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**Revitalizing Auto Communities Environmental Response (RACER) Trust**

# 2012 Corrective Measures Implementation (CMI) Annual Report and Requested Changes to Groundwater Monitoring Plan

Buick City (Formerly General Motors Corporation North American Operations Facility)

Flint, Michigan

March 29, 2013

ARCADIS

# 2012 CMI Annual Report

Revitalizing Auto Communities
Environmental Response
(RACER)Trust
Buick City Site
Flint, Michigan

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**List of Acronyms, Abbreviations, and Units of Measurement**

| | |
|---|---|
| AGMP | Annual Groundwater Monitoring Program |
| AOI | Area of Interest |
| AST | Aboveground Storage Tank |
| BBL | Blasland, Bouck and Lee |
| BGS | Below Ground Surface |
| CMI | Corrective Measures Implementation |
| CSX | CSX Corporation |
| FE | Flammability and Explosivity |
| FSP | Field Sampling Plan |
| GAI | Groundwater Acute Inhalation |
| GCC | Groundwater Contact Criteria |
| GMC | General Motors Corporation |
| GPR | Ground Penetrating Radar |
| GSI | Groundwater/Surface Water Interface |
| HDPE | High Density Polyethylene |
| HSWA | Hazardous and Solid Waste Amendments |
| LIF | Laser Induced Fluorescence |
| LNAPL | Light Non-Aqueous Phase Liquid |
| MDEQ | Michigan Department of Environmental Quality |
| MH | Manhole |
| MP | Monitoring Point |
| MPE | Multi Phase Extraction |
| NDW | Non-Residential Drinking Water |
| ng/L | Nanograms Per Liter |
| NGVIA | Groundwater Volatilization to Indoor Air Inhalation |
| NPDES | National Pollutant Discharge Elimination System |
| NPMP | NPDES Plus Monitoring Program |
| NPSIC | Non-Residential Soil Particulate Inhalation Criteria |
| NREPA | Natural Resources and Environmental Protection Act |
| NRSVIA | Non-Residential Soil Volatilization to Indoor Air |
| NSZD | Natural Source Zone Depletion |

| | |
|---|---|
| OSB | Oriented Strand Board |
| PCBs | Polychlorinated Biphenyls |
| PID | Photoionization Detector |
| RACER | Revitalizing Auto Communities Environmental Response |
| RCRA | Resource Conservation and Recovery Act |
| RDW | Residential Drinking Water |
| RFI | RCRA Facility Investigation |
| RGVIA | Residential Groundwater Volatilization to Indoor Air Inhalation |
| QAPP | Quality Assurance Project Plan |
| SVOC | Semi-volatile Organic Compound |
| TSCA | Toxic Substances Control Act |
| µg/L | Micrograms per Liter |
| USEPA | United States Environmental Protection Agency |
| VOC | Volatile Organic Compound |
| WMU | Waste Management Unit |
| %RE | Percentage of Reference Emitter |

# 1. Overview of Corrective Measures Implemented

This 2012 Corrective Measures Implementation (CMI) Annual Report was prepared by ARCADIS on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust for the Buick City Site (formerly known as General Motors Corporation [GMC] North American Operations) (the Site), located in Flint, Michigan.

The CMI *Work Plan - Southend of the Former General Motors Corporation North American Operations Facility (Otherwise Known as Buick City)* was submitted to the United States Environmental Protection Agency (USEPA) on August 13, 2010. The CMI Work Plan was prepared to comply with requirements of the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. § 6901 et seq., and USEPA regulations at 40 C.F.R. Parts 260-271 and Part 124. This annual report was prepared to document and summarize corrective measures completed and implemented during the 2012 calendar year as well as investigations, testing and other activities completed in support of corrective measures design and implementation. The corrective measures are being implemented in accordance with the *Final Decision and Response to Comments* (Final Decision) for the Southend of the Site issued by the USEPA on May 13, 2010.

## 1.1 Introduction

The Site is located at 902 East Leith Street in Flint, Michigan, in Genesee County and encompasses approximately 452 acres of land. It is generally bounded to the north by Stewart Avenue and Pierson Road, to the south by Harriet Street, to the east by James P. Cole Boulevard and CSX Corporation (CSX) Railroad, and to the west by Industrial Avenue and North Street. The portion of the Site located north of Leith Street (hereafter referred to as the Northend) was in part occupied by GMC for manufacturing operations until December 6, 2010. Factory demolition has been completed in both the Northend of the Site and the portion of the property located south of Leith Street (hereafter referred to as the Southend). A Site Location map is included as **Figure 1**.

## 1.2 Summary of 2012 Corrective Measures

The following Corrective Measures were implemented in 2012 and are discussed further in their respective sections of the report:

- A Laser Induced Fluorescence (LIF) investigation was performed at the Site from September 4 through September 17, 2012 and November 1 through November 2, 2012. The purpose of the LIF investigation was to further delineate the vertical and lateral extent of the Light Non-Aqueous Phase Liquid (LNAPL) areas located in the

Northend of the Site and to further define the extent of LNAPL impacts at the Southend of the Site in conjunction with the LIF Investigations completed in 2010 and 2011;

- The Area of Interest (AOI) 09-B multi-phase extraction (MPE) Treatment System (System) was installed between July 2012 and September 2012. The objective of the System is to apply vacuum to recovery wells in order to extract groundwater, LNAPL, and soil gas to remediate the AOI 09-B gasoline plume. System startup is scheduled for April 2013;

- A Natural Source Zone Depletion study was conducted at the Southend of the Site throughout 2012 to establish ongoing natural attenuation rates of LNAPL as a baseline for comparison to active LNAPL recovery technologies;

- A LNAPL transmissivity study was conducted at the Southend of the Site throughout 2012 to quantify relative LNAPL recoverability in this portion of the Site, as well as to focus LNAPL recovery efforts in areas where LNAPL is more recoverable;

- The National Pollutant Discharge Elimination System (NPDES) “NPDES Plus” monitoring program (NPMP) was continued at the Site to evaluate compliance with Michigan Part 201 Groundwater Surface Water Interface (GSI) criteria for the long-term protection of the Flint River. The NPMP consists of collecting monthly samples from up to 10 Site storm sewers during dry weather flow to assess the impact of groundwater infiltrating into the Site storm sewers;

- The annual groundwater monitoring event was conducted from November 5 through November 14, 2012. The purpose of the annual groundwater monitoring event is to monitor groundwater quality and flow patterns, and LNAPL plumes at the Site;

- Quarterly inspections of surface cover in select areas were completed in order to protect future Site users from near surface soils that exceed direct contact criteria. The engineering controls include maintaining the surface cover consistent with existing conditions at five AOIs located in the Southend of the Site;

- Soil sampling activities were performed at the AOI 29-A select surface cover area in December 2012 to better define the extent of lead surficial soil impacts at AOI 29-A in order to minimize the area requiring additional surface cover;

- Soil sampling activities were performed at the AOI 83/84-3 area in September 2012 to delineate lead impacted soils identified during the RCRA Facility Investigation (RFI); and

- Several wells located in former building basements and off-Site properties were abandoned.

In addition to the above corrective measures, this report also includes a brief summary of the following significant activities completed at the Site in 2012:

- Storm sewer outfall containment areas continue to be inspected for oil/debris accumulation, absorbent boom saturation, and that the containment booms are in good condition and functioning properly;

- The Outfall 003/004 Storm Water Diversion and Treatment System (Outfall 003/004 System) continues to operate and is maintained by an operations and maintenance technician. Maintenance procedures and events occur based on field observations and levels;

- Closure activities at the Northend and Southend RCRA Waste Management Units (WMU) were completed and the Certification of Closure Reports were submitted to the Michigan Department of Environmental Quality (MDEQ) for approval;

- Soil sampling was conducted to evaluate subsurface impacts associated with the WMU #3 area in September 2012;

- Soil and groundwater sampling activities were performed at the northern parcel area (formerly Building 38) in October 2012 to assess current Site conditions;

- Investigatory and sampling activities were performed to determine the presence or absence of drums in the former Factory 31 Heat Treat basement area in September 2012; and

- In 2012, absorbent boom studies were conducted along the Outfall 002, 003, and 005 storm sewers at select locations to determine oil infiltration locations and identify potential bulkheading locations. Bulkheading activities were performed at the Site in February and March 2013 to decrease/eliminate LNAPL infiltration to the on-Site storm sewers.

