	ND (0.005) U
Thallium	0.0007 J	ND (0.001) U
Thallium [IDW, RDW]	0.0007 J	ND (0.001) U
Vanadium	0.0022 J	0.0031 J
SVOC		
2,3,7,8-TCDD Equivalent	ND (0.000000042) U	ND (0.000000074) U

MW-32	8/31/01	1/9/02	11/13/02	5/21/03
VOC				
1,1,1-Trichloroethane	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Acetone	ND (0.01) U	ND (0.014) U	ND (0.01) U	ND (0.01) U
Benzene	ND (0.001) U	ND (0.007) UND	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.014) U	ND (0.001) U	ND (0.001) U
SVOC				
2,4-Dimethylphenol	ND (0.035) U	ND (0.014) U	ND (0.035) U	ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	0.016 J	ND (0.035) U	ND (0.035) U
bis(2-Ethylhexyl)phthalate [IDW, RDW]	ND (0.035) U	0.0097 J	ND (0.035) U	ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.014) U	ND (0.035) U	ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.014) U	ND (0.035) U	ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.014) U	ND (0.035) U	ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.014) U	ND (0.035) U	ND (0.035) U
PCBs				
Total PCBs	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
RCRA				
Antimony	ND (0.035) U	ND (0.035) U	ND (0.035) U	ND (0.035) U
Arsenic	0.0052 J	0.0044 J	0.0027 J	ND (0.01) U
Barium	0.432	0.0877	0.413	0.39
Beryllium	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Cadmium	0.00028 J	0.00057 J	ND (0.005) U	ND (0.005) U
Chromium, Total	ND (0.01) U	ND (0.01) U	ND (0.01) U	ND (0.01) U
Cobalt	0.0014 J	ND (0.005) U	ND (0.005) U	ND (0.005) U
Copper	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Cyanide (total)	NS	NS	NS	NS
Iron	NS	NS	NS	NS
Lead	ND (0.003) U	ND (0.003) U	ND (0.003) U	ND (0.003) U
Manganese	0.0026 J	0.0046 J	0.0026 J	0.0026 J
Nickel	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Selenium	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Vanadium	ND (0.01) U	0.0024 J	ND (0.01) U	ND (0.01) U
SVOC				
2,3,7,8-TCDD Equivalent	NS	NS	NS	NS

MW01-04	2/19/02	7/17/02	5/21/03
VOC			
1,1,1-Trichloroethane	ND (0.001) U	NS	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	NS	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	NS	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	NS	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	NS	ND (0.001) U
Acetone	0.033 J	NS	ND (0.01) U
Benzene	0.00019 J	NS	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	NS	ND (0.001) U
Ethylbenzene	ND (0.001) U	NS	ND (0.001) U
Methylene chloride [IDW, RDW]	ND (0.001) U	NS	0.001
Tetrachloroethene	ND (0.001) U	NS	ND (0.001) U
Toluene	0.00039 J	NS	ND (0.001) U
Trichloroethene	0.00024 J	NS	ND (0.001) U
Vinyl chloride	ND (0.001) U	NS	ND (0.001) U
SVOC			
2,4-Dimethylphenol	0.011	NS	ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	NS	ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	NS	0.004 J
Butyl benzylphthalate	ND (0.035) U	NS	ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	NS	ND (0.035) U
Methylphenol (Cresol)	0.0733 J	NS	ND (0.035) U
Pentachlorophenol	ND (0.035) U	NS	ND (0.035) U
PCBs			
Total PCBs [IDW, RDW]	0.0007883 J	0.0004385 J	0.0003484 J
RCRA			
Antimony	0.0036 J	NS	0.0036 J
Arsenic	0.008 J	NS	0.0033 J
Barium	0.0638	NS	0.0755
Beryllium	ND (0.001) U	NS	ND (0.001) U
Cadmium	ND (0.005) U	NS	ND (0.005) U
Chromium, Total	0.002 J	NS	0.0007 J
Cobalt	ND (0.02) U	NS	0.0007 J
Copper	0.0084 J	NS	0.0202 J
Cyanide (total)	NS	NS	0.0175
Iron	NS	NS	NS
Lead	0.004	NS	ND (0.0013) U
Manganese	0.0533 J	NS	0.0524 J
Nickel	ND (0.02) U	NS	ND (0.02) U
Selenium	ND (0.005) U	NS	ND (0.005) U
Thallium	ND (0.001) U	NS	ND (0.001) U
Vanadium	0.0038 J	NS	0.0048 J
SVOC			
2,3,7,8-TCDD Equivalent	0.000000000207 J	NS	0.000000043696 J

MW08	8/14/01	1/10/02	5/21/03
VOC			
1,1,1-Trichloroethane	ND (0.006) U	ND (0.003) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.006) U	ND (0.003) U	ND (0.001) U
1,1-Dichloroethane	ND (0.006) U	ND (0.003) U	ND (0.001) U
1,1-Dichloroethene	ND (0.006) U	ND (0.003) U	ND (0.001) U
1,2-Dichloroethane	ND (0.006) U	ND (0.003) U	ND (0.001) U
Acetone	NS	NS	0.14 J
Benzene	ND (0.006) U	ND (0.003) U	0.0045 J
cis-1,2-Dichloroethene	ND (0.006) U	ND (0.003) U	0.0056 J
Ethylbenzene	ND (0.006) U	ND (0.003) U	ND (0.001) U
Methylene chloride	ND (0.006) U	ND (0.003) U	ND (0.001) U
Tetrachloroethene	ND (0.006) U	ND (0.003) U	ND (0.001) U
Toluene	ND (0.006) U	ND (0.003) U	0.0007 J
Trichloroethene	ND (0.006) U	ND (0.003) U	0.0007 J
Vinyl chloride [IDW, RDW]	0.0009 J	0.0007 J	0.0007 J
SVOC			
2,4-Dimethylphenol	ND (0.035) U	ND (0.02) U	ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	ND (0.02) U	ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.02) U	ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.02) U	ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.02) U	ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.02) U	ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.02) U	ND (0.035) U
PCBs			
Total PCBs	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
RCRA			
Antimony	ND (0.035) U	ND (0.035) U	ND (0.035) U
Arsenic	0.0052 J	0.0044 J	0.0027 J
Barium	0.432	0.0877	0.413
Beryllium	ND (0.001) U	ND (0.001) U	ND (0.001) U
Cadmium	0.00028 J	0.00057 J	ND (0.005) U
Chromium, Total	ND (0.01) U	ND (0.01) U	ND (0.01) U
Cobalt	0.0014 J	ND (0.005) U	ND (0.005) U
Copper	ND (0.005) U	ND (0.005) U	ND (0.005) U
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (0.003) U	ND (0.003) U	ND (0.003) U
Manganese [RDW]	0.0026 J	0.0046 J	0.0026 J
Nickel	ND (0.005) U	ND (0.005) U	ND (0.005) U
Selenium	ND (0.005) U	ND (0.005) U	ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U	ND (0.001) U
Vanadium	0.0038 J	NS	0.0048 J
SVOC			
2,3,7,8-TCDD Equivalent	0.000000000207 J	NS	0.000000043696 J

MW06	8/31/01	1/9/02	11/13/02	5/21/03
VOC				
1,1,1-Trichloroethane	NS	NS	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	NS	NS	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	NS	NS	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	NS	NS	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	NS	NS	ND (0.001) U	ND (0.001) U
Acetone	NS	NS	ND (0.01) U	ND (0.01) U
Benzene	NS	NS	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	NS	NS	ND (0.001) U	ND (0.001) U
Ethylbenzene	NS	NS	ND (0.001) U	ND (0.001) U
Methylene chloride	NS	NS	ND (0.001) U	ND (0.001) U
Tetrachloroethene	NS	NS	ND (0.001) U	0.0014
Toluene	NS	NS	ND (0.001) U	ND (0.001) U
Trichloroethene	NS	NS	ND (0.001) U	ND (0.001) U
Vinyl chloride	NS	NS	ND (0.001) U	ND (0.001) U
SVOC				
2,4-Dimethylphenol	NS	NS	ND (0.035) U	ND (0.035) U
Benzo(a)pyrene	NS	NS	ND (0.035) U	ND (0.035) U
bis(2-Ethylhexyl)phthalate	NS	NS	ND (0.035) U	ND (0.035) U
Butyl benzylphthalate	NS	NS	ND (0.035) U	ND (0.035) U
Dibenz(a,h)anthracene	NS	NS	ND (0.035) U	ND (0.035) U
Methylphenol (Cresol)	NS	NS	ND (0.035) U	ND (0.035) U
Pentachlorophenol	NS	NS	ND (0.035) U	ND (0.035) U
PCBs				
Total PCBs	ND (0.0004) U	NS	ND (0.0004) U	ND (0.0004) U
RCRA				
Antimony	NS	NS	ND (0.025) U	ND (0.025) U
Arsenic	NS	NS	0.0046 J	ND (0.01) U
Barium	NS	NS	0.082	0.0839
Beryllium	NS	NS	ND (0.001) U	ND (0.001) U
Cadmium	NS	NS	ND (0.005) U	ND (0.005) U
Chromium, Total	NS	NS	ND (0.01) U	ND (0.01) U
Cobalt	NS	NS	ND (0.02) U	ND (0.02) U
Copper	NS	NS	ND (0.005) U	0.0013 J
Cyanide (total)	NS	NS	0.004 J	NS
Iron	NS	NS	NS	NS
Lead	NS	NS	ND (0.003) U	0.0019 J
Manganese	NS	NS	0.0026 J	0.0046 J
Nickel	NS	NS	ND (0.02) U	ND (0.02) U
Selenium	NS	NS	ND (0.005) U	ND (0.005) U
Thallium	NS	NS	ND (0.001) U	ND (0.001) U
Vanadium	NS	NS	ND (0.01) U	ND (0.01) U
SVOC				
2,3,7,8-TCDD Equivalent	NS	NS	NS	NS

MWW-01	2/13/02	11/14/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U/ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	ND (0.035) U/ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.035) U/ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.035) U/ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
PCBs		
Total PCBs	ND (0.0004) U	ND (0.0004) U/ND (0.0004) U
RCRA		
Antimony	ND (0.035) U	ND (0.035) U/ND (0.035) U
Arsenic	ND (0.01) U	ND (0.01) U/ND (0.01) U
Barium	0.0046 J	0.0066 J/0.0079 J
Beryllium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Cadmium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Chromium, Total	ND (0.01) U	ND (0.01) U/ND (0.01) U
Cobalt	ND (0.02) U	ND (0.02) U/ND (0.02) U
Copper	ND (0.005) U	ND (0.005) U/ND (0.005) U
Cyanide (total)	NS	NS/NS
Iron	NS	NS/NS
Lead	ND (0.003) U	ND (0.003) U/ND (0.003) U
Manganese	0.0047 J	0.0045 J/0.0042 J
Nickel	ND (0.02) U	ND (0.02) U/ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vanadium	0.0012 J	ND (0.01) U/ND (0.01) U
SVOC		
2,3,7,8-TCDD Equivalent	ND (0.000000044) U	ND (0.000000045) U/ND (0.000000046) U

MWW-02	2/13/02	11/14/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U/ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	ND (0.035) U/ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.035) U/ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.035) U/ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
PCBs		
Total PCBs	ND (0.0004) U	ND (0.0004) U/ND (0.0004) U
RCRA		
Antimony	ND (0.035) U	ND (0.035) U/ND (0.035) U
Arsenic	0.0048 J	0.0065 J/0.0079 J
Barium	0.0454	0.0496/0.0512
Beryllium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Cadmium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Chromium, Total	0.0046 J	0.0046 J/0.0049 J
Cobalt	ND (0.02) U	ND (0.02) U/ND (0.02) U
Copper	ND (0.005) U	ND (0.005) U/ND (0.005) U
Cyanide (total)	NS	NS/NS
Iron	NS	NS/NS
Lead	ND (0.003) U	ND (0.003) U/ND (0.003) U
Manganese	0.0047 J	0.0045 J/0.0042 J
Nickel	ND (0.02) U	ND (0.02) U/ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vanadium	0.0012 J	ND (0.01) U/ND (0.01) U
SVOC		
2,3,7,8-TCDD Equivalent	ND (0.000000044) U	ND (0.000000045) U/ND (0.000000046) U

MWW-03	2/13/02	11/14/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U/ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	ND (0.035) U/ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.035) U/ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.035) U/ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
PCBs		
Total PCBs	ND (0.0004) U	ND (0.0004) U/ND (0.0004) U
RCRA		
Antimony	ND (0.035) U	ND (0.035) U/ND (0.035) U
Arsenic	ND (0.01) U	ND (0.01) U/ND (0.01) U
Barium	0.0638 J	0.0638 J/0.0662 J
Beryllium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Cadmium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Chromium, Total	ND (0.01) U	ND (0.01) U/ND (0.01) U
Cobalt	ND (0.02) U	ND (0.02) U/ND (0.02) U
Copper	ND (0.005) U	ND (0.005) U/ND (0.005) U
Cyanide (total)	NS	NS/NS
Iron	NS	NS/NS
Lead	ND (0.003) U	ND (0.003) U/ND (0.003) U
Manganese	0.0046 J	0.0045 J/0.0042 J
Nickel	ND (0.02) U	ND (0.02) U/ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vanadium	ND (0.01) U	ND (0.01) U/ND (0.01) U
SVOC		
2,3,7,8-TCDD Equivalent	ND (0.000000044) U	ND (0.000000045) U/ND (0.000000046) U

MWW-04	2/13/02	11/14/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	0.00084 J/0.0012 J
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U/ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U/ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U/ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	ND (0.035) U/ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.035) U/ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.035) U/ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.035) U/ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.035) U/ND (0.035) U
PCBs		
Total PCBs	ND (0.0004) U	ND (0.0004) U/ND (0.0004) U
RCRA		
Antimony	ND (0.035) U	ND (0.035) U/ND (0.035) U
Arsenic	ND (0.01) U	ND (0.01) U/ND (0.01) U
Barium	0.0638 J	0.0638 J/0.0662 J
Beryllium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Cadmium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Chromium, Total	ND (0.01) U	ND (0.01) U/ND (0.01) U
Cobalt	ND (0.02) U	ND (0.02) U/ND (0.02) U
Copper	ND (0.005) U	ND (0.005) U/ND (0.005) U
Cyanide (total)	NS	NS/NS
Iron	NS	NS/NS
Lead	ND (0.003) U	ND (0.003) U/ND (0.003) U
Manganese	0.0046 J	0.0045 J/0.0042 J
Nickel	ND (0.02) U	ND (0.02) U/ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U/ND (0.005) U
Thallium	ND (0.001) U	ND (0.001) U/ND (0.001) U
Vanadium	ND (0.01) U	ND (0.01) U/ND (0.01) U
SVOC		
2,3,7,8-TCDD Equivalent	NS	NS/ND (0.000000067) U/ND (0.000000072) U