## 2. LNAPL Characterization

LNAPL characterization activities were conducted at the Site consistent with the *LIF Work Plan* dated June 12, 2012 and the CMI Work Plan, prepared by ARCADIS. The LNAPL characterization through LIF investigations was organized into three phases: the first phase of the LIF investigation was conducted at the Southend of the Site in 2010 and reported in the 2010 CMI Report; the second phase of the LIF investigation was conducted in 2011 and reported in the 2011 CMI Report; and the third phase of the investigation was conducted in September and November 2012 and targeted areas that could not previously be accessed, which were now accessible due to demolition of the remaining buildings on-Site' and addressed data gaps from the first two phases of investigation.

### 2.1 LIF Investigation

The 2012 LIF investigation was performed to further delineate the vertical and lateral extent of the LNAPL areas located at the Site in conjunction with the LIF Investigations completed in 2010 and 2011. The known LNAPL areas included in the 2012 investigation in the Northend are located at AOI 03-1, AOI 05-1/05-5, AOI 10-1/10-4, AOI 36-1 (gasoline and mineral seal/hydraulic oil plumes), AOI 36-2, AOI 36-5, AOI 81-2, AOI 83/84-2, AOI 83/84-4, and AOI 86-1 (**Figure 2a**). The known LNAPL areas included in the 2012 investigation in the Southend are located at AOI 02-B, AOI 40-A, -B, and -16C (**Figure 2b**).

#### 2.1.1 Summary of Field Activities

ARCADIS and Stock Drilling, Inc. of Ida, Michigan (Stock) performed the LIF investigation from September 4 through September 17, 2012 and November 1 through November 2, 2012. The purpose of the LIF investigation was to further define the vertical and horizontal extent of LNAPL impacts from historic Site activities. Stock provided the LIF equipment and advanced LIF soil probes under the direct supervision of ARCADIS personnel.

During the 2012 investigation a total of 95 borings were advanced at the Site. A total of 86 LIF borings were completed in the Northend and nine LIF borings were completed in the Southend. Borings were completed to an average depth of approximately 30 feet below ground surface (bgs). In addition, because a different LIF contractor was used during the 2012 event than prior events, calibration borings were completed to confirm that the responses between Stock and the prior LIF contractor were similar. While LIF equipment is operated on the same principles, the response factor to each company's reference standard can vary. Three calibration borings were completed and ARCADIS confirmed that the responses were similar.

A detailed description of the LIF technology and the methods and practices used during implementation of the investigation are presented in the 2011 CMI Report.

LIF boring locations were focused in the areas where LNAPL has been observed in monitoring wells in order to further delineate the extent of impacts. Additional "step out" borings were completed to delineate impacts. **Figure 2a** (Northend) and **Figure 2b** (Southend) present the locations of the LIF borings and step out locations.

#### 2.1.2 Summary of Results

The LIF logs were analyzed to determine the lateral and vertical extent of LNAPL in the subsurface and LNAPL speciation. Visual observations and interpretations of the 95 LIF logs established a Site-specific "background" fluorescence response. If a response was less than 5%RE (Percentage of Reference Emitter) or the max %RE was at a depth less than 5 feet bgs (the area that was hand cleared in the boring), these responses were considered attributable to "background". LIF responses greater than this "background" level were considered indicative of impact.

LIF borings were identified as LIF, followed by the AOI number in which the boring was located, followed by the boring number (the order that the borings were drilled in that AOI) as LIF-XX-YYY. As an example, the 17$^{th}$ LIF boring drilled in AOI 40 would be identified as LIF-40-017.

**Figures 2a** and **2b** show the areal distribution of LIF response as color coded dots based on the maximum fluorescence at each LIF boring in the Northend and Southend, respectively. Numerous refusals were encountered during the 2012 investigation and are depicted on the Figures as an "X". **Table 1** summarizes the results of the 2012 LIF investigation by AOI and includes the borings completed during this investigation, the maximum signal percentage, the maximum signal depth, and the final depth of each boring. Table 1 also includes a summary of the investigation results. LIF boring logs that graphically present the output generated by the LIF equipment are included in the Direct Sensing Report by Stock presented in **Appendix A**.

The LIF investigation event yielded valuable data on the areal and vertical extent of impacts associated with the Site LNAPL plumes. **Figures 3a** and **3b** show the lateral extent of impacts in the vicinity of each of the LNAPL plumes. The extent of impact was delineated using the LIF borings, as well as historic Site data including presence or absence of LNAPL in monitoring wells, soil boring log observations, and oil shake test results.

Based on the results of the LIF investigation additional soil borings and/or monitoring wells will be completed at the AOI 36-1 – Mineral Seal/Hydraulic Oil plume; the AOI 05-1/05-5 – Hydraulic Oil Plumes; the AOI 10-1/10-4 – Hydraulic Oil Plumes; and beneath Factory 83/84 south of the AOI 83/84-2 Cutting Oil Plume and west of the AOI 83/84-4 Cutting Oil Plume. In these areas the LIF results indicate that the impacts extend well beyond the currently defined extents of LNAPL, so further delineation is necessary to gain a better understanding of the extent of LNAPL.

### 2.2 AOI 09-B System Design and Installation

The AOI-09-B MPE System was designed to apply vacuum to recovery wells in order to extract groundwater, LNAPL, and soil gas to remediate the AOI 09-B gasoline plume. The system will dewater the more permeable sandy deposits in the shallow saturated zone where most of the LNAPL resides, making these zones accessible for induced air flow. Air flow through the dewatered zone will volatilize and recover volatile organic compounds (VOCs) present in LNAPL. It is anticipated that the bulk of the contaminant recovery will be though soil gas extraction because the gasoline LNAPL at AOI 09-B is highly volatile. The System will be operated until the daily total mass recovery (liquid and vapor) is less that 0.1% different from the prior total mass recovery, indicating that future recovery will be insignificant compared to the mass recovered to date. Analytical samples will be collected at least monthly to calculate recovery rates of the MPE system. Two consecutive monthly sampling events that indicate daily mass recovery is less than 0.1% different from the prior daily total mass is a reasonable endpoint.

Installation of the system was performed between July 2012 and September 2012. The scope of work consisted of establishing utility connections (sanitary sewer, electric and natural gas), impacted soil disposal, High Density Polyethylene (HDPE) pipe fusion welding and installation, pipe chase construction, MPE well vault installation, and treatment building installation. Additional professional services included the use of a ground penetrating radar (GPR) contractor to locate potential unknown/unidentified subsurface utilities. As-built construction drawings and weekly progress reports for the project are provided in **Appendix B**.

The AOI-09-B Site was cleared and grubbed to facilitate access for construction activities. All pipe chase routes (connections between the MPE wells and the MPE well manifolds on the treatment building) were painted on the ground surface to assist with the installation of the pipe chase. A GPR survey was completed to identify potential unknown/unidentified utilities in the proposed utility corridor. Upon completion of the GPR survey, concrete conduit containing an unknown live electric line was discovered running through the middle of the proposed utility corridor (for the entire length between Hamilton Avenue and the treatment building location). In order to

maintain proper utility separation distances, the 3-inch sanitary sewer and the gas and electrical conduits were installed in separate trenches, immediately east and west of the previously unknown electric line, respectively.

The prefabricated treatment building, thermal oxidizer, and product tank were delivered and placed at the AOI-09-B Site on August 8, 2012. The treatment building consists of a 10 foot by 40 foot steel building containing groundwater remediation components (MPE blowers, oil/water separator, air striper, bag filter assembly and carbon vessels). HDPE piping and pipe chase formwork were installed and tested in accordance with the contract drawings. Approximately 6 to 12 inches of crushed aggregate was installed over the oriented strand board (OSB) to protect the pipe chase. In order to secure the System, an 8 foot tall chain link fence with concertina wire was installed around the perimeter of the System and an alarm system was installed.

In October 2012, an issue with the natural gas connection installed by Consumer's Energy (Consumers) was identified during the system startup. Consumers had installed a low pressure reducer that did not meet the specification provided to them by ARCADIS. This issue was subsequently corrected by Consumers in December 2012. During the initial startup all of the system components were inspected and a soft start-up was completed with all components appearing to be in good condition; however, due to delays associated with the gas connection and winters freezing temperatures the system startup is scheduled for April 2013.

### 2.3 Natural Source Zone Depletion (NSZD) Study

The objective of the NSZD study conducted at the Southend of the Site was to establish ongoing natural attenuation rates of LNAPL at the Site as a baseline for comparison to active LNAPL recovery technologies. Due to the shallow depth to groundwater at the Site NSZD was measured through two methods, via soil gas profiles from nested soil gas probes and carbon dioxide traps from Colorado State University (CSU), quarterly from February through September 2012 in accordance with the *Southend: Natural Source Zone Depletion and LNAPL Transmissivity Measurement Work Plan* (ARCADIS, 2011b). The nested soil gas probes and/or carbon traps were installed at 11 locations in LNAPL areas AOI 02-B, AOI 12-A, -B, and –C, and AOI 40-A, -B, and 16-C.