MW-05-99	1/10/02	11/13/02	5/19/03
VOC			
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U	0.74
Benzene	ND (0.001) U	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Ethylbenzene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U
SVOC			
2,4-Dimethylphenol	ND (0.035) U	ND (0.035) U	ND (0.035) U
Benzo(a)pyrene	ND (0.035) U	ND (0.035) U	ND (0.035) U
bis(2-Ethylhexyl)phthalate	ND (0.035) U	ND (0.035) U	ND (0.035) U
Butyl benzylphthalate	ND (0.035) U	ND (0.035) U	ND (0.035) U
Dibenz(a,h)anthracene	ND (0.035) U	ND (0.035) U	ND (0.035) U
Methylphenol (Cresol)	ND (0.035) U	ND (0.035) U	ND (0.035) U
Pentachlorophenol	ND (0.035) U	ND (0.035) U	ND (0.035) U
PCBs			
Total PCBs	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
RCRA			
Antimony	ND (0.025) U	ND (0.025) U	ND (0.025) U
Arsenic	0.0064 J	ND (0.01) U	0.0039 J
Barium	0.163	0.414	0.162
Beryllium	ND (0.001) U	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.005) U	ND (0.005) U	ND (0.005) U
Chromium, Total	ND (0.01) U	0.0036 J	ND (0.01) U/ND (0.01) U
Cobalt	ND (0.02) U	ND (0.02) U	ND (0.02) U
Copper	ND (0.005) U	0.0048 J	ND (0.005) U/ND (0.005) U
Cyanide (total)	NS	0.0095	NS
Iron	NS	NS	NS
Lead	ND (0.003) U	0.0039

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MW8-02	9/11/01	1/9/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	ND (0.001) U	ND (0.001) U
Benzene	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	0.00033 NJ	ND (0.0005) U
Ethylbenzene	0.00013 J	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.012) U
Benzo(a)pyrene	ND (0.005) U	ND (0.012) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.012) U
Butyl benzylphthalate	ND (0.005) U	ND (0.012) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.012) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.012) U
Pentachlorophenol	ND (0.005) U	ND (0.012) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0073 J	0.0147
Barium	0.0848	0.103
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.0005) U	0.00032 J
Chromium Total	ND (0.001) U	ND (0.001) U
Cobalt	ND (0.01) U	ND (0.02) U
Copper	ND (0.0025) U	ND (0.0064) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.187	0.153
Nickel	0.0238 J	0.034
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
Vanadium	ND (0.01) U	ND (0.01) U
2,3,7,8-TCDD Equivalent	NS	NS

MW8-01	9/11/01	1/9/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	ND (0.001) U	ND (0.001) U
Benzene	0.00018 J	ND (0.001) U
cis-1,2-Dichloroethene	0.00033 NJ	ND (0.0005) U
Ethylbenzene	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	0.00031 J	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0076 J	0.0247
Barium	0.0848	0.103
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.0005) U	0.00032 J
Chromium Total	ND (0.001) U	ND (0.001) U
Cobalt	ND (0.01) U	ND (0.02) U
Copper	ND (0.0025) U	ND (0.0064) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.187	0.153
Nickel	0.0238 J	0.034
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
Vanadium	ND (0.01) U	ND (0.01) U
2,3,7,8-TCDD Equivalent	NS	NS

MW8-05	9/12/01	1/9/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	ND (0.001) U	ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.001) U	ND (0.0005) U
Ethylbenzene	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	0.0002 J	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0126 J	0.0186
Barium	0.0989	0.0807
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	0.00034 J	0.00024 J
Chromium Total	ND (0.001) U	ND (0.001) U
Cobalt	ND (0.01) U	ND (0.02) U
Copper	ND (0.0025) U	ND (0.0064) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese [DW, RDW]	1.2	3.04
Nickel	ND (0.01) U	ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
Vanadium [RDW]	ND (0.01) U	0.0186 J
2,3,7,8-TCDD Equivalent	NS	NS

MW8-12	2/12/02	11/12/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	0.029 ND	0.021 UJ
Benzene	0.00038 J	ND (0.001) U
cis-1,2-Dichloroethene	0.0003 J	ND (0.0005) U
Ethylbenzene	0.00033 J	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	0.00033 J	0.00048 J
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.05) U	ND (0.05) U
Benzo(a)pyrene	ND (0.05) U	ND (0.05) U
bis(2-Ethylhexyl)phthalate	ND (0.05) U	ND (0.05) U
Butyl benzylphthalate	ND (0.05) U	ND (0.05) U
Dibenz(a,h)anthracene	ND (0.05) U	ND (0.05) U
Methylphenol (Cresol)	ND (0.05) U	ND (0.05) U
Pentachlorophenol	ND (0.05) U	ND (0.05) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0126 J	0.0186
Barium	0.0989	0.0807
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	0.00034 J	0.00024 J
Chromium Total	ND (0.001) U	ND (0.001) U
Cobalt	ND (0.01) U	ND (0.02) U
Copper	ND (0.0025) U	ND (0.0064) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.0455 J	0.0446 J
Nickel	ND (0.01) U	ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
Vanadium [RDW]	ND (0.01) U	0.0178 J
2,3,7,8-TCDD Equivalent	0.000000009194835 J	NS

MW8-13	8/29/03
VOC	
1,1,1-Trichloroethane	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U
Acetone	ND (0.01) U
Benzene	0.00047 J
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	0.0007 J
Methylene chloride	ND (0.001) U
Tetrachloroethene	0.0022
Toluene	0.0002 J
Trichloroethene	ND (0.001) U
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol [DW, RDW]	0.5
Benzo(a)pyrene	ND (0.05) U
bis(2-Ethylhexyl)phthalate	0.6 J
Butyl benzylphthalate	ND (1) U
Dibenz(a,h)anthracene	ND (0.05) U
Methylphenol (Cresol) [DW, RDW]	0.68 J
Pentachlorophenol	ND (0.05) U
P/PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.025) U
Arsenic	0.0186
Barium	0.0807
Beryllium	ND (0.001) U
Cadmium	ND (0.005) U
Chromium Total	ND (0.01) U
Cobalt	ND (0.02) U
Copper	ND (0.025) U
Cyanide (total)	NS
Iron	NS
Lead	ND (0.003) U
Manganese [DW, RDW]	3.04 J
Nickel	ND (0.02) U
Selenium	ND (0.005) U
Thallium	ND (0.005) U
Thallium [RDW]	0.0186 J
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MW8-04	1/9/02
VOC	
1,1,1-Trichloroethane	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U
Acetone	ND (0.01) U
Benzene	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	0.00022 J
Methylene chloride	ND (0.001) U
Tetrachloroethene	ND (0.001) U
Toluene	0.0018 J
Trichloroethene	ND (0.001) U
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U
Pentachlorophenol	ND (0.005) U
P/PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.025) U
Arsenic	0.0186
Barium	0.0779
Beryllium	ND (0.001) U
Cadmium	ND (0.005) U
Chromium Total	ND (0.01) U
Cobalt	ND (0.02) U
Copper	ND (0.025) U
Cyanide (total)	NS
Iron	NS
Lead	ND (0.003) U
Manganese	0.0455 J
Nickel	ND (0.02) U
Selenium	ND (0.005) U
Thallium	ND (0.005) U
Vanadium	ND (0.01) U
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MW8-03	2/13/03	11/13/03
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	0.029 J	ND (0.01) U
Benzene	0.00038 J	ND (0.001) U
cis-1,2-Dichloroethene	0.0003 J	ND (0.0005) U
Ethylbenzene	0.00033 J	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	0.00033 J	0.00048 J
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.05) U	ND (0.05) U
Benzo(a)pyrene	ND (0.05) U	ND (0.05) U
bis(2-Ethylhexyl)phthalate	ND (0.05) U	ND (0.05) U
Butyl benzylphthalate	ND (0.05) U	ND (0.05) U
Dibenz(a,h)anthracene	ND (0.05) U	ND (0.05) U
Methylphenol (Cresol)	ND (0.05) U	ND (0.05) U
Pentachlorophenol	ND (0.05) U	ND (0.05) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0126 J	0.0186
Barium	0.0989	0.0807
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	0.00034 J	0.00024 J
Chromium Total	ND (0.001) U	ND (0.001) U
Cobalt	ND (0.01) U	ND (0.02) U
Copper	ND (0.0025) U	ND (0.0064) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.0455 J	0.0446 J
Nickel	ND (0.01) U	ND (0.02) U
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
Vanadium [RDW]	ND (0.01) U	0.0178 J
2,3,7,8-TCDD Equivalent	0.000000009194835 J	NS

MW8-11	2/11/02	11/12/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U
Benzene	0.0005 J	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	0.00043 J	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	0.0018 J	0.0016 J
Toluene	0.0018 J	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0195	0.0201
Barium	0.0285	0.0458
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.005) U	ND (0.005) U
Chromium Total	ND (0.01) U	0.0047 J
Cobalt	ND (0.02) U	ND (0.02) U
Copper	ND (0.005) U	ND (0.005) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese [DW, RDW]	2.82 J	3.17
Nickel	0.0058 J	0.007 J
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
VOC/F		
2,3,7,8-TCDD Equivalent	0.000000002125405 J	NS

MW8-09	8/30/03
VOC	
1,1,1-Trichloroethane	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U
Acetone	ND (0.01) U
Benzene	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	ND (0.001) U
Methylene chloride	ND (0.001) U
Tetrachloroethene	ND (0.001) U
Toluene	ND (0.001) U
Trichloroethene	ND (0.001) U
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U
Pentachlorophenol	ND (0.005) U
P/PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.025) U
Arsenic	0.0076 J
Barium	0.103
Beryllium	ND (0.001) U
Cadmium	ND (0.0005) U
Chromium Total	ND (0.001) U
Cobalt	ND (0.01) U
Copper	ND (0.0025) U
Cyanide (total)	NS
Iron	NS
Lead	ND (0.003) U
Manganese	0.187
Nickel	ND (0.02) U
Selenium	ND (0.005) U
Thallium	ND (0.005) U
Vanadium	ND (0.01) U
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MW8-10	2/12/02	11/12/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U/ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U/ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U/ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U/ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U/ND (0.001) U	ND (0.001) U
Acetone	0.0053 J/0.016 J	ND (0.01) U
Benzene	0.00065 J/0.0006 J	0.0004 J
cis-1,2-Dichloroethene	ND (0.0005) U/ND (0.0005) U	ND (0.0005) U
Ethylbenzene	0.00043 J/0.00034 J	ND (0.001) U
Methylene chloride	ND (0.001) U/ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U/ND (0.001) U	ND (0.001) U
Toluene	0.0007 J/0.0019 J	0.00066 J
Trichloroethene	ND (0.001) U/ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U/ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.05) U/ND (0.05) U	ND (0.05) U
Benzo(a)pyrene	ND (0.05) U/ND (0.05) U	ND (0.05) U
bis(2-Ethylhexyl)phthalate	ND (0.05) U/ND (0.05) U	ND (0.05) U
Butyl benzylphthalate	ND (0.05) U/ND (0.05) U	ND (0.05) U
Dibenz(a,h)anthracene	ND (0.05) U/ND (0.05) U	ND (0.05) U
Methylphenol (Cresol)	ND (0.05) U/ND (0.05) U	ND (0.05) U
Pentachlorophenol	ND (0.05) U/ND (0.05) U	ND (0.05) U
P/PCB		
Total PCBs	ND (0.0004)	ND (0.0004) U
INORG	0.00142 J	
Antimony	ND (0.025) U/ND (0.025) U	ND (0.025) U
Arsenic	ND (0.01) U/ND (0.01) U	0.0065 J
Barium	0.0776/0.0763	0.0776
Beryllium	ND (0.001) U/ND (0.001) U	ND (0.001) U
Cadmium	ND (0.0005) U/ND (0.0005) U	ND (0.0005) U
Chromium Total	ND (0.01) U/ND (0.01) U	ND (0.01) U
Cobalt	0.0066 J/0.0068 J	ND (0.02) U
Copper	ND (0.005) U/ND (0.005) U	ND (0.005) U
Cyanide (total)	NS/NS	NS
Iron	NS/NS	NS
Lead [DW, RDW]	0.0138	0.0138
Manganese	ND (0.003) U/ND (0.003) U	ND (0.003) U
Nickel	0.0174 J/0.0178 J	0.0168 J
Selenium	ND (0.005) U/ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U/ND (0.005) U	ND (0.005) U
Vanadium	0.0059 J	NS
VOC/F		
2,3,7,8-TCDD Equivalent	ND (0.0000000645) U/0.0000000033568 J	NS