A summary of NSZD results will be submitted to RACER and the USEPA in 2013.

### 2.4 LNAPL Transmissivity Study

The objective of the LNAPL transmissivity study was to quantify relative LNAPL recoverability at the Southend of the Site. LNAPL transmissivity will also be used to

focus LNAPL recovery efforts in areas where LNAPL is more recoverable and/or be used as a test to establish the practicable limits of LNAPL recovery.

LNAPL baildown tests were completed at the Site in December 2011, March 2012, June 2012, and September 2012 in accordance with the *Southend: Natural Source Zone Depletion and LNAPL Transmissivity Measurement Work Plan* (ARCADIS, 2011). Transmissivity testing was completed at LNAPL areas AOI 02-B, AOI 09-A, AOI 12-A, -B, and –C, and AOI 40-A, -B and 16-C.

The majority of the monitoring wells at the Southend of the Site exhibited minimal LNAPL discharge from the formation indicating that hydraulic LNAPL recovery is not practicable. At monitoring well RFI-12-23 transmissivity results indicate that the recovery is likely not practicable; however, during final remedy selection other plume-specific knowledge and factors will be assessed to determine if hydraulic recovery is practicable. Monitoring well RFI-40-7R2 exhibited transmissivity that indicates LNAPL recovery at this well may be practicable.

The results of the LNAPL transmissivity study are summarized in the LNAPL Transmissivity Evaluation and Results memorandum dated February 14, 2013 included as **Appendix C**.

## 3. Groundwater Monitoring

Groundwater monitoring is conducted at the Site through two programs; the National Pollutant Discharge Elimination System (NPDES) Plus Monitoring Program (NPMP) and the Annual Groundwater Monitoring Program (AGMP). The NPMP program monitors the Site's storm sewers for impacted groundwater infiltration, while the AGMP monitors the downgradient property boundary for off-Site groundwater migration.

### 3.1 NPDES Plus Monitoring Program

The NPMP has continued to be implemented at the Site to monitor compliance with MDEQ Part 201 GSI criteria for the long-term protection of the Flint River. The monthly NPMP sampling continued to be completed at Site Outfalls 001, 002, 003, 005, 006, 007, 009, 010, 011, and 013 (see **Figure 4**). The NPMP primary Monitoring Points (MP) are co-located with the monitoring points that have been identified in the current and previous Site NPDES permits.

On May 29, 2012 the USEPA approved the modifications to the sampling program proposed in the 2011 CMI Annual Report. The modifications were implemented at the Site starting June 2012. **Table 2** presents the currently approved NPMP sampling program.

All NPMP samples were collected as grab samples during dry weather flow using a peristaltic pump fitted with tubing, with the exception of the polychlorinated biphenyl (PCB) samples which were collected using an automated sampler to collect 24-hour composite samples as indicated on **Table 2**. The samples were collected and analyzed using the procedures described in the Site FSP and QAPP (Appendix C of the RFI Work Plan [BBL, 2001]).

In addition to the routine monthly sampling events an upgradient sampling event was completed in July 2012 to assess contributions from off-Site upgradient sources. The five upgradient Site storm sewer locations sampled included: MH 3-25-3, MH 3-31, MH 3-51, and MH 4-21, for Outfall 003/004, and MH 13-14 for Outfall 013. One additional upgradient sampling location at Outfall 001 (MH 1-7) was also identified to be sampled, but was observed to have too low a flow to be sampled at the time of sampling in 2012. The upgradient sampling event was coordinated with the monthly NPMP sampling. Two sampling teams coordinated efforts in order to sample the upgradient location and NPMP location at approximately the same time to help make sure the samples were representative.

### 3.1.1 Summary of Results

The analytical results of the 2012 NPMP sampling events are presented in **Table 3**. The historic NPMP data are presented in **Appendix D** for reference.

#### *3.1.1.1 Outfall 001 Results Evaluation*

Outfall 001 is sampled from MP001, which is located at MH 1-3 (**Figure 4**). Samples were collected during 10 out of 12 sampling events in 2012. Five of the samples exceeded GSI criteria for mercury, one sample exceeding for thallium, and one sample for zinc.

Impacts at Outfall 001 are primarily associated with mercury; however, the August 2011 upgradient sampling data indicate that off-Site upgradient sources are impacting the water discharging at Outfall 001. The analytical data are presented on **Table 3**.

#### *3.1.1.2 Outfall 002 Results Evaluation*

Outfall 002 is sampled from MP002, which is located at MH 2-19 (**Figure 4**). Samples were collected at MP002 during all 12 of the sampling events in 2012. When compared to GSI criteria there are three samples exceeding for arsenic, one sample exceeding for chromium, two samples exceeding for copper, seven samples exceeding for cyanide, one sample exceeds for lead, 11 samples exceed for mercury, three samples exceed for silver, and one sample exceeds for vanadium. The analytical data are presented on **Table 3**.

The Outfall 002 storm sewer is currently in the process of being bulkheaded. Once bulkheading is complete the Site's contribution to the Outfall 002 storm sewer will be eliminated.

#### *3.1.1.3 Outfalls 003 and 004 Results Evaluation*

Outfall 003 is sampled from MP003, which is located at MH 3-3 (**Figure 4**). Following the installation of the Outfall 003/004 System in January 2011 the discharge at MP003 is now a combined flow from the Outfall 003 and 004 systems. This section presents data from samples of the combined flow. Samples were collected during all 12 of the sampling events in 2012. When Outfall 003 samples are compared to GSI criteria there is one sample exceeding for arsenic, two samples exceeding for cyanide, eight samples exceeding for mercury, and one sample exceeding for silver. The analytical data are presented on **Table 3**.

The upgradient sampling data collected in July 2012 are presented in **Table 4** with the corresponding downgradient sample results. Four upgradient samples were collected at MH 3-25-2, MH 3-31, MH3-51, and MH4-21 (**Figure 4**), which are located at the upgradient property boundary and are representative of the contribution from upgradient off-Site sources. The MH 3-25-3 sample exceeded the GSI criteria for mercury. The MH 3-31 sample exceeded the GSI criteria for total chromium, copper, total cyanide, lead, mercury, and zinc. The MH 3-51 sample exceeded the GSI mercury criteria. The MH 4-21 sample exceeded the GSI criteria for lead and mercury.

Mercury was detected in the corresponding sample collected in July from MP003 above GSI criteria at a concentration of 30 ng/L. Mercury was detected in the upgradient samples collected from MH 3-25-3, MH 3-31, MH 3-51 and MH 4-21 at concentrations of 110 ng/L, 41 ng/L, 1.6 ng/L, and 11 ng/L, respectively, which all exceed MDEQ Part 201 GSI criteria. The data indicate that upgradient off-Site sources are likely a significant contributor to the mercury impacts that are being detected at MP003.

*3.1.1.4 Outfall 005 Results Evaluation*

Outfall 005 is sampled from MP005, which is located at MH 5-6 (**Figure 4**). Samples were collected at MP005 during 11 out of 12 sampling events in 2012. When compared to GSI criteria there are five samples exceeding for arsenic, one sample exceeding for copper, one sample exceeding for lead, and five samples exceeding for mercury. The analytical data are presented on **Table 3**.

The Site's contribution to the Outfall 005 storm sewer is currently in the process of being bulkheaded. Once bulkheading is complete the Site's contribution to the Outfall 005 storm sewer will be eliminated

*3.1.1.5 Outfall 006 Results Evaluation*

Outfall 006 is sampled from MP006, which is located at MH 6-2 (**Figure 4**). Samples were collected at MP006 during 11 out of 12 sampling events in 2012. When compared to GSI criteria there are five samples exceeding for mercury. The analytical data are presented on **Table 3**.

*3.1.1.6 Outfall 007 Results Evaluation*

Due to access issues, the primary sampling location (MH 7-1) was changed after the September 2010 sampling event to where Outfall 007 discharges into the Flint River. This sample location is called MP007 (**Figure 4**). Samples were collected at MP007

during 11 out of 12 sampling events in 2012. When compared to GSI criteria there is one sample exceeding for lead and eleven samples exceeding for mercury. The analytical data are presented on **Table 3**.