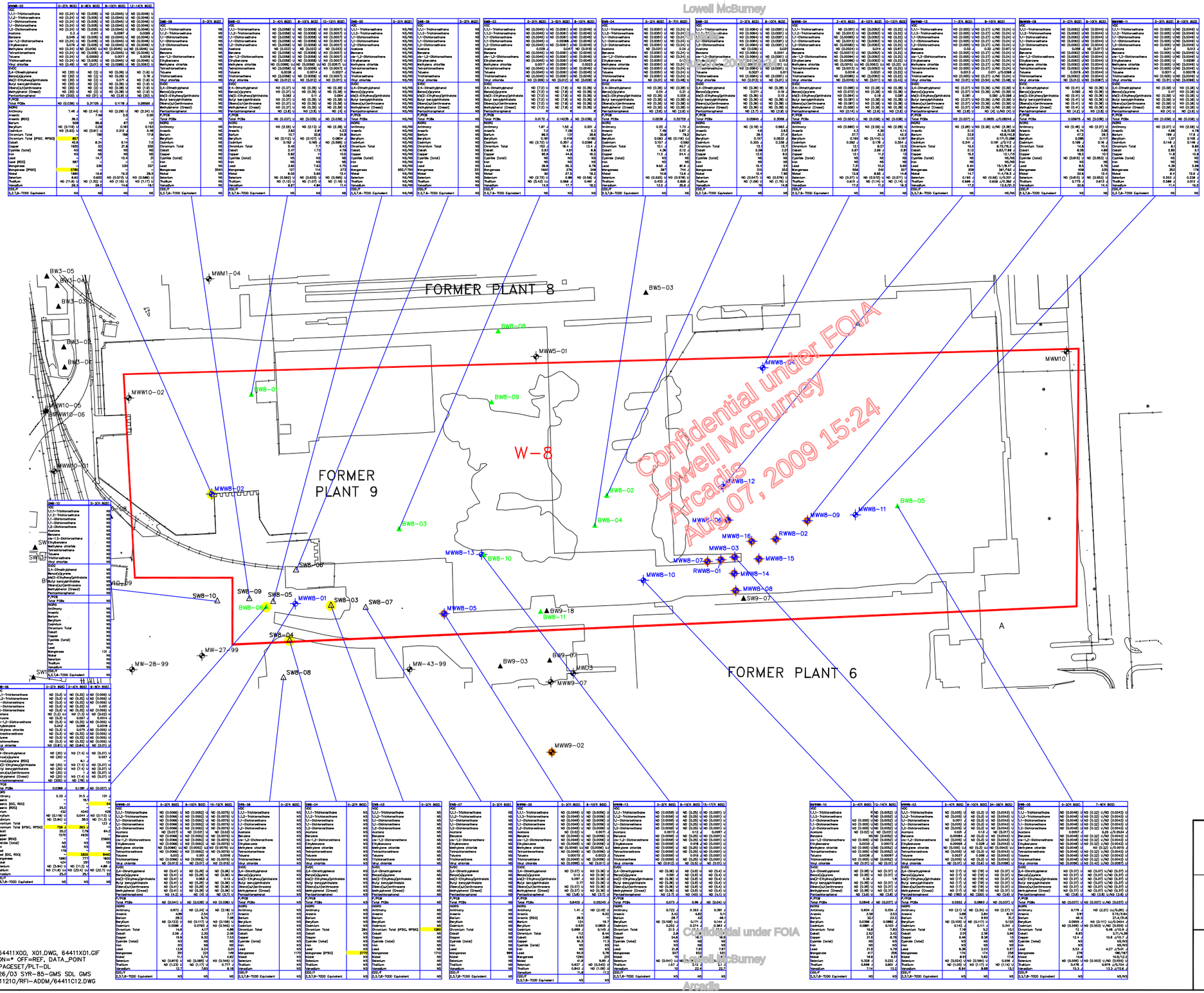
MW8-14	8/27/01	1/8/02
VOC		
1,1,1-Trichloroethane	NS (0.00015) U	0.00035 J
1,1,2-Trichloroethane	NS (0.0002) U	ND (0.001) U
1,1-Dichloroethane	NS (0.00016) U	ND (0.001) U
1,1-Dichloroethene	NS (0.00016) U	ND (0.001) U
1,2-Dichloroethane	NS (0.00021) U	ND (0.001) U
Acetone	NS	0.014 J
Benzene	NS (0.0001) U	ND (0.001) U
cis-1,2-Dichloroethene	NS (0.00026) U	ND (0.0005) U
Ethylbenzene	NS (0.00012) U	ND (0.001) U
Methylene chloride	NS (0.00034) U	ND (0.001) U
Tetrachloroethene	NS (0.00052) U	ND (0.001) U
Toluene	NS (0.00016) U	ND (0.001) U
Trichloroethene	NS (0.00016) U	ND (0.001) U
Vinyl chloride	NS (0.00015) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	NS (0.0002) U	ND (0.005) U
Benzo(a)pyrene	NS (0.00073) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	NS (0.00153) U	ND (0.005) U
Butyl benzylphthalate	NS (0.00048) U	ND (0.005) U
Dibenz(a,h)anthracene	NS (0.00078) U	ND (0.005) U
Methylphenol (Cresol)	NS (0.0013) U	ND (0.005) U
Pentachlorophenol	NS (0.0013) U	ND (0.005) U
P/PCB		
Total PCBs	NS (0.0000982) U	ND (0.0004) U
INORG		
Antimony	NS (0.0022) U	ND (0.025) U
Arsenic	NS (0.00368) U	0.0031 J
Barium	0.105	0.036
Beryllium	NS (0.00054) U	ND (0.001) U
Cadmium	NS (0.00015) U	ND (0.0005) U
Chromium Total	NS (0.00054) U	0.0034 J
Cobalt	NS (0.0014) U	ND (0.01) U
Copper	NS (0.0042) U	ND (0.005) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	NS (0.0033) U	ND (0.003) U
Manganese	0.0276	0.0161
Nickel	0.0036 J	ND (0.02) U
Selenium	NS (0.0045) U	ND (0.005) U
Thallium	NS (0.0011) U	ND (0.005) U
Thallium [DW, RDW]	0.0135	NS
Vanadium	NS (0.00062) U	ND (0.01) U
VOC/F		
2,3,7,8-TCDD Equivalent	NS	NS

MW8-15	1/29/03	11/12/03	5/20/03
VOC			
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
Acetone	0.014 J	ND (0.01) U	ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) UNJ	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U
SVOC			
2,4-Dimethylphenol	ND (0.005) U	ND (0.5) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.5) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.5) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.5) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.5) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.5) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.5) U	ND (0.005) U
P/PCB			
Total PCBs	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
INORG			
Antimony	0.0028 J	ND (0.025) U	
Arsenic	0.0281		0.0262
Barium	0.46	1.03	
Beryllium	0.00062 J		0.0004 J
Beryllium [DW, RDW]			0.0004
Cadmium	0.0011 J		0.0039 J
Chromium Total	0.0927		0.295
Chromium Total [DW, RDW]			0.295
Cobalt	0.0212 J		0.0879 J
Copper	0.0206 J		0.214 J
Cyanide (total)	NS		NS
Iron	NS		NS
Lead [DW, RDW]	0.036		0.122
Manganese [RDW]	1.84 J		0.47 J
Manganese [DW, RDW]			0.47
Nickel	0.0763 J		0.307 J
Nickel [DW, RDW]			0.307
Selenium	ND (0.005) U	ND (0.005) U	NS
Thallium	0.005 J		0.002 J
Thallium [DW, RDW]			0.002
Vanadium [DW, RDW]	0.0801		0.338
VOC/F			
2,3,7,8-TCDD Equivalent	NS		NS
2,3,7,8-TCDD Equivalent [DW]	0.0000000319787 J		NS

MW8-16	2/13/02	11/13/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	0.0053 J	ND (0.01) U
Benzene	0.00065 J	0.0004 J
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	0.00043 J	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	0.0007 J	0.00066 J
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.05) U	ND (0.05) U
Benzo(a)pyrene	ND (0.05) U	ND (0.05) U
bis(2-Ethylhexyl)phthalate	ND (0.05) U	ND (0.05) U
Butyl benzylphthalate	ND (0.05) U	ND (0.05) U
Dibenz(a,h)anthracene	ND (0.05) U	ND (0.05) U
Methylphenol (Cresol)	ND (0.05) U	ND (0.05) U
Pentachlorophenol	ND (0.05) U	ND (0.05) U
P/PCB		
Total PCBs	ND (0.0004)	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	0.0076 J	0.0147
Barium	0.0848	0.103
Beryllium	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.0005) U	0.00032 J
Chromium Total	ND (0.001) U	ND (0.001) U
Cobalt	ND (0.01) U	ND (0.02) U
Copper	ND (0.0025) U	ND (0.0064) U
Cyanide (total)	NS	NS
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.187	0.153
Nickel	0.0238 J	0.034
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.005) U	ND (0.005) U
Vanadium	ND (0.01) U	ND (0.01) U
2,3,7,8-TCDD Equivalent	NS	NS

MW8-28	2/13/02	11/14/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	0.014 J	ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	0.00029 J	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.1) U
Benzo(a)pyrene	ND (0.005) U	ND (0.1) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.1) U
Butyl benzylphthalate	ND (0.005) U	ND (0.1) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.1) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.1) U
Pentachlorophenol	ND (0.005) U	ND (0.1) U
P/PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	0.0029 J	ND (0.025) U
Arsenic	0.0281	0.0364
Barium	0.46	1.03
Beryllium	0.00062 J	0.0004 J
Beryllium [DW, RDW]		0.0004
Cadmium	0.0011 J	0.0039 J
Chromium Total	0.0927	0.295
Chromium Total [DW, RDW]		0.295
Cobalt	0.0212 J	0.0879 J
Copper	0.0206 J	0.214 J
Cyanide (total)	NS	NS
Iron	NS	NS
Lead [DW, RDW]	0.036	0.122
Manganese [RDW]	1.84 J	0.47 J
Manganese [DW, RDW]		0.47
Nickel	0.0763 J	0.307 J
Nickel [DW, RDW]		0.307
Selenium	ND (0.005) U	ND (0.005) U

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SITE LOCATION

LEGEND:

- MWW10 — GROUNDWATER MONITORING WELL LOCATION
- P18-01 — SOIL BORING LOCATION
- SM23-03 — SOIL SURFACE SAMPLE LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- APPROXIMATE AOI AREA
- W-8 = FORMER PLANT 9 BASEMENT AST

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

- RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
- IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
- RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
- IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
- RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
- IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

- RDW – RESIDENTIAL DRINKING WATER CRITERIA
- IDW – INDUSTRIAL DRINKING WATER CRITERIA
- RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.
8. R – DATA REJECTED FROM DATA VALIDATION

0 100' 200'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI W-8 - SOIL

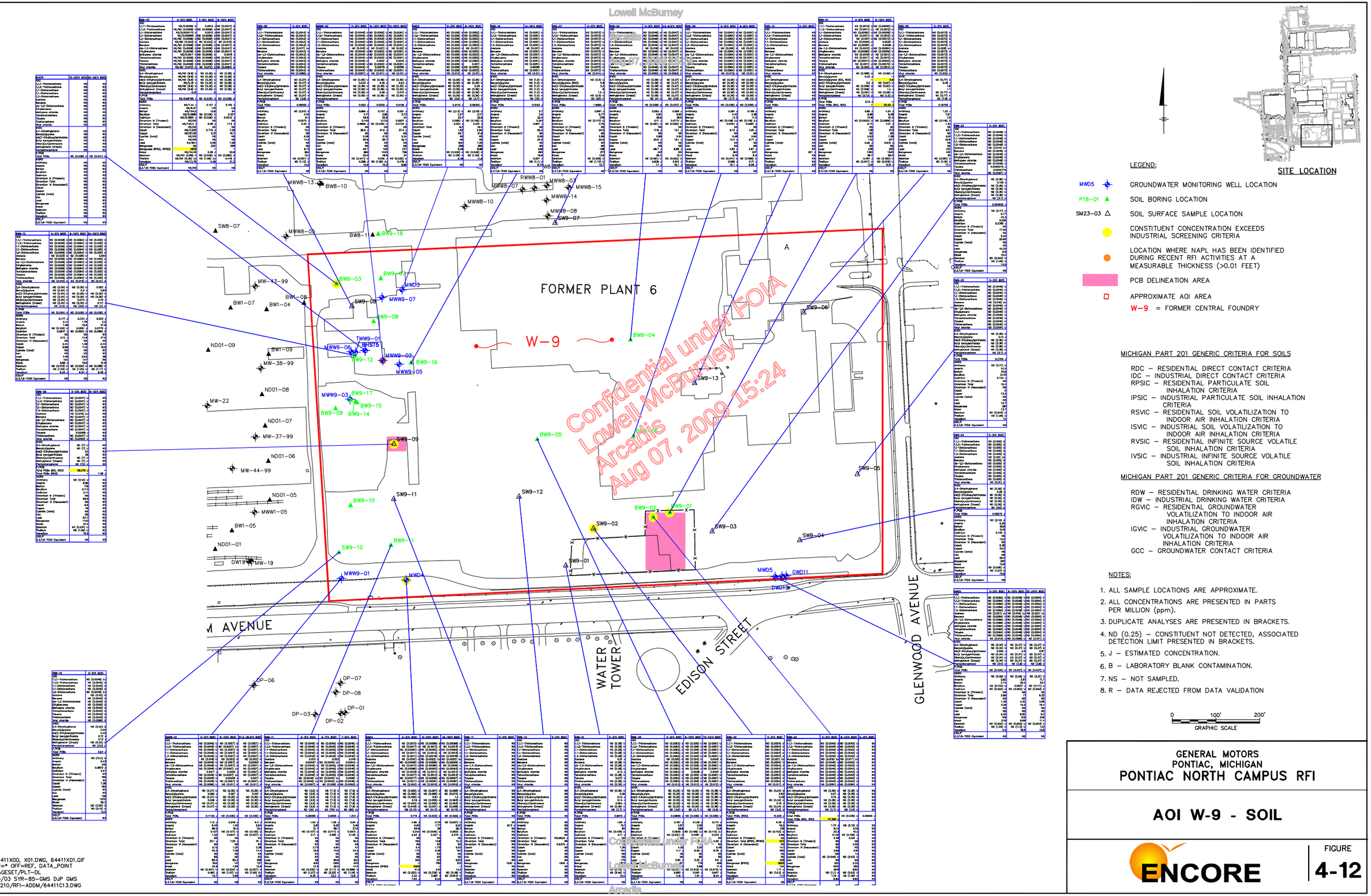
ENCORE

FIGURE 4-11

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS SDL GMS
64411210/RFI-ADDM/64411C12.DWG

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SITE LOCATION

LEGEND:

- MWD5 — GROUNDWATER MONITORING WELL LOCATION
- P18-01 — SOIL BORING LOCATION
- SM23-03 — SOIL SURFACE SAMPLE LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- PCB DELINEATION AREA
- APPROXIMATE AOI AREA
- W-9 = FORMER CENTRAL FOUNDRY

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.
8. R – DATA REJECTED FROM DATA VALIDATION

0 100' 200'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI W-9 - SOIL

ENCORE

FIGURE 4-12

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS DJP GMS
64411210/RFI-ADDM/64411C13.DWG

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MWM2-01	8/30/01	1/8/02	11/12/02	6/23/03
VOC				
1,1,1-Trichloroethane	0.026	0.03	0.02	0.034
1,1,2-Trichloroethane	ND (0.0006) U	ND (0.001) U	ND (0.001) U	ND (0.0006) U
1,1-Dichloroethane	0.0019 J	0.0026 J	0.0017 J	0.0035 J
1,1-Dichloroethene	0.00082 J	0.001 J	ND (0.001) U	0.00053 J
1,2-Dichlorobenzene	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U	ND (0.01) U	0.0015 J
Benzene	ND (0.0003) U	ND (0.0003) U	ND (0.0003) U	ND (0.0003) U
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U	ND (0.001) U
SVOC				
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
PCB				
Total PCBs	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
INORG				
Antimony	0.0023 J	0.0025 J	0.0025 J	0.0025 J
Arsenic	0.0122	0.0138	0.0138	0.0138
Barium	0.0825	0.0825	0.0825	0.0825
Beryllium	ND (0.0001) U	ND (0.0001) U	ND (0.0001) U	ND (0.0001) U
Cadmium	0.00033 J	0.00032 J	0.00032 J	0.00032 J
Chromium Total	0.0032 J	0.0029 J	0.0029 J	0.0029 J
Cobalt	0.0028 J	0.0024 J	0.0024 J	0.0024 J
Copper	0.0203	0.251	0.251	0.251
Cyanide (total)	NS	NS	NS	NS
Iron	NS	NS	NS	NS
Lead	ND (0.003) U	0.003 J	0.003 J	0.003 J
Manganese	0.0965	0.0963 J	0.0963 J	0.0963 J
Nickel	0.0143 J	0.0143 J	0.0143 J	0.0143 J
Selenium	ND (0.005) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Thallium	ND (0.01) U	ND (0.01) U	0.00028 J	0.00028 J
Vanadium	0.0078 J	0.0078 J	0.0078 J	0.0078 J
VOC/F				
2,3,7,8-TCDD Equivalent	NS	NS	NS	NS

MWM1-01	8/30/01	1/8/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichlorobenzene	ND (0.001) U	ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U
Benzene	ND (0.0003) U	ND (0.0003) U
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U
Tetrachloroethene	0.0041 J	0.0038 J
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U
PCB		
Total PCBs	ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	0.0077 J	0.005 J
Arsenic	0.0053 J	0.0057 J
Barium	0.0825	0.0825
Beryllium	ND (0.0001) U	ND (0.0001) U
Cadmium	ND (0.0005) U	ND (0.0005) U
Chromium Total	NS	NS
Cobalt	ND (0.02) U	ND (0.02) U
Copper	ND (0.005) U	ND (0.005) U
Cyanide (total)	0.0081 J	0.0055 J
Iron	NS	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	0.0963	ND (0.01) U

MWM1-06	8/12/03
VOC	
1,1,1-Trichloroethane	NS/ND
1,1,2-Trichloroethane	NS/ND
1,1-Dichloroethane	NS/ND
1,1-Dichloroethene	NS/ND
1,2-Dichlorobenzene	NS/ND
Acetone	NS/ND
Benzene	NS/ND
cis-1,2-Dichloroethene	NS/ND
Ethylbenzene	NS/ND
Methylene chloride	NS/ND
Tetrachloroethene	NS/ND
Toluene	NS/ND
Trichloroethene	NS/ND
Vinyl chloride	NS/ND
SVOC	
2,4-Dimethylphenol	NS/ND
Benzo(a)pyrene	NS/ND
bis(2-Ethylhexyl)phthalate	NS/ND
Butyl benzylphthalate	NS/ND
Dibenz(a,h)anthracene	NS/ND
Methylphenol (Cresol)	NS/ND
Pentachlorophenol	NS/ND
PCB	
Total PCBs	NS/ND
INORG	
Antimony	NS/ND
Arsenic	NS/ND
Barium	NS/ND
Beryllium	NS/ND
Cadmium	NS/ND
Chromium Total	NS/ND
Cobalt	NS/ND
Copper	NS/ND
Cyanide (total) [EQL, RDM]	0.340/0.488
Iron	NS/ND
Lead	NS/ND
Manganese	NS/ND
Nickel	NS/ND
Selenium	NS/ND
Thallium	NS/ND
Vanadium	NS/ND
VOC/F	
2,3,7,8-TCDD Equivalent	NS/ND

MWM1-02	9/25/01	1/8/02	8/12/03
VOC			
1,1,1-Trichloroethane	0.00053 J	0.001 J	NS
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	NS
1,2-Dichlorobenzene	ND (0.001) U	ND (0.001) U	NS
Acetone	ND (0.01) U	ND (0.01) U	NS
Benzene	ND (0.0003) U	ND (0.0003) U	NS
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U	NS
Ethylbenzene	ND (0.001) U	ND (0.001) U	NS
Methylene chloride	ND (0.001) U	ND (0.001) U	NS
Tetrachloroethene	0.00044 J	ND (0.001) U	NS
Toluene	ND (0.001) U	ND (0.001) U	NS
Trichloroethene	ND (0.001) U	ND (0.001) U	NS
Vinyl chloride	ND (0.001) U	ND (0.001) U	NS
SVOC			
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U	NS
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U	NS
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U	NS
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U	NS
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U	NS
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U	NS
Pentachlorophenol	ND (0.005) U	ND (0.005) U	NS
PCB			
Total PCBs	ND (0.0004) U	ND (0.0004) U	NS
INORG			
Antimony	0.0023 J	0.0025 J	NS
Arsenic	0.0122	0.0138	NS
Barium	0.0825	0.0825	NS
Beryllium	ND (0.0001) U	ND (0.0001) U	NS
Cadmium	0.00033 J	0.00032 J	NS
Chromium Total	0.0032 J	0.0029 J	NS
Cobalt	0.0028 J	0.0024 J	NS
Copper	0.0203	0.251	NS
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (0.003) U	0.003 J	NS
Manganese	0.0965	0.0963 J	NS
Nickel	0.0143 J	0.0143 J	NS
Selenium	ND (0.005) U	ND (0.005) U	NS
Thallium	ND (0.01) U	0.00028 J	NS
Vanadium	0.0078 J	0.0078 J	NS
VOC/F			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM1-03	8/13/01	1/8/02	8/12/03
VOC			
1,1,1-Trichloroethane	ND (0.0015) U	0.00055 J	NS
1,1,2-Trichloroethane	ND (0.0003) U	ND (0.001) U	NS
1,1-Dichloroethane	ND (0.0014) U	ND (0.001) U	NS
1,2-Dichlorobenzene	ND (0.0007) U	ND (0.001) U	NS
Acetone	ND (0.0018) U	ND (0.01) U	NS
Benzene	ND (0.0018) U	ND (0.0003) U	NS
cis-1,2-Dichloroethene	ND (0.0032) U	ND (0.0005) U	NS
Ethylbenzene	ND (0.0012) U	ND (0.001) U	NS
Methylene chloride	ND (0.0015) U	ND (0.001) U	NS
Tetrachloroethene	ND (0.0018) U	ND (0.001) U	NS
Toluene	ND (0.0018) U	ND (0.001) U	NS
Trichloroethene	ND (0.0015) U	ND (0.001) U	NS
Vinyl chloride	ND (0.0015) U	ND (0.001) U	NS
SVOC			
2,4-Dimethylphenol	ND (0.00085) U	ND (0.005) U	NS
Benzo(a)pyrene	ND (0.0017) U	ND (0.005) U	NS
bis(2-Ethylhexyl)phthalate	ND (0.0027) U	ND (0.005) U	NS
Butyl benzylphthalate	ND (0.0017) U	ND (0.005) U	NS
Dibenz(a,h)anthracene	ND (0.0017) U	ND (0.005) U	NS
Methylphenol (Cresol)	ND (0.0013) U	ND (0.005) U	NS
Pentachlorophenol	ND (0.0052) U	ND (0.005) U	NS
PCB			
Total PCBs	ND (0.00082) U	ND (0.0004) U	NS
INORG			
Antimony	ND (0.0022) U	ND (0.025) U	NS
Arsenic	ND (0.0013) U	0.007 J	NS
Barium	0.172	0.164	NS
Beryllium	ND (0.0004) U	ND (0.001) U	NS
Cadmium	ND (0.00038) U	ND (0.005) U	NS
Chromium Total	NS	NS	NS
Cobalt	0.0038 J	0.0027 J	NS
Copper	ND (0.0054) U	0.0186 J	NS
Cyanide (total) [EQL, RDM]	0.0361 J	0.0124 J	NS
Iron	NS	NS	NS
Lead	ND (0.0025) U	ND (0.003) U	NS
Manganese	0.548	0.289	NS
Nickel	ND (0.0022) U	0.0037 J	NS
Selenium	ND (0.0043) U	ND (0.005) U	NS
Thallium	ND (0.0017) U	ND (0.01) U	NS
Vanadium	ND (0.00082) U	ND (0.01) U	NS
VOC/F			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM1-04	8/12/03
VOC	
1,1,1-Trichloroethane	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	NS
1,2-Dichlorobenzene	NS
Acetone	NS
Benzene	NS
cis-1,2-Dichloroethene	NS
Ethylbenzene	NS
Methylene chloride	NS
Tetrachloroethene	NS
Toluene	NS
Trichloroethene	NS
Vinyl chloride	NS
SVOC	
2,4-Dimethylphenol	NS
Benzo(a)pyrene	NS
bis(2-Ethylhexyl)phthalate	NS
Butyl benzylphthalate	NS
Dibenz(a,h)anthracene	NS
Methylphenol (Cresol)	NS
Pentachlorophenol	NS
PCB	
Total PCBs	NS
INORG	
Antimony	NS
Arsenic	NS
Barium	NS
Beryllium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Copper	NS
Cyanide (total)	NS
Iron	NS
Lead	NS
Manganese	NS
Nickel	NS
Selenium	NS
Thallium	NS
Vanadium	NS
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MWM1-05	8/12/03
VOC	
1,1,1-Trichloroethane	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	NS
1,2-Dichlorobenzene	NS
Acetone	NS
Benzene	NS
cis-1,2-Dichloroethene	NS
Ethylbenzene	NS
Methylene chloride	NS
Tetrachloroethene	NS
Toluene	NS
Trichloroethene	NS
Vinyl chloride	NS
SVOC	
2,4-Dimethylphenol	NS
Benzo(a)pyrene	NS
bis(2-Ethylhexyl)phthalate	NS
Butyl benzylphthalate	NS
Dibenz(a,h)anthracene	NS
Methylphenol (Cresol)	NS
Pentachlorophenol	NS
PCB	
Total PCBs	NS
INORG	
Antimony	NS
Arsenic	NS
Barium	NS
Beryllium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Copper	NS
Cyanide (total)	0.0478
Iron	NS
Lead	NS
Manganese	NS
Nickel	NS
Selenium	NS
Thallium	NS
Vanadium	NS
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MWM2-08	1/31/02	11/12/02
VOC		
1,1,1-Trichloroethane	0.034	0.1
1,1,2-Trichloroethane	ND (0.0056) U	ND (0.014) U
1,1-Dichloroethane	0.0035 J	0.4
1,2-Dichlorobenzene	0.0081 J	0.0081 J
Acetone	ND (0.056) U	ND (0.14) U
Benzene	ND (0.0056) U	ND (0.014) U
cis-1,2-Dichloroethene	ND (0.0028) U	ND (0.007) U
Ethylbenzene	0.0076 J	0.0076 J
Methylene chloride [EQL, RDM]	ND (0.0056) U	ND (0.014) U
Tetrachloroethene	ND (0.0056) U	ND (0.014) U
Toluene	ND (0.0056) U	ND (0.014) U
Trichloroethene	0.0066 J	0.0066 J
Vinyl chloride	ND (0.0056) U	ND (0.014) U
SVOC		
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U
PCB		
Total PCBs	NS/ND (0.0004) U	ND (0.0004) U
INORG		
Antimony	ND (0.025) U	ND (0.025) U
Arsenic	ND (0.0013) U	0.0064 J
Barium	0.0774	0.0778
Beryllium	ND (0.0004) U	ND (0.001) U
Cadmium	0.00037 J	ND (0.005) U
Chromium Total	ND (0.0038) U	0.0047 J
Cobalt	0.0029 J	0.0046 J
Copper	ND (0.0042) U	ND (0.005) U
Cyanide (total)	NS	NS/ND
Iron	NS	NS/ND
Lead	ND (0.003) U	ND (0.014) U
Manganese	0.172	0.085 J
Nickel	0.0031 J	0.0046 J
Selenium	ND (0.005) U	ND (0.005) U
Thallium	ND (0.01) U	ND (0.01) U
Vanadium	0.0018 J	0.0041 J
VOC/F		
2,3,7,8-TCDD Equivalent	NS	NS

MWM2-04	8/30/01	1/8/02	11/12/02	6/24/03
VOC				
1,1,1-Trichloroethane [EQL, RDM]	0.48	0.42	0.55	0.8
1,1,2-Trichloroethane	ND (0.017) U	ND (0.02) U	ND (0.062) U	ND (0.04) U
1,1-Dichloroethane [EQL, RDM]	0.012 J	0.01 J	0.02 J	0.02 J
1,1-Dichloroethene	0.04 J	0.03 J	0.05 J	0.05 J
1,2-Dichlorobenzene [RDM]	—	1.3	1.9	1.5
Acetone	0.075 J	0.06 J	0.045 J	0.04 J
1,2-Dichlorobenzene	ND (0.0052) U	0.01 J	ND (0.062) U	ND (0.04) U
Benzene [EQL, RDM]	—	0.01 J	ND (0.062) U	ND (0.04) U
cis-1,2-Dichloroethene	0.23 J	0.43 J	ND (0.62) U	ND (0.4) U
Ethylbenzene	ND (0.0052) U	ND (0.017) U	ND (0.062) U	ND (0.04) U
Methylene chloride [EQL, RDM]	ND (0.0052) U	ND (0.017) U	ND (0.062) U	ND (0.04) U
Tetrachloroethene	ND (0.0045) U	ND (0.033) U	ND (0.062) U	ND (0.04) U
Toluene	ND (0.0045) U	ND (0.033) U	ND (0.062) U	ND (0.04) U
Trichloroethene	ND (0.0028) U	ND (0.033) U	ND (0.062) U	ND (0.04) U
Vinyl chloride	ND (0.0028) U	ND (0.033) U	ND (0.062) U	0.024 J
SVOC				
2,4-Dimethylphenol	ND (0.0088) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.00073) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.0027) U	ND (0.005) U	ND (0.005) U	0.001 J
Butyl benzylphthalate	ND (0.0088) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.00073) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.0088) U	ND (0.005) U	ND (0.005) U	0.044 J
Pentachlorophenol	ND (0.0073) U	ND (0.005) U	ND (0.005) U	ND (0.005) U
PCB	ND (0.00082) U	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
INORG				
Antimony	ND (0.025) U	ND (0.025) U	ND (0.025) U	ND (0.025) U
Arsenic	0.0044 J	0.0032 J/J.0037 J	0.0026 J/ND (0.01) U	ND (0.01) U
Barium	0.048	0.0585/0.0544	ND (0.005) U/ND (0.005) U	0.0836/0.0846
Beryllium	ND (0.0004) U	ND (0.001) U/ND (0.001) U	ND (0.001) U/ND (0.001) U	ND (0.001) U/ND (0.001) U
Cadmium	0.0063 J	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Chromium Total	ND (0.01) U	0.0039 J/0.0047 J	0.0039 J/0.0039 J	0.0039 J/0.0039 J
Cobalt	0.0088 J	0.0108 J/ND (0.01) U	ND (0.01) U/ND (0.01) U	ND (0.01) U/ND (0.01) U
Copper	ND (0.005) U	0.0176 J/0.0176 J	0.0176 J/0.0176 J	0.0176 J/0.0176 J
Cyanide (total)	NS	0.00029 J/ND (0.005) U	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Iron	NS	NS	ND (0.01) U/ND (0.01) U	ND (0.01) U/ND (0.01) U
Lead	ND (0.003) U	0.001 J/0.0019 J	0.0025 J/0.0077 J	0.0025 J/0.0077 J
Manganese	0.156	0.0799/0.0799	0.0799/0.0799	0.0799/0.0799
Nickel	0.0136 J	0.0143 J/0.0143 J	0.0143 J/0.0143 J	0.0143 J/0.0143 J
Selenium	ND (0.005) U	10.8/10.4	4.74/5.09	4.74/5.09
Thallium	ND (0.01) U	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Vanadium	ND (0.01) U	0.545/0.434	0.318/0.335	0.318/0.335
VOC/F				
2,3,7,8-TCDD Equivalent	NS	NS/NS	NS/NS	NS/NS