The Site's contribution to the Outfall 007 storm sewer is currently in the process of being bulkheaded. Once bulkheading is complete the Site's contribution to the Outfall 007 storm sewer will be eliminated

*3.1.1.7 Outfall 009 Results Evaluation*

Outfall 009 is sampled from MP009, which is located at MH 11-7 (**Figure 4**). Samples were collected during at MP009 during all of the12 sampling events in 2012. When compared to GSI criteria there are six samples exceeding for cyanide and 10 samples exceeding for mercury. The analytical data are presented on **Table 3**.

The Outfall 009 storm sewer joins the Outfall 011 storm sewer at Hamilton Avenue and discharges to the Flint River through Outfall 011. The Outfall 011 storm sewer is sampled at the discharge point and the Outfall 011 samples do not exceed criteria.

*3.1.1.8 Outfall 010 Results Evaluation*

Outfall 010 is sampled from MP010, which is located at MH 10-5 (**Figure 4**). Samples were collected at MP010 during all 12 of the sampling events in 2012. When compared to GSI criteria there is one sample exceeding for arsenic, two samples exceeding for chromium, one sample exceeding for copper, 11 samples exceeding for cyanide, two sample exceeding for lead, one sample exceeding for manganese, eight samples exceeding for mercury, and one sample exceeding for zinc. The analytical data are presented on **Table 3**.

*3.1.1.9 Outfall 011 Results Evaluation*

Due to access issues, the primary sampling location (MP011) was changed to where Outfall 011 discharges into the Flint River; however, this secondary location was sampled only two of the scheduled eight sampling events in 2012 due to the river level being up to the outfall discharge point making an accurate grab sample not possible. Per the revised sampling schedule Outfall 011 was slated for quarterly sampling beginning in July 2012. The results of the two samples did not exceed the GSI criteria. The analytical data are presented on **Table 3**.

*3.1.1.10 Outfall 013 Results Evaluation*

Outfall 013 is sampled from MP013, which is located at MH 13-6 (**Figure 4**). Samples were collected at MP013 during 11 of the 12 sampling events in 2012. When compared to GSI criteria there are three samples exceeding for copper, one sample exceeding for cyanide, and 10 samples exceeding for mercury. Analytical data are presented on **Table 3**.

The upgradient sampling data collected in July 2012 are presented in **Table 4**. The Outfall 013 upgradient sample was collected at MH 13-14, which is located at the upgradient property boundary and would be representative of the contribution from upgradient off-Site sources. The analytical data show that mercury was detected in the upgradient sample at a concentration of 16 ng/L which exceeds MDEQ Part 201 GSI criteria. The corresponding downgradient sample collected at MP013 detected mercury at a concentration of greater than 100 ng/L. Both samples exceed MDEQ Part 201 criterion for mercury of 1.3 ng/L; however, the on-Site sample concentration is higher that the upgradient sample. In addition, the on-Site portion of the Outfall 013 storm sewer also receives run off from Harriet Street, Industrial Ave, and North Avenue.

3.1.2 Requested Changes to the Monitoring Plan

The requested changes to the NPMP Monitoring Plan are based on a review of the 2012 monthly outfall monitoring data (**Table 3**). The current sampling frequency and analyte list for each monitoring point is presented on **Table 2**.

The following rationale was used to determine the proposed 2013 NPMP Sampling Plan including determining the sampling frequency and analyte list for each monitoring point:

1) If an analyte has not been detected in the past 12 months or has only been detected at concentrations that are less than 75% of the GSI criteria then no additional sampling of that analyte is recommended;

2) If in the past 12 months an analyte was detected in one or more samples at a concentration less than 75% of GSI criteria and the data collected to date show an increasing trend, then quarterly sampling is recommended for that analyte;

3) If in the past 12 months an analyte was detected in one or more samples at a concentration greater than 75% of GSI criteria then quarterly sampling is recommended for that analyte;

4) In accordance with NREPA Act 451 of 1994, Section 324.20120e(19), if a groundwater contamination plume is entering a sewer that discharges to surface water, and the GSI pathway is relevant, the compliance point is at the sewer system outfall to surface water; therefore, if samples collected from the outfall discharge point do not exceed GSI criteria, then no further sampling is recommended for that Outfall.

The 2013 Sampling Plan was developed based on these criteria and the outfall specific conditions. The proposed 2013 Sampling Plan is summarized on **Table 5**.

#### 3.1.3 Response Plan

Nine of the ten outfalls sampled during the NPMP detected select metals at concentrations exceeding GSI criteria. The following recommendations are made to respond to these metals exceedances:

1) Bulkheading of Outfalls 002, 005, and 007 and select laterals of Outfall 003 will be completed in 2013. Bulkheading will eliminate the Site's contribution to Outfalls 002, 005 and 007; therefore, once bulkheading is complete monthly sampling will be discontinued.

2) Additional samples will be collected from the Outfall 001, 003/004, 006, 010, and 013 discharge points (at the Flint River) in order to demonstrate compliance with the MDEQ GSI criteria. If two consecutive samples collected from the outfall discharge point do not exceed GSI criteria, then no further sampling is recommended for that Outfall. At Outfalls 001, 003/004, and 013 samples will also be collected from the upgradient property boundary to evaluate upgradient off-Site contribution. In accordance with Natural Resources and Environmental Protection Act (NREPA) Act 451 of 1994, Section 324.20120e(19), if a groundwater contamination plume is entering a sewer that discharges to surface water, and the GSI pathway is relevant, the compliance point is at the sewer system outfall to surface water, which shall account for any applicable mixing zone for the sewer system outfall.

   The discharge point samples will be collected in conjunction with the quarterly samples collected from the downgradient property boundary.

3) Based on the results of the compliance point sampling at the outfalls an evaluation of additional bulkhead installation will be completed.

4) Based on the results of the compliance point sampling at the outfalls a review of groundwater and surface soil data may be completed to prepare a plan to

move the sampling locations upstream each month to try to determine the source area of the GSI impacts.

### 3.2 Annual Groundwater Monitoring Event

The 2012 Annual Groundwater Monitoring Event (2012 Monitoring Event) was completed in accordance with the plan presented in the 2011 Annual CMI Report. The 2012 Monitoring Event was conducted from November 5 to November 14, 2012 and included collecting groundwater level/ LNAPL presence and thickness measurements and groundwater samples. The groundwater level and LNAPL presence/thickness monitoring locations included in the 2012 program are presented on **Tables 6** and **7** for the Northend and Southend of the Site, respectively. The groundwater quality monitoring locations included in the 2012 monitoring event are presented in **Table 8**.

#### 3.2.1 Monitoring Network Inspection and Maintenance

Repairs and/or maintenance were performed in 2012 on select monitoring wells. These activities included: the abandonment of monitoring wells RW-4, 20-146, 20-606, RFI-36-45, RFI-36-51, RFI-10-30, RFI-40-11, RFI-40-13, RFI-40-15, 40-303, RFI-09-07 and RFI-40-14 (further discussed in Section 5); the redevelopment of RFI-36-20; the installation and development of monitoring well RFI-10-37; and the installation of security bolts to monitoring wells that samples are collected from.

In addition, a number of monitoring wells were not able to be gauged (i.e. water level or LNAPL presence measurement) for the following reasons: wells not accessible (access agreement not finalized), wells damaged or blocked, or wells could not be located. A number of monitoring wells were not able to be located following Site demolition activities. If a well was not able to be gauged the reason is documented on **Table 9**.

Recommendations for repairing, replacement and/or abandonment of Site monitoring wells will be completed following approval of the 2013 proposed monitoring plan. Alternate locations will be selected (where possible) to replace wells that were damaged, inaccessible, or could not be found. Monitoring wells selected abandonment will be submitted to USEPA for review and approval.

#### 3.2.2 Groundwater Level and LNAPL Presence Measurements

As part of the 2012 Monitoring Event, ARCADIS completed a Site-wide round of groundwater level and LNAPL presence and thickness measurements, which included attempting to collect measurements from 148 locations listed in **Table 6** (Northend) and 107 locations listed in **Table 7** (Southend).

The monitoring well locations for the Northend and Southend are shown on **Figures 5** and **6**, respectively. Due to limited access to off-Site property wells, expired access agreements for DuPont property, damaged or inaccessible wells, and wells that could not be located, 228 of the 255 wells originally planned monitoring wells were gauged for groundwater elevation and LNAPL thickness. Prior to the 2013 Monitoring Event alternate locations will be selected (where possible) to replace wells that were damaged, inaccessible, or could not be found.