MWM2-20	6/23/03
VOC	
1,1,1-Trichloroethane	0.04
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	0.0019 J
1,2-Dichlorobenzene	0.0026 J
Acetone	0.0044 J/ND (0.026) U
Benzene	ND (0.0003) U/ND (0.0003) U
cis-1,2-Dichloroethene	ND (0.0005) U/ND (0.0004) U
Ethylbenzene	0.0009 J
Methylene chloride	ND (0.001) U/ND (0.001) U
Tetrachloroethene	ND (0.001) U/ND (0.001) U
Toluene	ND (0.001) U/ND (0.001) U
Trichloroethene	ND (0.001) U/ND (0.001) U
Vinyl chloride	ND (0.001) U/ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (0.005) U/ND (0.005) U
Benzo(a)pyrene	ND (0.005) U/ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U/ND (0.005) U
Butyl benzylphthalate	ND (0.005) U/ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U/ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U/ND (0.005) U
Pentachlorophenol	ND (0.005) U/ND (0.005) U
PCB	
Total PCBs	ND (0.0004) U/ND (0.0004) U
INORG	
Antimony	ND (0.025) U/ND (0.025) U
Arsenic	0.0044 J/ND (0.01) U
Barium	0.0836/0.0844
Beryllium	ND (0.001) U/ND (0.001) U
Cadmium	ND (0.005) U/ND (0.005) U
Chromium Total	0.0039 J/0.0039 J
Cobalt	ND (0.01) U/ND (0.01) U
Copper	0.0176 J/0.0176 J
Cyanide (total)	ND (0.005) U/ND (0.005) U
Iron	ND (0.01) U/ND (0.01) U
Lead	0.0025 J/0.0077 J
Manganese	0.0799/0.0799
Nickel	0.0143 J/0.0143 J
Selenium	4.74/5.09
Thallium	ND (0.005) U/ND (0.005) U
Vanadium	0.318/0.335
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MWM2-07	1/31/02	11/12/02	6/23/03
VOC			
1,1,1-Trichloroethane	ND (0.001) U	ND (0.002) U/ND (0.0025) U	ND (0.001) U/ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.002) U/ND (0.0025) U	ND (0.001) U/ND (0.001) U
1,1-Dichloroethane	0.0015 J	0.0013 J/0.0013 J	0.0008 J/0.0009 J
1,2-Dichlorobenzene	0.00082 J	0.0012 J/0.0015 J	0.0007 J/0.00069 J
Acetone	ND (0.01) U	ND (0.02) U/ND (0.025) U	0.0011 J/ND (0.01) U
Benzene	ND (0.001) U	ND (0.002) U/ND (0.0025) U	ND (0.001) U/ND (0.001) U
cis-1,2-Dichloroethene [EQL, RDM]	0.034	0.08	0.012 J/0.013 J
Ethylbenzene	ND (0.001) U	ND (0.002) U/ND (0.0025) U	ND (0.001) U/ND (0.001) U
Methylene chloride	0.0024 J	0.0018 J/0.0019 J	ND (0.001) U/ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.002) U/ND (0.0025) U	ND (0.001) U/ND (0.001) U
Toluene	ND (0.001) U	ND (0.002) U/ND (0.0025) U	ND (0.001) U/ND (0.001) U
Trichloroethene [EQL, RDM]	0.0024 J	0.0034 J/0.0027 J	0.0028 J/0.0025 J
Vinyl chloride [EQL, RDM]	0.013	0.015 J/0.007 J	0.0032 J/0.0022 J
SVOC			
2,4-Dimethylphenol	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Benzo(a)pyrene	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
bis(2-Ethylhexyl)phthalate	NS	ND (0.005) U/ND (0.005) U	ND (0.0068) U/ND (0.005) U
Butyl benzylphthalate	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Dibenz(a,h)anthracene	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Methylphenol (Cresol)	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Pentachlorophenol	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
PCB			
Total PCBs	ND (0.0004) U	NS/ND (0.0004) U/ND (0.0004) U	ND (0.0004) U/ND (0.0004) U
INORG			
Antimony	ND (0.025) U	ND (0.025) U/ND (0.025) U	ND (0.025) U/ND (0.025) U
Arsenic	NS	0.0044 J/0.0032 J/0.0037 J	0.0026 J/ND (0.01) U
Barium	NS	0.0585/0.0544	0.0836/0.0844
Beryllium	NS	ND (0.001) U/ND (0.001) U	ND (0.001) U/ND (0.001) U
Cadmium	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Chromium Total	NS	0.0018 J/ND (0.01) U	ND (0.01) U/ND (0.01) U
Cobalt	NS	ND (0.01) U/ND (0.01) U	0.0019 J/ND (0.01) U
Copper	NS	0.0023 J/0.0051 J	ND (0.005) U/ND (0.005) U
Cyanide (total)	NS	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Iron	NS	NS/ND	ND (0.01) U/ND (0.01) U
Lead	ND (0.003) U	ND (0.003) U/ND (0.003) U	0.0025 J/0.0077 J
Manganese	0.156	0.435/0.434	0.318/0.335
Nickel	0.0196 J	0.0143 J/0.0143 J	0.0143 J/0.0143 J
Selenium	ND (0.005) U	10.8/10.4	4.74/5.09
Thallium	ND (0.01) U	ND (0.005) U/ND (0.005) U	ND (0.005) U/ND (0.005) U
Vanadium	ND (0.01) U	ND (0.01) U/ND (0.01) U	0.318/0.335
VOC/F			
2,3,7,8-TCDD Equivalent	NS	NS/NS	NS/NS

MWM2-15	8/24/03
VOC	
1,1,1-Trichloroethane	0.0045 J
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	0.0077 J
1,2-Dichlorobenzene	0.0098 J
Acetone	ND (0.01) U
Benzene	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	ND (0.001) U
Methylene chloride	ND (0.001) U
Tetrachloroethene	ND (0.001) U
Toluene	ND (0.001) U
Trichloroethene	0.0029 J
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U
bis(2-Ethylhexyl)phthalate	0.0049 J
Butyl benzylphthalate	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U
Pentachlorophenol	ND (0.005) U
PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.025) U
Arsenic	0.0028 J
Barium	0.0774
Beryllium	ND (0.001) U
Cadmium	ND (0.005) U
Chromium Total	0.0029 J
Cobalt	0.0017 J
Copper	ND (0.005) U
Cyanide (total)	NS
Iron	NS
Lead	ND (0.003) U
Manganese	0.0963 J
Nickel	0.0143 J
Selenium	ND (0.005) U
Thallium	ND (0.01) U
Vanadium	0.0078 J
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MWM2-16	8/24/03
VOC	
1,1,1-Trichloroethane	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	0.0022 J
1,2-Dichlorobenzene	ND (0.001) U
Acetone	ND (0.01) U
Benzene	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	ND (0.001) U
Methylene chloride	ND (0.001) U
Tetrachloroethene	ND (0.001) U
Toluene	ND (0.001) U
Trichloroethene	0.0019 J
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U
bis(2-Ethylhexyl)phthalate	0.0049 J
Butyl benzylphthalate	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U
Pentachlorophenol	ND (0.005) U
PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.025) U
Arsenic	0.0037 J
Barium	0.0924
Beryllium	ND (0.001) U
Cadmium	0.00028 J
Chromium Total	0.0028 J
Cobalt	0.0013 J
Copper	ND (0.005) U
Cyanide (total)	NS
Iron	NS
Lead	ND (0.003) U
Manganese	0.115
Nickel	0.0136 J
Selenium	ND (0.005) U
Thallium	ND (0.01) U
Vanadium	0.0078 J
VOC/F	
2,3,7,8-TCDD Equivalent	NS

MWM2-17	8/23/03
VOC	
1,1,1-Trichloroethane	0.0084 J
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	0.00079 J
1,2-Dichlorobenzene	ND (0.001) U
Acetone	0.0031 J
Benzene	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	ND (0.001) U
Methylene chloride	ND (0.001) U
Tetrachloroethene	ND (0.001) U
Toluene	ND (0.001) U
Trichloroethene	0.0023 J
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (0.005) U
Benzo(a)pyrene	ND (0.005) U
bis(2-Ethylhexyl)phthalate	ND (0.005) U
Butyl benzylphthalate	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.005) U
Methylphenol (Cresol)	ND (0.005) U
Pentachlorophenol	ND (0.005) U
PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.025) U
Arsenic	0.0044 J
Barium	0.0846
Beryllium	ND (0.001) U
Cadmium	0.0063 J
Chromium Total	ND (0.01) U
Cobalt	0.0088 J
Copper	ND (

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SITE LOCATION

LEGEND:

- MWM2–15 — GROUNDWATER MONITORING WELL LOCATION
- BM2–12 — SOIL BORING LOCATION
- SM21–04 — SURFACE SOIL SAMPLE LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- APPROXIMATE AOI AREA
- M–2 = FORMER PLATING OPERATION AREA

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

- RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
- IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
- RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
- IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
- RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
- IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

- RDW – RESIDENTIAL DRINKING WATER CRITERIA
- IDW – INDUSTRIAL DRINKING WATER CRITERIA
- RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
- GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED

0 80' 160'
GRAPHIC SCALE

PLANT (FORM PLANT

M–2

MWM7 MWM8 MWM2–01 MWM2–02 MWM2–03 MWM2–04 MWM2–05 MWM2–06 MWM2–07 MWM2–08 MWM2–09 MWM2–10 MWM2–11 MWM2–12 MWM2–13 MWM2–14 MWM2–15 MWM2–16 MWM2–17 MWM2–18 MWM2–19 MWM2–20 MWM2–21 MWM2–22 MWM2–23 MWM2–24

BM2–01 BM2–02 BM2–03 BM2–04 BM2–05 BM2–06 BM2–07 BM2–08 BM2–09 BM2–10 BM2–11 BM2–12 BM2–13 BM2–14 BM2–15 BM2–16 BM2–17 BM2–18

SM21–01 SM21–02 SM21–03 SM21–04

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X: 64411X0D, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT–DL
11/26/03 SYR–85–GMS DJP GMS
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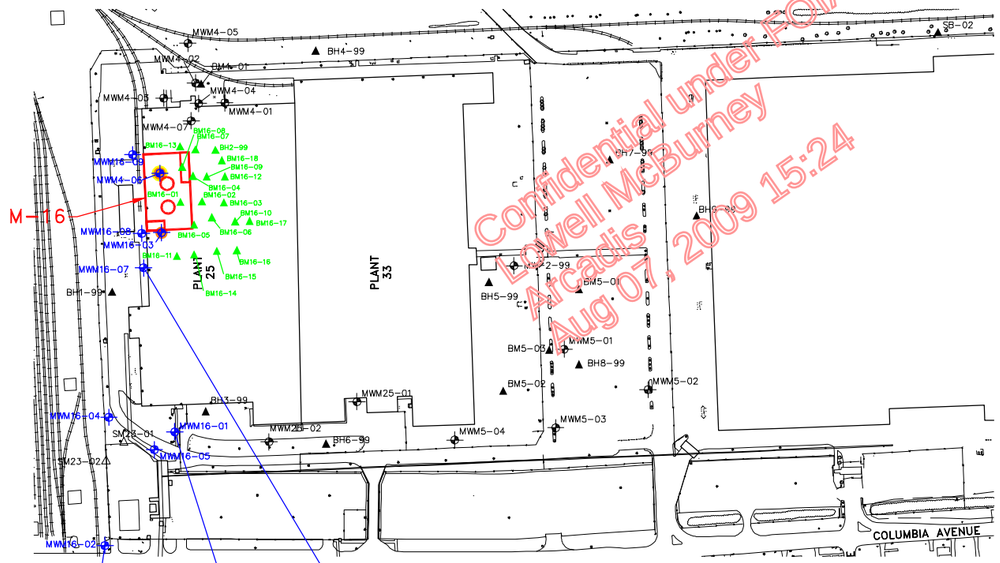
GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI M-2 - SOIL

ENCORE

FIGURE 4-14

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SITE LOCATION

LEGEND:

- MWM4-07 — GROUNDWATER MONITORING WELL LOCATION
- BM5-03 — SOIL BORING LOCATION
- SM23-01 — SURFACE SOIL SAMPLE LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)
- APPROXIMATE AOI AREA
- M-16 = PLANT 25 BASEMENT SUMP AREA

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.

0 200' 400'
GRAPHIC SCALE

MWM16-02	0-2Ft (BGS)	6-8Ft (BGS)	18-20Ft (BGS)
VOC			
1,1,1-Trichloroethane	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
1,1,2-Trichloroethane	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
1,1-Dichloroethane	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
1,2-Dichloroethane	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
Acetone	ND (0.028) U	ND (0.022) U	ND (0.027) U
Benzene	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
cis-1,2-Dichloroethene	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
Ethylbenzene	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
Methylene chloride	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
Tetrachloroethene	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
Toluene	ND (0.007) U	0.0094 J	0.0074 J
Trichloroethene	ND (0.007) U	ND (0.0054) U	ND (0.0087) U
Vinyl chloride	ND (0.014) U	ND (0.011) U	ND (0.013) U
SVOC			
2,4-Dimethylphenol	ND (0.33) U	ND (0.42) U	ND (0.36) U
Benz(a)pyrene	0.33 J	ND (0.42) U	ND (0.36) U
Bis(2-Ethylhexyl)phthalate	0.29 J	ND (0.42) U	ND (0.36) U
Dibenz(a,h)anthracene	ND (0.33) U	ND (0.42) U	ND (0.36) U
Methylphenol (Cresol)	ND (0.33) U	ND (0.42) U	ND (0.36) U
Pentachlorophenol	ND (3.6) U	ND (4.5) U	ND (3.7) U
PCB			
Total PCBs	0.47889 J	0.10605 J	ND (0.0361) U
INORG			
Antimony	ND (2.1) U	ND (2.53) U	ND (2.16) U
Arsenic	5.1 J	4.6 J	3.6 J
Barium	181 J	89.4 J	8.8 J
Beryllium	1.62 J	0.434 J	ND (0.108) U
Cadmium	0.418 J	0.422 J	0.16 J
Chromium III (Trivalent)	NS	NS	NS
Chromium Total	12.7 J	17.6 J	4.26 J
Chromium VI (Hexavalent)	NS	NS	NS
Cobalt	2.33 J	2.1 J	1.03 J
Copper	20.9 J	22.7 J	8.16 J
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	74.9 J	16.6 J	3.24 J
Manganese	1120 J	731 J	187 J
Nickel	9.8 J	7.9 J	5.16 J
Selenium	ND (0.97) U	ND (1.2) U	ND (0.5) U
Thallium	0.327 J	0.353 J	0.159 J
Vanadium	15.1 J	23.9 J	7.37 J
GCC/V			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM5-01	0-2Ft (BGS)	8-10Ft (BGS)	14-16Ft (BGS)
VOC			
1,1,1-Trichloroethane	ND (0.000982) U	ND (0.00092) U	ND (0.0012) U
1,1,2-Trichloroethane	ND (0.0007) U	ND (0.00066) U	ND (0.0013) U
1,1-Dichloroethane	ND (0.00082) U	ND (0.00068) U	ND (0.00073) U
1,2-Dichloroethane	ND (0.00082) U	ND (0.00077) U	ND (0.00097) U
1,2-Dichloroethene	ND (0.00082) U	ND (0.00072) U	ND (0.00081) U
Acetone	ND (0.0019) U	ND (0.0021) U	ND (0.0036) U
Benzene	ND (0.00098) U	ND (0.00084) U	ND (0.0018) U
cis-1,2-Dichloroethene	ND (0.00075) U	ND (0.00084) U	ND (0.0011) U
Ethylbenzene	ND (0.00083) U	ND (0.00088) U	ND (0.00074) U
Methylene chloride	ND (0.0012) U	ND (0.0013) U	ND (0.0034) U
Tetrachloroethene	ND (0.00083) U	ND (0.00088) U	ND (0.00074) U
Toluene	ND (0.00041) U	ND (0.00035) U	0.0027 J
Trichloroethene	ND (0.00088) U	ND (0.00078) U	ND (0.00083) U
Vinyl chloride	ND (0.0012) U	ND (0.0014) U	ND (0.0018) U
SVOC			
2,4-Dimethylphenol	ND (0.087) U	ND (0.09) U	ND (0.09) U
Benz(a)pyrene	ND (0.085) U	ND (0.09) U	ND (0.088) U
Bis(2-Ethylhexyl)phthalate	0.1 J	ND (0.09) U	0.1 J
Dibenz(a,h)anthracene	ND (0.085) U	ND (0.09) U	ND (0.087) U
Methylphenol (Cresol)	ND (0.085) U	ND (0.09) U	ND (0.087) U
Pentachlorophenol	ND (0.13) U	ND (0.14) U	ND (0.14) U
PCB			
Total PCBs	0.114 J	ND (0.023) U	ND (0.023) U
INORG			
Antimony	0.898 J	0.562 J	0.583 J
Arsenic	4.4 J	3.4 J	3.16 J
Barium	45.8 J	34.7 J	9.52 J
Beryllium	0.32 J	0.186 J	ND (0.0518) U
Cadmium	0.162 J	0.0884 J	0.128 J
Chromium III (Trivalent)	NS	NS	NS
Chromium Total	14.9 J	11.6 J	6.9 J
Chromium VI (Hexavalent)	NS	NS	NS
Cobalt	3.46 J	3.1 J	2.2 J
Copper	33.5 J	17.8 J	10.2 J
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	21.6 J	7.62 J	4.58 J
Manganese	410 J	308 J	238 J
Nickel	10 J	8.7 J	6.56 J
Selenium	ND (0.537) U	ND (0.378) U	ND (0.349) U
Thallium	ND (0.542) U	ND (0.385) U	ND (0.364) U
Vanadium	16.9 J	15 J	8.09 J
GCC/V			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM16-07	0-2Ft (BGS)
VOC	
1,1,1-Trichloroethane	ND (0.0042) U
1,1,2-Trichloroethane	ND (0.0042) U
1,1-Dichloroethane	ND (0.0042) U
1,2-Dichloroethane	ND (0.0042) U
Acetone	0.013 J
Benzene	ND (0.0042) U
cis-1,2-Dichloroethene	ND (0.0042) U
Ethylbenzene	ND (0.0042) U
Methylene chloride	ND (0.0042) U
Tetrachloroethene	ND (0.0042) U
Toluene	0.0027 J
Trichloroethene	ND (0.0042) U
Vinyl chloride	ND (0.0085) U
SVOC	
2,4-Dimethylphenol	ND (0.36) U
Benz(a)pyrene	ND (0.36) U
Bis(2-Ethylhexyl)phthalate	0.13 J
Dibenz(a,h)anthracene	ND (0.36) U
Methylphenol (Cresol)	ND (0.36) U
Pentachlorophenol	ND (3.7) U
PCB	
Total PCBs	0.0952 J
INORG	
Antimony	0.234 J
Arsenic	4.1 J
Barium	44.3 J
Beryllium	0.88 J
Cadmium	0.373 J
Chromium Total	13.4 J
Cobalt	5.73 J
Copper	25.7 J
Cyanide (total)	NS
Iron	NS
Lead	9 J
Manganese	284 J
Nickel	15.8 J
Selenium	ND (0.591) U
Thallium	0.338 J
Vanadium	13 J
GCC/V	
2,3,7,8-TCDD Equivalent	NS

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS SDL GMS
64411210/RFI-ADDM/64411C16.DWG

Confidential under FOIA
Lowell McBurney
Arcadis
Aug 07, 2009 15:24

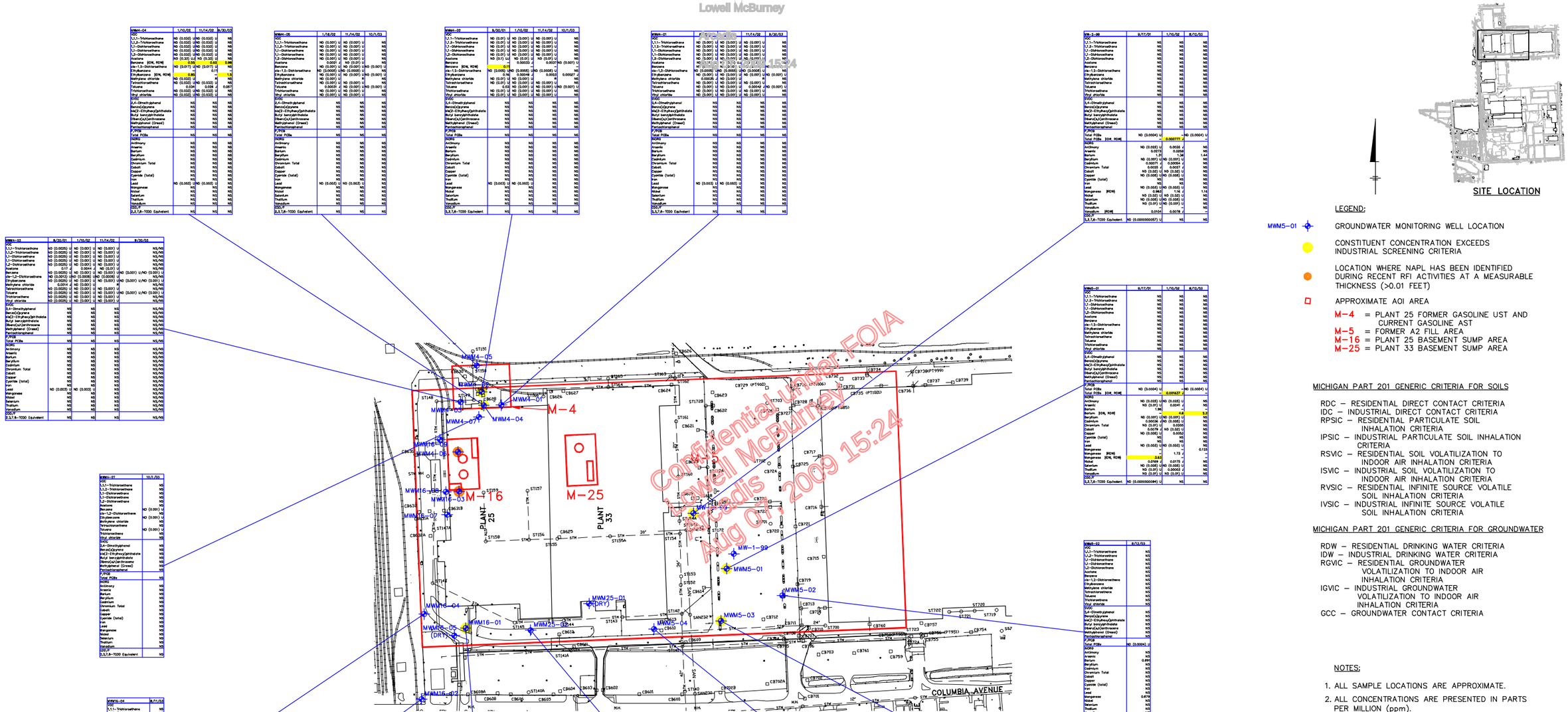
GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI M-16 - SOIL

ENCORE

FIGURE 4-15

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Lowell McBurney
Arcadis
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Lowell McBurney
Arcadis
Aug 07, 2009 15:24

MWM4-04	1/10/02	11/14/02	8/30/03
VOC			
1,1,1-Trichloroethane	ND (0.033)	UND (0.033) U	NS
1,1,2-Trichloroethane	ND (0.033)	UND (0.033) U	NS
1,1-Dichloroethane	ND (0.033)	UND (0.033) U	NS
1,1-Dichloroethene	ND (0.033)	UND (0.033) U	NS
1,2-Dichloroethane	ND (0.033)	UND (0.033) U	NS
Acetone	ND (0.33)	UJ ND (0.33) U	NS
Benzene [ECM, RCM]	0.0	0.0	0.0
cis-1,2-Dichloroethene	ND (3.017)	UJ UND (3.017) UJ	NS
Ethylbenzene	0.11	0.11	0.11
Ethylbenzene [ECM, RCM]	0.86	0.86	1.8
Methylene chloride	ND (0.033)	U 8	NS
Tetrachloroethene	ND (0.033)	UND (0.033) U	1.8
Toluene	0.034	0.036 J	0.057
Trichloroethene	ND (0.033)	UND (0.033) U	NS
Vinyl chloride	ND (0.033)	UND (0.033) U	NS
SVOC			
2,4-Dimethylphenol	NS	NS	NS
Benzo(a)pyrene	NS	NS	NS
bis(2-Ethylhexyl)phthalate	NS	NS	NS
Butyl benzylphthalate	NS	NS	NS
Dibenz(a,h)anthracene	NS	NS	NS
Methylphenol (Cresol)	NS	NS	NS
Pentachlorophenol	NS	NS	NS
PCB			
Total PCBs	NS	NS	NS
INORG			
Antimony	NS	NS	NS
Arsenic	NS	NS	NS
Barium	NS	NS	NS
Beryllium	NS	NS	NS
Cadmium	NS	NS	NS
Chromium Total	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (6.064)	UND (6.064) U	NS
Manganese	NS	NS	NS
Nickel	NS	NS	NS
Selenium	NS	NS	NS
Thallium	NS	NS	NS
Vanadium	NS	NS	NS
DIOXIN			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM4-05	1/10/02	11/14/02	10/1/03
VOC			
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	NS
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U	NS
Acetone	ND (0.01) U	ND (0.01) U	NS
Benzene	ND (0.001) U	ND (0.001) UND (0.001) U	NS
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) UND (0.0005) U	NS
Ethylbenzene	ND (0.001) U	ND (0.001) UND (0.001) U	NS
Methylene chloride	ND (0.001) U	ND (0.001) U	NS
Tetrachloroethene	ND (0.001) U	ND (0.001) U	NS
Toluene	0.0031 J	ND (0.001) UND (0.001) U	NS
Trichloroethene	ND (0.001) U	ND (0.001) U	NS
Vinyl chloride	ND (0.001) U	ND (0.001) U	NS
SVOC			
2,4-Dimethylphenol	NS	NS	NS
Benzo(a)pyrene	NS	NS	NS
bis(2-Ethylhexyl)phthalate	NS	NS	NS
Butyl benzylphthalate	NS	NS	NS
Dibenz(a,h)anthracene	NS	NS	NS
Methylphenol (Cresol)	NS	NS	NS
Pentachlorophenol	NS	NS	NS
PCB			
Total PCBs	NS	NS	NS
INORG			
Antimony	NS	NS	NS
Arsenic	NS	NS	NS
Barium	NS	NS	NS
Beryllium	NS	NS	NS
Cadmium	NS	NS	NS
Chromium Total	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (0.003)	ND (0.003) U	NS
Manganese	NS	NS	NS
Nickel	NS	NS	NS
Selenium	NS	NS	NS
Thallium	NS	NS	NS
Vanadium	NS	NS	NS
DIOXIN			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM4-03	8/30/01	1/10/02	11/14/02	8/30/03
VOC				
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
Acetone	0.17 J	0.004 J	ND (0.01) U	NS
Benzene	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U	ND (0.0005) U	NS
Ethylbenzene	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
Methylene chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
Tetrachloroethene	0.0014 J	ND (0.001) U	ND (0.001) U	NS
Toluene	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
Trichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
Vinyl chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U	NS
SVOC				
2,4-Dimethylphenol	NS	NS	NS	NS
Benzo(a)pyrene	NS	NS	NS	NS
bis(2-Ethylhexyl)phthalate	NS	NS	NS	NS
Butyl benzylphthalate	NS	NS	NS	NS
Dibenz(a,h)anthracene	NS	NS	NS	NS
Methylphenol (Cresol)	NS	NS	NS	NS
Pentachlorophenol	NS	NS	NS	NS
PCB				
Total PCBs	NS	NS	NS	NS
INORG				
Antimony	NS	NS	NS	NS
Arsenic	NS	NS	NS	NS
Barium	NS	NS	NS	NS
Beryllium	NS	NS	NS	NS
Cadmium	NS	NS	NS	NS
Chromium Total	NS	NS	NS	NS
Cobalt	NS	NS	NS	NS
Copper	NS	NS	NS	NS
Cyanide (total)	NS	NS	NS	NS
Iron	NS	NS	NS	NS
Lead	ND (0.003)	ND (0.003) U	NS	NS
Manganese	NS	NS	NS	NS
Nickel	NS	NS	NS	NS
Selenium	NS	NS	NS	NS
Thallium	NS	NS	NS	NS
Vanadium	NS	NS	NS	NS
DIOXIN				
2,3,7,8-TCDD Equivalent	NS	NS	NS	NS