*3.2.2.1 Groundwater Level Evaluation*

Groundwater level measurements were collected and are summarized in **Table 9**. The general groundwater flow directions at the Site are shown on **Figures 5** and **6**. **Figure 5** shows that groundwater flow directions at the Northend are to the northeast in the northern portion of the Northend; to the east in the central portion of the Northend; and to the southeast in the southern portion of the Northend. **Figure 6** show the groundwater flow in the Southend of the Site is primarily to east/southeast towards the Flint River. As shown in the 2011 CMI report, groundwater flow is also locally influenced by the presence of storm sewers that traverse the Site.

*3.2.2.2 LNAPL Presence Evaluation*

The LNAPL presence and thickness measurements were compared to historical measurements generated during previous Site investigation and monitoring events.

**Figures 5** and **6** present the results of the 2012 LNAPL presence evaluation. The figures show the historical locations where LNAPL has been detected in monitoring wells in a light orange color. The locations where LNAPL was detected at a thickness of 0.01 feet or greater during the 2012 Monitoring Event are indicated in a dark orange color.

The observation of ephemeral LNAPL in monitoring wells is a common problem at sites with seasonally fluctuating water tables. Based on measured LNAPL thicknesses, there is generally an inverse relationship between groundwater elevation and apparent LNAPL thickness in wells (that is, lower groundwater elevations lead to increased LNAPL thicknesses and vice versa). As groundwater elevations fall LNAPL is observed more frequently in monitoring wells. When an increase in groundwater elevation occurs, LNAPL is suppressed by the elevated groundwater levels.

During the 2012 Monitoring Event LNAPL presence at the Site was generally consistent with historical data and the LNAPL plumes at the Site continue to be stable.

These monitoring wells will remain in the annual monitoring program. Additional wells may be installed for monitoring LNAPL at the existing LNAPL plumes, depending on the results of subsequent investigations and the remedial actions taken in those areas. These wells will be installed, as necessary, following USEPA approval of the remedial design of each of the LNAPL plumes.

#### 3.2.3 Groundwater Quality Monitoring Program

A total of 50 monitoring wells were to be sampled during the 2012 Monitoring Event for the purpose of water quality analysis. **Table 8** presents the monitoring well locations included in the groundwater quality monitoring program, the specific analyses to be completed for each sampled location, and the rationale for the inclusion of each monitoring well in the sampling program.

The groundwater quality monitoring program is defined based on three monitoring well classifications: sentinel wells, plume fringe wells, and plume wells, as discussed below:

1) Sentinel Wells - The purpose of these wells is to monitor plume stability and/or to determine if impacts have extended past the known plume footprint.

2) Plume Fringe Wells – Plume fringe wells are selected for monitoring in locations where the concentrations of constituents are fluctuating above and below criteria, indicating that the well is at the fringe of the plume. The purpose of these samples is to monitor plume stability and concentrations.

3) Plume Wells –The purpose of these samples is to determine the current concentrations at the downgradient portion of the plume.

The groundwater samples were collected, analyzed and validated using methods and procedures consistent with those employed previously at the Site, as described in the Site's Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) (Appendix C of the RFI Work Plan [Blasland, Bouck & Lee (BBL), 2001]) and the CMI Work Plan. Each well was purged until measured field parameters (i.e., temperature, specific electrical conductivity, dissolved oxygen, oxidation/reduction potential, pH and turbidity) stabilized. These field-measured data are summarized in **Table 10**. Groundwater samples were then collected; submitted to Merit Analytical Laboratories of East Lansing, Michigan, as specified in the FSP (BBL 2001); and analyzed using the procedures specified in the QAPP (BBL 2001).

*3.2.3.1 Data Evaluation*

The criteria for groundwater data evaluation at the Site have been updated to reflect the restrictions required in the Final Decision. The following deed restrictions will be placed on the Site:

- Land use at the Site will be restricted to Non-residential use; and
- Groundwater use on RACERS's property at the Site will be restricted to sampling and other regulatory testing. Drinking water use in the saturated zones beneath the Site will be prohibited.

Because of the future prohibition for on-Site drinking water, the laboratory analytical data for the 2012 Monitoring Event, as well as historical data were compared to MDEQ Part 201 criteria as follows:

- All data were compared to GSI, Groundwater Contact Criteria (GCC),; Groundwater Acute Inhalation Screening Level (GAI); Non-Residential Groundwater Volatilization to Indoor Air Inhalation (NGVIA); and Flammability and Explosivity Screening Level (FE); and
- In addition, groundwater samples collected from off-Site monitoring wells and on-Site monitoring wells located within 200 feet of the downgradient property boundary were also compared to Residential Drinking Water (RDW) and Residential Groundwater Volatilization to Indoor Air Inhalation (RGVIA) criteria.

The Site groundwater data show that the exceedances are primarily of GSI and RDW criteria. The groundwater exceedances of GSI criteria were then further evaluated to determine whether the GSI pathway is relevant. As discussed in Section 3.1 above, in accordance with NREPA Act 451 of 1994, Section 324.20120e(19), if a groundwater contamination plume is entering a sewer that discharges to surface water, and the GSI pathway is relevant, the compliance point is at the sewer system outfall to surface water, which shall account for any applicable mixing zone for the sewer system outfall. The GSI pathway is not considered relevant for the following outfall drainage areas:

- At Outfalls 002, 005, 006 (west of the railroad tracks), 007 and 008 the Site's contribution to the storm sewers has been or is in the process of being bulkheaded; therefore, the GSI pathway is not applicable;
- The NPMP data collected from Outfall 011 at the compliance point does not exceed GSI criteria; therefore, the GSI pathway is not applicable at Outfall 011 or

Outfall 009 (which combines with and discharge through the Outfall 011 discharge point); and.

- Evaluation of Outfall 012 indicates that there is no dry weather flow; therefore, the GSI pathway is not applicable.

In addition, as there have been no exceedances of GSI criteria for VOCs, Semi-volatile Organic Compound (SVOC)s, or PCBs in any of the NPMP samples collected to date, only the metals exceedances of GSI criteria are relevant. **Figures 7** and **8** present the groundwater exceedances of GSI criteria for metals for 2012 and historical groundwater quality data, where GSI criteria are applicable which includes Outfall drainage areas 001, 003/004, 006, 010, and 013.

**Figures 9** and **10** present the groundwater plumes located along the downgradient property boundary and off-Site, which exceed RDW criteria, based on 2012 and historical groundwater quality data.

*3.2.3.2 Summary of Field Activities*

Of the 50 monitoring wells included in the groundwater monitoring program, seven monitoring wells were not sampled. One well could not be located (RFI-10-31), one well had an obstruction (70-164), one well was dry (RFI-36-47), and four wells were not accessible due to non-finalized access agreements (RFI-36-20, MW-26, RFI-09-14, MW-23). The remaining 43 monitoring wells were sampled from November 5 to 14, 2012 by SampleServe.

*3.2.3.3 Summary of Results*

The laboratory analytical data for the 2012 Monitoring Event are summarized in **Table 11**. Historical groundwater data prior to 2012 is presented in **Appendix E**. The annual groundwater sampling locations are primarily located along the downgradient property boundary and off-Site; therefore, the analytical data were compared to GSI, GCC, GAI, RDW, RGVIA, NGVIA and FE criteria. Of the 43 monitoring wells sampled, one or more analytes were detected at concentrations exceeding criteria in 12 of those wells. These 12 monitoring wells are discussed further below. Analyte concentrations in the monitoring wells not specifically discussed in this section did not detect any constituents above criteria. The rationale for retaining or eliminating monitoring wells included in the current plan is discussed further in Section 3.2.3.4 and is presented in **Table 12**.

**Northend Monitoring Wells**

**07-01**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well 07-01 was submitted for analysis of VOCs. The analytical results indicate that tetrachloroethene and trichloroethene were detected at concentrations exceeding RDW criteria.

Concentrations of tetrachloroethene have been above RDW criteria since 2010 at concentrations ranging from 11 to 33 µg/L. Concentrations of trichloroethene have been increasing since 2010 (3 to 9 µg/L).

Monitoring well 07-01 is located downgradient of the CSX property which bisects the Site. While drinking water criteria are not applicable to on-Site monitoring wells, this point will be continue to be sampled as a plume fringe well to monitor the concentrations of constituents which traverse the CSX property.

**RFI-81-51**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-81-51 was submitted for analysis of VOCs. The analytical results indicate that tetrachloroethene and trichloroethene were detected at concentrations which exceed RDW criteria.