MWM4-01	1/10/02	11/14/02	8/30/03
VOC			
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	NS
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	NS
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U	NS
Acetone	ND (0.01) U	ND (0.01) U	NS
Benzene	ND (0.001) U	ND (0.001) U	NS
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U	NS
Ethylbenzene	ND (0.001) U	ND (0.001) U	NS
Methylene chloride	ND (0.001) U	ND (0.001) U	NS
Tetrachloroethene	ND (0.001) U	ND (0.001) U	NS
Toluene	ND (0.001) U	ND (0.001) U	NS
Trichloroethene	ND (0.001) U	ND (0.001) U	NS
Vinyl chloride	ND (0.001) U	ND (0.001) U	NS
SVOC			
2,4-Dimethylphenol	NS	NS	NS
Benzo(a)pyrene	NS	NS	NS
bis(2-Ethylhexyl)phthalate	NS	NS	NS
Butyl benzylphthalate	NS	NS	NS
Dibenz(a,h)anthracene	NS	NS	NS
Methylphenol (Cresol)	NS	NS	NS
Pentachlorophenol	NS	NS	NS
PCB			
Total PCBs	NS	NS	NS
INORG			
Antimony	NS	NS	NS
Arsenic	NS	NS	NS
Barium	NS	NS	NS
Beryllium	NS	NS	NS
Cadmium	NS	NS	NS
Chromium Total	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (5.003)	ND (5.003) U	NS
Manganese	NS	NS	NS
Nickel	NS	NS	NS
Selenium	NS	NS	NS
Thallium	NS	NS	NS
Vanadium	NS	NS	NS
DIOXIN			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MW-2-99	8/17/01	1/10/02	8/12/03
VOC			
1,1,1-Trichloroethane	NS	NS	NS
1,1,2-Trichloroethane	NS	NS	NS
1,1-Dichloroethane	NS	NS	NS
1,1-Dichloroethene	NS	NS	NS
1,2-Dichloroethane	NS	NS	NS
Acetone	NS	NS	NS
Benzene	NS	NS	NS
cis-1,2-Dichloroethene	NS	NS	NS
Ethylbenzene	NS	NS	NS
Methylene chloride	NS	NS	NS
Tetrachloroethene	NS	NS	NS
Toluene	NS	NS	NS
Trichloroethene	NS	NS	NS
Vinyl chloride	NS	NS	NS
SVOC			
2,4-Dimethylphenol	NS	NS	NS
Benzo(a)pyrene	NS	NS	NS
bis(2-Ethylhexyl)phthalate	NS	NS	NS
Butyl benzylphthalate	NS	NS	NS
Dibenz(a,h)anthracene	NS	NS	NS
Methylphenol (Cresol)	NS	NS	NS
Pentachlorophenol	NS	NS	NS
PCB			
Total PCBs	ND (5.0000) U	0.000777 J	ND (0.0004) U
INORG			
Antimony	NS	NS	NS
Arsenic	ND (0.035) U	0.0035 J	NS
Barium	0.0373 J	0.0354 J	NS
Beryllium	0.52	0.54	0.4 J
Cadmium	ND (0.001) U	UND (0.001) U	NS
Chromium Total	0.0077 J	0.0054 J	NS
Cobalt	0.0035 J	0.0037 J	NS
Copper	ND (0.02) U	ND (0.02) U	NS
Cyanide (total)	ND (0.005) U	UND (0.005) U	NS
Iron	NS	NS	NS
Lead	NS	NS	NS
Manganese	ND (0.003)	UND (0.003) U	NS
Manganese [RCM]	1.463	1.16 J	1.16
Nickel	ND (0.02) U	ND (0.02) U	NS
Selenium	ND (0.005) U	UND (0.005) U	NS
Thallium	ND (5.01) U	UND (5.001) U	NS
Vanadium	NS	NS	NS
DIOXIN			
2,3,7,8-TCDD Equivalent	0.0154	0.0078 J	NS
2,3,7,8-TCDD Equivalent	ND (0.0000000057) U	NS	NS

MWM5-01	8/17/01	1/10/02	8/12/03
VOC			
1,1,1-Trichloroethane	NS	NS	NS
1,1,2-Trichloroethane	NS	NS	NS
1,1-Dichloroethane	NS	NS	NS
1,1-Dichloroethene	NS	NS	NS
1,2-Dichloroethane	NS	NS	NS
Acetone	NS	NS	NS
Benzene	NS	NS	NS
cis-1,2-Dichloroethene	NS	NS	NS
Ethylbenzene	NS	NS	NS
Methylene chloride	NS	NS	NS
Tetrachloroethene	NS	NS	NS
Toluene	NS	NS	NS
Trichloroethene	NS	NS	NS
Vinyl chloride	NS	NS	NS
SVOC			
2,4-Dimethylphenol	NS	NS	NS
Benzo(a)pyrene	NS	NS	NS
bis(2-Ethylhexyl)phthalate	NS	NS	NS
Butyl benzylphthalate	NS	NS	NS
Dibenz(a,h)anthracene	NS	NS	NS
Methylphenol (Cresol)	NS	NS	NS
Pentachlorophenol	NS	NS	NS
PCB			
Total PCBs	ND (0.0004) U	0.000637 J	ND (0.0004) U
Total PCBs [ECM, RCM]	0.0	0.0	0.0
INORG			
Antimony	ND (0.035)	UND (0.035) U	NS
Arsenic	ND (5.01) U	0.0041 J	NS
Barium	1.96	1.96	NS
Barium [ECM, RCM]	4.9	4.9	5.2
Beryllium	ND (5.001) U	ND (0.001) U	NS
Cadmium	0.0034 J	UND (0.005) U	NS
Chromium Total	ND (0.01) U	0.0048 J	NS
Cobalt	0.0019 J	ND (0.02) U	NS
Copper	ND (0.005) U	0.0052 J	NS
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (0.003)	UND (0.003) U	0.125
Manganese	NS	1.73 J	NS
Manganese [RCM]	3.81	3.81	NS
Mercury	0.0169 J	0.0173 J	NS
Nickel	ND (0.005)	UND (0.005) U	NS
Selenium	ND (5.01) U	0.00003 J	NS
Thallium	ND (5.01) U	ND (5.01) U	NS
Vanadium	NS	NS	NS
DIOXIN			
2,3,7,8-TCDD Equivalent	ND (0.0000000084) U	NS	NS

MWM5-02	8/12/03
VOC	
1,1,1-Trichloroethane	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	NS
1,1-Dichloroethene	NS
1,2-Dichloroethane	NS
Acetone	NS
Benzene	NS
cis-1,2-Dichloroethene	NS
Ethylbenzene	NS
Methylene chloride	NS
Tetrachloroethene	NS
Toluene	NS
Trichloroethene	NS
Vinyl chloride	NS
SVOC	
2,4-Dimethylphenol	NS
Benzo(a)pyrene	NS
bis(2-Ethylhexyl)phthalate	NS
Butyl benzylphthalate	NS
Dibenz(a,h)anthracene	NS
Methylphenol (Cresol)	NS
Pentachlorophenol	NS
PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	NS
Arsenic	NS
Barium	0.89
Beryllium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Copper	NS
Cyanide (total)	NS
Iron	NS
Lead	NS
Manganese	0.65
Nickel	NS
Selenium	NS
Thallium	NS
Vanadium	NS
DIOXIN	
2,3,7,8-TCDD Equivalent	NS

MWM16-04	8/17/03
VOC	
1,1,1-Trichloroethane	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	NS
1,1-Dichloroethene	NS
1,2-Dichloroethane	NS
Acetone	NS
Benzene	NS
cis-1,2-Dichloroethene	NS
Ethylbenzene	NS
Methylene chloride	NS
Tetrachloroethene	NS
Toluene	NS
Trichloroethene	NS
Vinyl chloride	NS
SVOC	
2,4-Dimethylphenol	NS
Benzo(a)pyrene	NS
bis(2-Ethylhexyl)phthalate	NS
Butyl benzylphthalate	NS
Dibenz(a,h)anthracene	NS
Methylphenol (Cresol)	NS
Pentachlorophenol	NS
PCB	
Total PCBs	NS
INORG	
Antimony	NS
Arsenic	NS
Barium	NS
Beryllium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Copper	NS
Cyanide (total)	NS
Iron	NS
Lead	NS
Manganese	NS
Nickel	NS
Selenium	NS
Thallium	NS
Vanadium	NS
DIOXIN	
2,3,7,8-TCDD Equivalent	NS

MWM16-02	1/31/02	11/13/02	8/17/03
VOC			
1,1,1-Trichloroethane	0.0027 J	0.0033 J	0.0029 J
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U	ND (0.001) U
Acetone	ND (0.01) U	ND (0.01) U	ND (0.01) U
Benzene	ND (0.001) U	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Toluene	0.0029 J	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U	0.0014 J
SVOC			
2,4-Dimethylphenol	ND (0.005) U	ND (0.005) U	ND (5.005) U
Benzo(a)pyrene	ND (0.005) U	ND (0.005) U	ND (5.005) U
bis(2-Ethylhexyl)phthalate	ND (5.005) U	0.0034 J	ND (5.005) U
Butyl benzylphthalate	ND (0.005) U	ND (0.005) U	ND (5.005) U
Dibenz(a,h)anthracene	ND (0.005) U	ND (0.005) U	ND (5.005) U
Methylphenol (Cresol)	ND (0.005) U	ND (0.005) U	ND (5.005) U
Pentachlorophenol	ND (0.005) U	ND (0.005) U	ND (5.005) U
PCB			
Total PCBs	ND (0.0004) U	ND (0.0004) U	ND (0.0004) U
INORG			
Antimony	ND (0.025) U	ND (0.025) U	ND (5.033) U
Arsenic	ND (5.01) U	ND (5.01) U	ND (5.01) U
Barium	0.0	0.0	0.0
Beryllium	ND (0.001) U	ND (0.001) U	ND (5.001) U
Cadmium	ND (0.005) U	ND (0.005) U	ND (5.005) U
Chromium Total	0.0098 J	ND (0.01) U	ND (5.01) U
Cobalt	ND (0.02) U	0.0013 J	ND (5.02) U
Copper	ND (0.005) U	ND (0.005) U	NS
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (0.003) U	ND (0.003) U	ND (5.003) U
Manganese	0.0887 J	0.0878 J	ND (5.01) U
Nickel	ND (5.02) U	ND (5.02) U	ND (5.02) U
Selenium	ND (5.005) U	ND (5.005) U	ND (5.005) U
Thallium	ND (5.01) U	ND (5.01) U	ND (5.01) U
Vanadium	ND (5.01) U	ND (5.01) U	ND (5.01) U
DIOXIN			
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM16-03	8/13/02	1/10/03	8/11/03
VOC			
1,1,1-Trichloroethane	ND (0.00013) U	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.0003) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.00024) U	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.00022) U	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.00021) U	ND (0.001) U	ND (0.001) U
Acetone	ND (0.00078) U	0.008 J	ND (0.01) U
Benzene	ND (0.00018) U	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.00012) U	ND (0.0005) U	ND (0.0005) U
Ethylbenzene	ND (0.00012) U	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.00034) U	ND (0.001) U	ND (0.001) U
Tetrachloroethene	ND (0.00013) U	ND (0.001) U	ND (0.001) U
Toluene	ND (0.00014) U	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.00014) U	ND (0.001) U	ND (0.001) U
Vinyl chloride	0.005	0.0077 J	0.014 J
SVOC			
2,4-Dimethylphenol	ND (0.00082) U	ND (0.005) U	ND (0.005) U
Benzo(a)pyrene	ND (0.00078) U	ND (0.005) U	ND (0.005) U
bis(2-Ethylhexyl)phthalate	0.0053	ND (0.005) U	0.0027 J
Butyl benzylphthalate	ND (0.00078) U	ND (0.005) U	ND (0.005) U
Dibenz(a,h)anthracene	ND (0.00078) U	ND (0.005) U	ND (0.005) U
Methylphenol (Cresol)	ND (0.00074) U	ND (0.005) U	ND (0.005) U
Pentachlorophenol	ND (0.00074) U	ND (0.005) U	ND (0.005) U
PCB			
Total PCBs [ECM, RCM]	ND (0.00008) U	ND (0.0004) U	ND (0.0004) U
INORG			
Antimony	ND (0.00032) U	ND (0.033) U	ND (0.025) U
Arsenic	ND (0.00036) U	0.0077 J	0.0099 J
Barium	0.0	0.0	0.0
Beryllium	ND (0.00004) U	ND (0.001) U	ND (0.001) U
Cadmium	ND (0.00028) U	ND (0.005) U	ND (0.005) U
Chromium Total	ND (0.00141) U	ND (0.01) U	0.0094 J
Cobalt	ND (0.00131) U	0.0033 J	0.0028 J
Copper	ND (0.00142) U	ND (0.005) U	ND (0.005) U
Cyanide (total)	NS	NS	NS
Iron	NS	NS	NS
Lead	ND (0.00123) U	ND (0.002) U	ND (0.003) U
Manganese	0.0887	0.818 J	0.0878 J
Manganese [RCM]	1.09	1.09	NS
Nickel	ND (0.00122) U	0.0024 J	0.0026 J
Selenium	ND (0.0040) U	ND (0.008) U	ND (0.005) U
Thallium	ND (0.0068) U	ND (0.001) U	ND (0.01) U
Vanadium	ND (0.00082) U	ND (0.01) U	ND (0.01) U
2,3,7,8-TCDD Equivalent	NS	NS	NS

MWM5-02	8/13/03
VOC	
1,1,1-Trichloroethane	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U
Acetone	ND (0.01) U
Benzene	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0005) U
Ethylbenzene	0.0
Methylene chloride	ND (0.001) U
Tetrachloroethene	ND (0.001) U
Toluene	ND (0.001) U
Trichloroethene	ND (0.001) U
Vinyl chloride	ND (0.001) U
SVOC	
2,4-Dimethylphenol	ND (5.005) U
Benzo(a)pyrene	ND (5.005) U
bis(2-Ethylhexyl)phthalate	ND (5.005) U
Butyl benzylphthalate	ND (5.005) U
Dibenz(a,h)anthracene	ND (5.005) U
Methylphenol (Cresol)	ND (5.005) U
Pentachlorophenol	ND (5.005) U
PCB	
Total PCBs	ND (0.0004) U
INORG	
Antimony	ND (0.033) U
Arsenic	0.0081 J
Barium	0.0
Beryllium	ND (0.001) U
Cadmium	ND (5.005) U
Chromium Total	0.0094 J
Cobalt	0.0031 J
Copper	ND (5.005) U
Cyanide (total)	NS
Iron	NS
Lead	ND (0.003) U
Manganese	0.567 J
Nickel	0.008 J
Selenium	ND (5.008) U
Thallium	0.00078 J
Vanadium	ND (0.01) U
2,3,7,8-TCDD Equivalent	NS

MWM4-04	8/12/03
VOC	
1,1,1-Trichloroethane	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	NS
1,1-Dichloroethene	NS
1,2-Dichloroethane	NS
Acetone	NS
Benzene	NS
cis-1,2-Dichloroethene	NS
Ethylbenzene	NS
Methylene chloride	NS
Tetrachloroethene	NS
Toluene	NS
Trichloroethene	NS
Vinyl chloride	NS
SVOC	
2,4-Dimethylphenol	NS
Benzo(a)pyrene	NS
bis(2-Ethylhexyl)phthalate	NS
Butyl benzylphthalate	NS
Dibenz(a,h)anthracene	NS
Methylphenol (Cresol)	NS
Pentachlorophenol	NS
PCB	
Total PCBs	NS
INORG	
Antimony	NS
Arsenic	NS
Barium	0.52
Beryllium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Copper	NS
Cyanide (total)	NS
Iron	NS
Lead	NS
Manganese	0.673
Nickel	NS
Selenium	NS
Thallium	NS
Vanadium	NS
DIOXIN	
2,3,7,8-TCDD Equivalent	NS

MWM5-03	8/12/03
VOC	
1,1,1-Trichloroethane	NS
1,1,2-Trichloroethane	NS
1,1-Dichloroethane	NS
1,1-Dichloroethene	NS
1,2-Dichloroethane	NS
Acetone	NS
Benzene	NS
cis-1,2-Dichloroethene	NS
Ethylbenzene	NS
Methylene chloride	NS
Tetrachloroethene	NS
Toluene	NS
Trichloroethene	NS
Vinyl chloride	NS
SVOC	
2,4-Dimethylphenol	NS
Benzo(a)pyrene	NS
bis(2-Ethylhexyl)phthalate	NS
Butyl benzylphthalate	NS
Dibenz(a,h)anthracene	NS
Methylphenol (Cresol)	NS
Pentachlorophenol	NS
PCB	
Total PCBs	NS
INORG	
Antimony	NS
Arsenic	NS
Barium	NS
Beryllium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Copper	NS
Cyanide (total)	NS
Iron	NS
Lead	NS
Manganese	NS
Nickel	NS
Selenium	NS
Thallium	NS
Vanadium	NS
DIOXIN	
2,3,7,8-TCDD Equivalent	NS

SITE LOCATION

LEGEND:

MWM5-01 — GROUNDWATER MONITORING WELL LOCATION

CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA

LOCATION WHERE NAPL HAS BEEN IDENTIFIED DURING RECENT RFI ACTIVITIES AT A MEASURABLE THICKNESS (>0.01 FEET)

APPROXIMATE AOI AREA

M-4 = PLANT 25 FORMER GASOLINE UST AND CURRENT GASOLINE AST
M-5 = FORMER A2 FILL AREA
M-16 = PLANT 25 BASEMENT SUMP AREA
M-25 = PLANT 33 BASEMENT SUMP AREA

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONCENTRATION.
7. NS – NOT SAMPLED.