Concentrations of tetrachloroethene have been fluctuating above and below RDW criteria since 2005. Concentrations of trichloroethene have been fluctuating (0.8 to 82 µg/L) since 2005; however, the concentrations have been consistently above RDW criteria since 2007. RFI-81-51 is located at the downgradient property boundary and will continue to be sampled as a plume fringe well during the annual monitoring program.

**20-FP10R**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well 20-FP10R was submitted for analysis of VOCs. The analytical results indicate that benzene was detected at 9 µg/L which exceeds RDW criteria. RFI-10-37 was installed in 2012 as a downgradient monitoring point for 20-FP10R and is located at the Site property boundary. Benzene was not detected at RFI-10-37. Monitoring well 20-FP10R will not be recommended for continued sampling as part of the annual monitoring program, but will be replaced by RFI-10-37

**RFI-10-37**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-10-37 was submitted for analysis of VOCs. The analytical results indicate that trichloroethene was detected at 175 µg/L which exceeds RDW criteria. RFI-10-37 was installed in 2012 as a downgradient monitoring point for 20-FP10R and is located at the Site property boundary. RFI-10-37 will continue to be monitored during the annual monitoring program as a plume well.

**RFI-36-55R**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-36-55R was submitted for analysis of VOCs. The analytical results indicate that 1,1-dichloroethene and vinyl chloride were detected at concentrations which exceed RDW criteria. Since RFI-36-55 was replaced with RFI-36-55R in 2011 the concentrations of 1,1-dichloroethene and vinyl chloride have increased slightly and are now above criteria. The replacement location for RFI-36-55R is located slightly upgradient of original RFI-36-55 due to the presence of a utility. The data indicate that RFI-36-55R is likely located at the downgradient edge of the groundwater plume and will continue to be monitored as a plume fringe well during the annual monitoring program.

**RFI-36-02**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-36-02 was submitted for analysis of VOCs and arsenic. The analytical results indicate that arsenic was detected at 22 µg/L and exceeds GSI criteria. RFI-36-02 is located in the Outfall 001 drainage area. A review of the NPMP data collected from Outfall 001 since September 2010 do not show any exceedances GSI criteria for arsenic in the storm sewer. In addition, concentrations of arsenic at RFI-36-02 have continued to decrease since the high of 91 µg/L was detected in 2002.

RFI-36-02 will not be recommended for continued monitoring of arsenic; however, arsenic will be added to the analyte list for downgradient monitoring well RFI-36-47.

**RFI-10-33**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-10-33 was submitted for analysis of VOCs. The analytical results indicate that 1,1-dichloroethene was detected at 10µg/L and exceeds RDW criteria. The 2012 analytical results show that the concentration of 1,1-dichloroethene has remained

relatively consistent since 2005 (ranging from 1 to 15 µg/L) and has exceeded RDW criteria of 7 µg/L off and on during that time period.

Monitoring well RFI-10-33 is located off-Site, downgradient of the property boundary and will continue to be monitored as plume fringe well during the annual monitoring program.

**Southend Monitoring Wells**

**40-304**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well 40-304 was submitted for analysis of VOCs. The 2012 analytical results indicate that vinyl chloride was detected at a concentration which exceeds RDW and Non-residential Drinking Water (NDW) criteria. The 2012 analytical results show that the concentration of trichloroethene has remained relatively consistent since 2001 (ranging from 1.7 to 7 µg/L).

Monitoring well 40-304 is located at the downgradient property boundary near the CSX property located in the middle of the Site in the Southend; therefore, the exceedance of residential drinking water criteria will continue to be monitored as a plume well during the annual monitoring program.

**RFI-09-04R**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-09-04R was submitted for analysis of VOCs. The 2012 analytical results indicate that trichloroethene was detected at a concentration which exceeds RDW and NDW criteria. The 2012 analytical results show that the concentration of trichloroethene has remained relatively consistent since 2004 (ranging from 8 to 12 µg/L).

RFI -09-04R is located at the downgradient property boundary near RFI-09-53 (discussed below); therefore, the exceedance of residential drinking water criteria will continue to be monitored as a plume well during the annual monitoring program.

**RFI-09-53**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-09-53 was submitted for analysis of VOCs. The 2012 analytical results indicate that vinyl chloride, trichloroethene, and cis-1,2-dichloroethene were detected at concentrations which exceed RDW and NDW criteria. In addition, vinyl chloride also

exceeds GSI criteria. The 2012 analytical results show that the concentrations of vinyl chloride and trichloroethene are beginning to decrease, while the concentration of cis-1,2-dichloroethene continues to fluctuate.

RFI-09-53 is located in the Outfall 011 drainage area and there have been no exceedances of GSI criteria detected in the samples collected from the outfall; therefore, the GSI pathway is not relevant. However, RFI-09-53 is also located at the downgradient property boundary; therefore, the exceedances of residential drinking water criteria will continue to be monitored as a plume well during the annual monitoring program.

**RFI-12-42**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-12-42 was submitted for analysis of VOCs. The analytical results indicate that naphthalene was detected at 23 µg/L and exceeds GSI criteria; however, RFI-12-42 is located in the portion of the Outfall 006 drainage area located west of the railroad tracks. As this portion of Outfall 006 has been bulkheaded, the GSI pathway is not considered relevant. RFI-12-42 will not be recommended for additional monitoring.

**RFI-09-46**

During the 2012 Monitoring Event, the groundwater sample collected from monitoring well RFI-09-46 was submitted for analysis of VOCs. The 2012 analytical results indicate that although naphthalene was detected at a concentration which exceeds GSI criteria the concentrations of constituents detected at RFI-09-46 have continued to decrease. Monitoring well RFI-09-46 is located downgradient of LNAPL plume AOI 09-B and will continue to be will continue to be monitored as a plume well during the annual monitoring program.

#### *3.2.3.4 Response Plan*

As discussed in Section 3.2.3.1, the criteria for groundwater data evaluation at the Site have been updated to reflect the restrictions required in the Final Decision. As such the Site groundwater monitoring plan has also been updated to monitor the exceedances of criteria at the Site and the downgradient property boundary. The proposed sampling locations were selected to monitor the groundwater plumes presented on **Figures 7** through **10**. The proposed groundwater monitoring plan, including analytical parameters and sampling rationale for each monitoring location, is presented on **Table 12**. The groundwater plan proposes monitoring the plumes using a combination of sentinel wells, plume fringe wells and/or plume wells as discussed below:

1) Sentinel Wells – Sentinel wells were selected in locations where samples have either not previously been collected downgradient of the plume, or have not been collected in several years. The purpose of these samples is to monitor plume stability and/or to determine if impacts have extended past the known plume footprint.

2) Plume Fringe Wells – Plume fringe wells are selected for monitoring in locations where the concentrations of constituents are fluctuating above and below criteria, indicating that the well is at the fringe of the plume. The purpose of these samples is to monitor plume stability and concentrations.

3) Plume Wells – Plume wells were selected in locations near the downgradient edge of a known plume where samples have not been collected in several years. The purpose of these samples is to determine the current concentrations at the downgradient portion of the plume.

In the event that a proposed monitoring well is not able to be sampled then a suitable replacement well will be identified and sampled in its place, if possible.

**Table 12** also discusses sampling locations that have been eliminated from the sampling program. Reasons for eliminating a sampling location generally follow the rationale summarized below:

1) Sentinel location(s) replaced by a plume/plume fringe well(s) – If two or more rounds of samples have been collected from a sentinel well with no criteria exceedances detected; then the sentinel well was replaced with a plume/ plume fringe well to determine the current concentrations at the downgradient edge of the plume.

2) Plume/Plume Fringe well(s) replaced by a sentinel well(s) - If two or more rounds of samples have been collected from a plume/plume fringe well with criteria exceedances detected; then the plume/plume fringe well was replaced with a sentinel well to determine if the impacts extend past the known plume footprint.

3) Location eliminated because area no longer exceeds criteria – As discussed in Section 3.2.3.1, the criteria for groundwater data evaluation at the Site have been updated to reflect the land and groundwater use restrictions required in the Final Decision. As such the plumes at the Site have been updated as shown on **Figures 7** through **10**. Previous sampling locations that no longer monitor a plume have been eliminated.

4) Sentinel locations downgradient of LNAPL plumes do not exceed criteria – If no criteria exceedances have ever been detected at a sentinel location downgradient of an LNAPL plume; then the sampling location was eliminated.

# 4. Soil Corrective Measures

## 4.1 Maintenance of Select Surface Covers

During the RFI, lead was detected above the MDEQ nonresidential direct contact criteria of 900 milligram per kilogram (mg/kg) in soil samples collected from the areas requiring soil cover (ARSCs). In accordance with the selected final remedy presented in the *Final Decision and Response to Comments (Final Decision) for the Southend of the Site* (USEPA, May 2010), the CMI Work Plan required that institutional and engineering controls be implemented to protect future Site users from near surface soils that exceed direct contact criteria. The engineering controls include maintaining the surface cover consistent with existing conditions at the ARSCs located in the Southend of the Site.

Five AOIs (AOI Group 02-C, AOI Group 12-A, AOI Group 29-A, AOI Group 09-A, and AOI Group 09-B) contain six areas where surface cover is inspected and maintained on a quarterly basis. These areas were photographed and visually inspected as a baseline in July 2010. Quarterly inspections were performed in March, June, September and December 2012. During each inspection the condition of cover was inspected and documented in an inspection log. Documented items include the type of cover (concrete, stone, vegetation, etc.), the condition of concrete or asphalt cover (good, fair, poor), and whether or not conditions of the cover have changed since the last inspection date. Photos of each inspection area are also included with the inspection log. Inspection logs are included in **Appendix E**.

In addition to the above activities, soil sampling was performed at the AOI 29-A select surface cover area in December 2012 to better define the extent of lead surficial soil impacts at AOI 29-A in order to refine the area requiring additional surface cover. The field activities were conducted in accordance with the Select Surface Cover AOI 29-A Sampling Plan approved by the USEPA on December 17, 2012. A summary of the field activities and laboratory analytical results is provided in **Appendix F**.

ARCADIS anticipates installation of additional surface cover to select portions of these areas to be completed in Spring 2013.

## 4.2 AOI 83/84-3 Lead Soil Delineation

AOI 83/84-3 is associated with the former Factory 83/84 area (also known as Factory 31), which is located in the Northend of the Site. Soil sampling activities were performed at the AOI 83/84-3 area in September 2012 to delineate lead impacted soils identified during the RCRA Facility Investigation (RFI). The AOI 83/84-3 sampling locations are presented on **Figure 11**. The field activities were conducted in

accordance with the *AOI 83/84-3 Lead Soil Delineation Work Plan* approved by the USEPA on September 12, 2012.

A review of the analytical data indicates that additional investigation is required to complete delineation to the east of AOI 83/84-3. The additional delineation activities are planned to be completed with additional Site investigation activities in Spring 2013. After delineation is complete the results of the AOI 83/84-3 lead soil investigation will be submitted in a summary memo.

### 4.3 CSX Property Lead Impacted Soil Removal

RACER and ARCADIS continued to pursue an access agreement with CSX during 2012. A draft agreement was completed and is currently awaiting finalization by both parties. The *AOI 09-A Impacted Soil Removal Work Plan* has been approved by RACER, CSX, and the USEPA and is included in **Appendix G**. ARCADIS anticipates the soil removal at this AOI to be completed in late Spring 2013.

## 5. Other CMI Activities – Well Abandonments

In January and February 2012 monitoring wells RW-4, 20-146 and 20-606 located in the former Factory 10 basement were abandoned in accordance with the *Factory 10 Basement Monitoring Well Abandonment Work Plan* submitted to the USEPA on November 18, 2011.

In December 2012, ten monitoring wells (RFI-36-45, RFI-36-51, RFI-10-30, RFI-40-11, RFI-40-13, RFI-40-15, RFI-40-303, RFI-09-01, RFI-09-07 and RFI-40-14) located on the CSX property were selected for abandonment in accordance with the *Monitoring Well Abandonment Work Plan* submitted to the USEPA on September 6, 2012. The wells were abandoned using the "plug in place" method with the following exceptions:

- Monitoring well RFI-36-45 was found to have been previously destroyed and could not be abandoned;
- Monitoring well RFI-40-14 was found to have been previously abandoned; and
- Monitoring well RFI-09-01 was noted to be located in the lead impacted soil area slated for excavation in Spring 2013. As the field staff did not have the proper health and safety measures in place, the abandonment of RFI-09-01 was deferred to be completed during the lead soil excavation activities.

## 6. Non-CMI Activity Summary

### 6.1 Outfall Maintenance

RACER maintains oil absorbent booms and oil containment booms at storm sewer Outfalls 002, 003, 004 and 005 in order to contain periodic oil sheens at the Flint River. The booms at each outfall consist of an initial line of oil absorbent booms to contain and absorb during normal outfall flow and an oil containment boom set farther out to contain any discharge during high flow events. A secondary oil containment boom line is set up on an as needed basis to provide an additional level of protection. All booms are installed in such a manner that allows them to adjust to the fluctuating river level. The outfall containment areas are currently inspected for oil/debris accumulation, absorbent boom saturation, and that the containment booms are in good condition and functioning properly. Based on visual observations, the booms are changed on an as-needed basis to ensure proper working order. In addition, accumulated oil and debris in the outfall containment areas are cleaned via vacuum extraction and oil absorbent slabs on an as-needed basis to prevent potential environmental releases.

In accordance with Part I, Section A.2.d of the Site NPDES permit – "During periods of no flow (such as plant shutdowns), the permittee may cease daily flow monitoring and outfall observation upon verifying that the flow of all production wastewaters to the outfall has ceased"; therefore, following the completion of Site demolition activities in May 2012, daily inspection of the outfalls was no longer required by the permit. However, continued inspections of the outfalls are necessary to monitor and maintain the booms at Outfall 002, 003, 004 and 005 until the Site's contribution of oil to the storm sewers has been eliminated or controlled. In July 2012 the *Outfall Decreased Inspection Plan* (**Appendix H)** was implemented. Per the decreased inspection plan outfall inspections are conducted on a minimum of a weekly basis and as needed per weather predictions and measured rainfall. The *Outfall Decreased Inspection Plan* was submitted to the MDEQ on July 18, 2012.

### 6.2 Oil Interceptor #2 Maintenance

The Oil Interceptor #2 (Interceptor #2) is an in-line oil water separator installed along one of the Outfall 003 storm sewer mains to prevent oil and debris from reaching the Flint River. Interceptor #2 is approximately 90 feet long by 20 feet wide with a depth of approximately 14 feet and was previously installed by GMC. Storm water enters Interceptor #2 via a 66-inch storm water sewer and exits the through a 66-inch sewer that ties back into the Outfall 003 storm sewer system. Storm water entering Interceptor #2 experiences an increased hydraulic retention time, which historically allowed for oil to be captured from the water surface via a tube skimmer. In addition to oil removal, Interceptor #2 also serves as a settling basin, removing suspended

sediment from storm water flow as suspended particles settle out of suspension due to decreased storm water velocity within the Interceptor.

There is no power at the Site and therefore the oil accumulating at Interceptor #2 can no longer be captured via tube skimmer. RACER maintains Interceptor #2 by utilizing two rows of oil absorbent booms spanned perpendicular to the direction of flow. The booms are inspected on a weekly basis for oil/debris accumulation, absorbent boom saturation, and that the absorbent booms are in good condition and functioning properly. Based on visual observations, the booms are changed and debris removed on an as-needed basis to ensure proper working order. In 2012 two maintenance events were performed on Interceptor #2, resulting in the collection and disposal of 20 drums (an estimated 960 gallons) of Toxic Substances Control Act (TSCA) PCB waste.

### 6.3 Outfall 003/004 Storm Water Diversion and Treatment System

The Outfall 003/004 Storm Water Diversion and Treatment System (Outfall 003/004 System) serve to remove oils and sediment in the Outfall 003 and 004 storm sewers prior to reaching the Flint River. The Outfall 003/004 System continues to operate and is maintained at least once per week. Water levels and oil levels are actively being monitored in vaults, the BaySeparator™ manholes, and the oil-water separator. Storm water downstream of the System is also being monitored in manholes as well as the Flint River outfalls to check for accumulating oils. Routine maintenance events were scheduled based on field observations and levels; including removal of debris and trash racks from the diversion structures, jetting of HDPE piping to clear blockage, and a cleaning event of the BaySeparator™ system. The BaySeparator™ cleaning event included removal of approximately 33,357 gallons of oil, water, and sediment utilizing a vacuum box and power washing the surfaces to ensure all material was removed.

### 6.4 RCRA WMU Closures

Ten historic RCRA WMUs are present at the Site. Closure activities associated with these WMUs have been ongoing at the Site since 2007. In 2012 the final WMU closure activities were completed at the Site and in April 2012 the Northend and Southend RCRA Waste Management Units Certification of Closure Reports were submitted to the MDEQ for approval. The locations of the WMUs are presented on **Figure 12.** The Certification of Closure Reports and MDEQ correspondence regarding closure status are presented in **Appendix I.**

The final decision from the MDEQ for each WMU is as follows:

- ***WMU #1 Factory 36, Building 36, Engine Plant Northeast*** Dock - Received Closure status from the MDEQ on September 20, 2011 (see **Appendix I)**.