0 200' 400'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

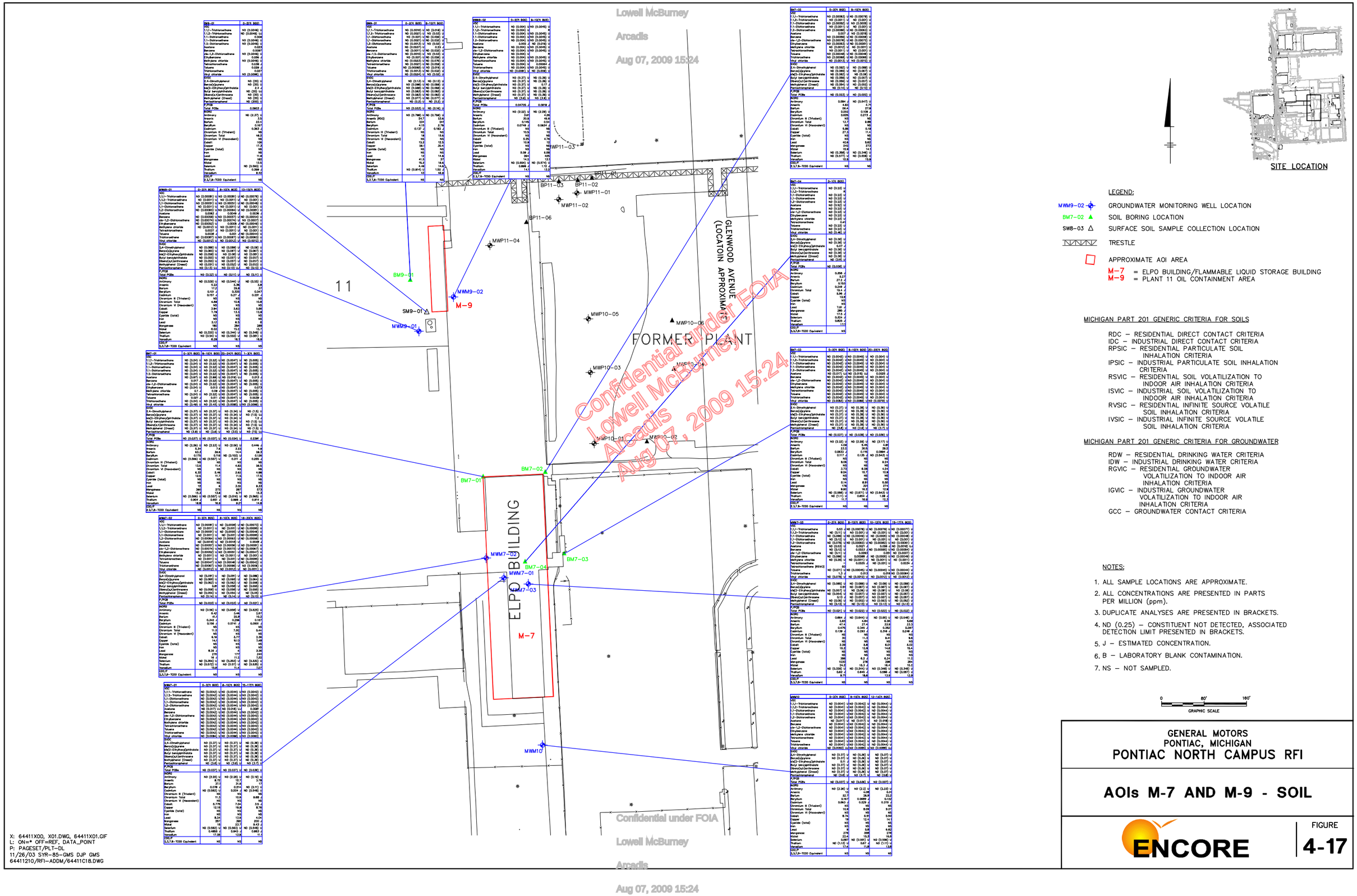
AOIs M-4, M-5, M-16 AND M-25 - GROUNDWATER

ENCORE

FIGURE 4-16

X: 64411X0D, X01.DWG, X06.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/25/03 SYR-85-GMS SDL GMS
64411210/RFI-ADDM/64411C17.DWG

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SITE LOCATION

LEGEND:

- MWM9-02 — GROUNDWATER MONITORING WELL LOCATION
- BM7-02 — SOIL BORING LOCATION
- SW8-03 — SURFACE SOIL SAMPLE COLLECTION LOCATION
- TRESTLE
- APPROXIMATE AOI AREA
- M-7 = ELPO BUILDING/FLAMMABLE LIQUID STORAGE BUILDING
- M-9 = PLANT 11 OIL CONTAINMENT AREA

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.

0 80' 160'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOIs M-7 AND M-9 - SOIL

ENCORE

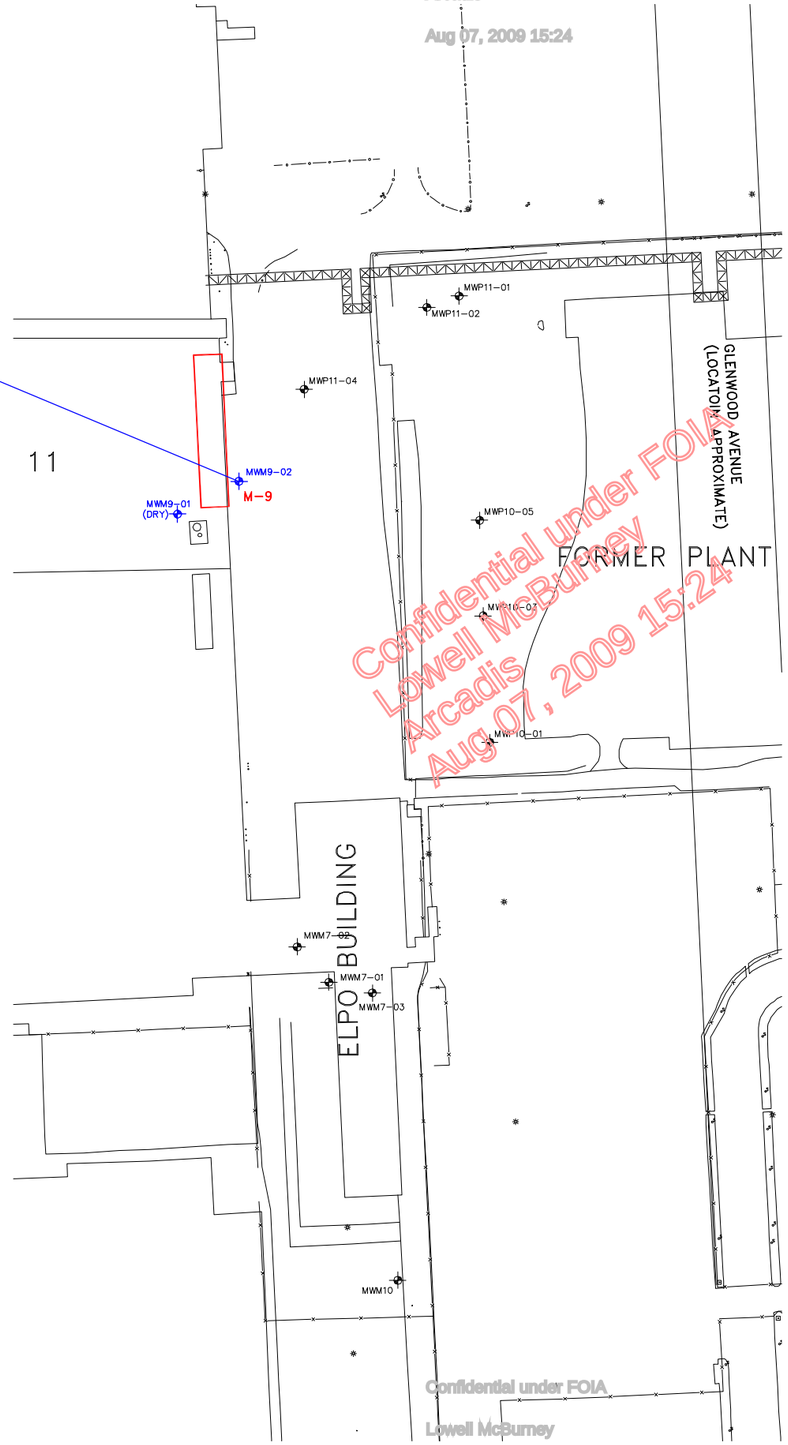
FIGURE 4-17

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PACESET/PLT-DL
11/26/03 SYR-85-GMS DJP GMS
64411210/RFI-ADDM/64411C18.DWG

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MWM9-02	2/1/02	11/14/02
VOC		
1,1,1-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1,2-Trichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethane	ND (0.001) U	ND (0.001) U
1,1-Dichloroethene	ND (0.001) U	ND (0.001) U
1,2-Dichloroethane	ND (0.001) U	ND (0.001) U
Acetone	R	ND (0.001) U
Benzene	ND (0.001) U	ND (0.001) U
cis-1,2-Dichloroethene	ND (0.0008) U	ND (0.0008) U
Ethylbenzene	ND (0.001) U	ND (0.001) U
Methylene chloride	ND (0.001) U	R
Tetrachloroethene	R	ND (0.001) U
Toluene	ND (0.001) U	ND (0.001) U
Trichloroethene	ND (0.001) U	ND (0.001) U
Vinyl chloride	ND (0.001) U	ND (0.001) U
SVOC		
2,4-Dimethylphenol	ND (0.008) U	ND (0.008) U
Benzo(a)pyrene	ND (0.008) U	ND (0.008) U
bis(2-Ethylhexyl)phthalate	ND (0.008) U	ND (0.008) U
Butyl benzylphthalate	ND (0.008) U	ND (0.008) U
Dibenz(a,h)anthracene	ND (0.008) U	ND (0.008) U
Methylphenol (Cresol)	ND (0.008) U	ND (0.008) U
Naphthalenephenol	ND (0.008) U	ND (0.008) U
PCB		
Total PCBs	ND (0.0094) U	ND (0.0094) U
INORG		
Antimony	0.0033 J	ND (0.025) U
Arsenic	0.0042 J	ND (0.01) U
Barium	0.049	0.049
Beryllium	ND (0.003) U	ND (0.003) U
Cadmium	ND (0.005) U	0.00029 J
Chromium Total	0.003 J	ND (0.01) U
Cobalt	0.0022 J	0.0034 J
Copper	ND (0.006) U	ND (0.006) U
Cyanide (total)	NS	NS
Iron	1.1	NS
Lead	ND (0.003) U	ND (0.003) U
Manganese	ND (0.01) U	0.0043 J
Nickel	0.0039 J	0.0073 J
Selenium	ND (0.008) U	ND (0.008) U
Thallium	0.00072 J	ND (0.001) U
Vanadium	0.0041 J	0.001 J
DIOXY		
2,3,7,8-TCDD Equivalent	NS	NS



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SITE LOCATION

LEGEND:

- MWM10 — GROUNDWATER MONITORING WELL LOCATION
- CONSTITUENT CONCENTRATION EXCEEDS INDUSTRIAL SCREENING CRITERIA
- TRESTLE
- APPROXIMATE AOI AREA
- M-9 = PLANT 11 OIL CONTAINMENT AREA

MICHIGAN PART 201 GENERIC CRITERIA FOR SOILS

RDC – RESIDENTIAL DIRECT CONTACT CRITERIA
IDC – INDUSTRIAL DIRECT CONTACT CRITERIA
RPSIC – RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION CRITERIA
RSVIC – RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
ISVIC – INDUSTRIAL SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
RVSIC – RESIDENTIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA
IVSIC – INDUSTRIAL INFINITE SOURCE VOLATILE SOIL INHALATION CRITERIA

MICHIGAN PART 201 GENERIC CRITERIA FOR GROUNDWATER

RDW – RESIDENTIAL DRINKING WATER CRITERIA
IDW – INDUSTRIAL DRINKING WATER CRITERIA
RGVIC – RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
IGVIC – INDUSTRIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA
GCC – GROUNDWATER CONTACT CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN PARTS PER MILLION (ppm).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND (0.25) – CONSTITUENT NOT DETECTED, ASSOCIATED DETECTION LIMIT PRESENTED IN BRACKETS.
5. J – ESTIMATED CONCENTRATION.
6. B – LABORATORY BLANK CONTAMINATION.
7. NS – NOT SAMPLED.
8. R – DATA REJECTED FROM DATA VALIDATION.

0 80' 160'
GRAPHIC SCALE

GENERAL MOTORS
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS RFI

AOI M-9 - GROUNDWATER

ENCORE

FIGURE 4-18

X: 64411X00, X01.DWG, 64411X01.GIF
L: ON=* OFF=REF, DATA_POINT
P: PAGESET/PLT-DL
11/26/03 SYR-85-GMS SDL GMS
64411210/RFI-ADDM/64411C19.DWG

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Lowell McBurney
Arcadis
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