- ***WMU #2 - Division 25, East of Factory 10, Outside Waste Thinner Tank, WMU #4 - Factory 10, Salvage Yard Tank Storage Area, and WMU #5 - Factory 10, Salvage Yard Container Storage Area -*** The January 15, 2013 letter from the MDEQ stated that the residual contamination at WMU #2, #4, and #5 will be addressed by placing a restrictive covenant on groundwater usage and soil relocation on each WMU and is presented in **Appendix I**. The letter also stated that the closure of the WMUs was completed pursuant to Part 111, Hazardous Waste Management, of the NREPA, 1994 PA 451, as amended, and the administrative rules promulgated thereto MAC R 299.9101*, et. seq.*

- ***WMU #3 - Factory 10, Building 20, Transmission Plant Tank Area*** – Deferred to RCRA Corrective Action in the July 27, 2009 letter, presented in **Appendix I**, from MDEQ – WHMD. The letter stated that the proposed work for closure would be conducted as part of ongoing Site activities.

- ***WMU #6 - Factory 31, Building 32, Axle Plant North Dock and WMU #8 - Building 02, Container Storage Area*** - Received Clean Closure status in the January 15, 2013 letter from the MDEQ presented in **Appendix I**.

- ***WMU #7 Building 41A, Assembly Plant Waste Storage Tank Area and WMU # 10 - Factory 86, Building 04, Assembly Plant Waste Storage Tanks*** - The January 15, 2013 letter from the MDEQ deferred WMU #7 and #10 to be addressed through incorporation into the Site-wide corrective action being conducted pursuant to Corrective Action Consent Order No R8H-5-00-02 and by placing restrictive covenants on groundwater usage and soil relocation at the WMUs (see **Appendix I**). The letter also stated that the closure of the WMUs was completed pursuant to Part 111, Hazardous Waste Management, of the NREPA, 1994 PA 451, as amended, and the administrative rules promulgated thereto MAC R 299.9101*, et. seq.*

- ***WMU #9 - Division 29, Building 23, Tool Manufacturing Cyanide Container Storage Area*** – Received Clean Closure status in the July 27, 2009 letter from MDEQ – WHMD (see **Appendix I**).

### 6.5 Waste Management Unit #3 Subsurface Investigation

WMU #3 consisted of two above ground storage tanks (ASTs) used to store 1,1,1-trichloroethane (1,1,1-TCA). A release was identified in May 1986 while completing maintenance work in the area. In 1987 and 1988 hydrogeological investigations were completed in the area and revealed 1,1,1-TCA impacts to soil and ground water.

In September 2012 ARCADIS completed three soil borings to evaluate subsurface impacts associated with WMU #3. The WMU #3 sample locations are presented on **Figure 13**. The field activities were conducted in accordance with the *WMU #3 Subsurface Investigation Work Plan* approved by the USEPA on September 12, 2012.

The concentration in one soil sample collected at a depth of 19 to 20 feet bgs exceeded the Non-Residential Soil Volatilization to Indoor Air (NRSVIA) criterion for 1,1,1-TCA. Additional investigation will be completed in Spring 2013 to delineate the extent of this exceedance in soil and to collect groundwater samples to determine if the groundwater volatilization to indoor air pathway is of a concern.

Four of the soil samples analyzed also exceeded GSIP criterion for 1,1,1-TCA. Based on available groundwater elevation and storm sewer invert elevation data in this area, the groundwater level is approximately at the same elevation as the storm sewer invert. This represents a possible pathway for groundwater at WMU #3 to infiltrate the Outfall 003 storm sewers, which discharges to the Flint River; however, the monthly NPMP samples collected from Outfall 003 do not exceed the GSI criterion for 1,1,1-TCA. Therefore, no additional investigation is recommended regarding these exceedances.

After delineation is complete the results of the WMU #3 investigation will be submitted to the MDEQ and USEPA in a summary memo.

### 6.6 Northern Parcel Soil Investigation

The Northern Parcel area is the portion of the Site located north of former Factory 36 and includes the former Factory 38 building footprint. In October 2012 soil and groundwater sampling activities were performed at the Northern Parcel to assess current Site conditions. The Northern Parcel sample locations are presented in **Figure 14**. The field activities were conducted in accordance with the *Northern Parcel Sampling Plan*.

Concentrations of manganese in two soil samples collected from soil borings RFI-BG-10 and RFI-38-12 exceeded the Non-residential Soil Particulate Inhalation criteria (NPSIC). Additional soil sampling will be completed in Spring 2013 to delineate the manganese exceedances of NPSIC criteria.

Concentrations of manganese in two of the groundwater samples and four of the soil samples analyzed also exceeded NDW, NDW Protection, GSI, and/or GSI Protection criteria; however, a groundwater use restriction is planned for the Northern Parcel prohibiting the use of groundwater for any purpose beyond sampling and other related investigatory testing. Therefore, drinking water is not an applicable pathway. The GSI pathway is only applicable through the Site storm sewers which discharge to the Flint

River through Outfall 001. Concentrations in the samples collected from the Site storm sewer in this area as part of a monthly sampling event have not exceeded GSI criteria for the analytes of concern since the sampling program began in Fall of 2010. Therefore, no additional investigation is recommended regarding these exceedances.

After delineation is complete the results of the Northern Parcel investigation will be submitted in a summary memo.

### 6.7 Former Factory 31 Basement Investigation

The former Factory 31 basement investigation was implemented in response to a 2010 letter received (via the MDEQ and USEPA) from a former General Motors employee who claimed that 25-30 full drums of various oils and cleaners were dumped in the former Factory 31 Heat Treat basement as it was being backfilled in 1982. The former Factory 31 Heat Treat basement is located beneath the former Factory 83/84 (also known as Factory 31) which is located in the Northend of the Site, just north of Leith street.

In September 2012 investigatory and sampling activities were performed at the former Factory 31 basement area to evaluate the area for evidence of drums. The field activities were conducted in accordance with the *Factory 31 Basement Investigation Work Plan* approved by the USEPA on September 18, 2012.

A total of eight soil borings, shown on **Figure 15**, were completed and at one boring location (F31_Boring 6) a strong odor and sheen were noted just beneath the concrete slab. Soil samples were collected from three of the borings exhibiting the highest photoionization detector (PID) readings and submitted to the laboratory for analysis of VOCs and SVOCs. No VOCs or SVOCs were detected in the soil samples; however, laboratory qualifiers indicate that elevated reporting limits were used due to matrix interference.

Additional step-out borings will be completed in Spring 2013 to further investigate the sheen and odors noted at F31_Boring 6 and to investigate for further evidence of drums.

After delineation is complete the results of the former Factory 31 Basement investigation will be submitted in a summary memo.

### 6.8 Outfall Storm Sewer Bulkheading

Bulkheading activities were performed at the Site in February and March 2013 to decrease or eliminate LNAPL infiltration to the on-Site storm sewers. The field

activities were conducted in accordance with the *Outfall 002 and 005 Storm Sewer Bulkheading Work Plan, Outfall 002 and 005 Storm Sewer Bulkheading Work Plan – Modification to Outfall 005 Bulkhead Location,* and *Outfall 002 and 005 Storm Sewer Bulkheading Work Plan: Addendum No. 1 – Outfall 003 and 007 Storm Sewer Bulkheading* approved by the USEPA on November 9, 2012, December 17, 2012 and December 17, 2012, respectively. The work plans and construction drawings are presented in **Appendix J.**

The bulkheading/plug locations were selected based on boom studies completed during 2011 and 2012 along Outfalls 002, 003, 004, and 005. The boom studies identified locations where oil was infiltrating the storm sewers and bulkhead or plug locations were selected to decrease / eliminate oil contributions to the outfalls. In addition to the bulkheads/plugs installed at Outfalls 002, 003, and 005 to minimize oil infiltration, a bulkhead was also installed at Outfall 007. The Outfall 007 bulkhead was installed to eliminate the pathway for mercury impacts, which were detected at concentrations exceeding GSI criteria during NPMP sampling.

**Figures 16** and **17** present the bulkhead and plug locations. The bulkheads completed at Outfalls 02 and 007 eliminated the Site's contribution to the storm sewers by bulkheading at the downgradient property boundary. Additional bulkheads were installed in the on-Site Outfall 002 storm sewer system to potentially collect infiltrating oil. As Outfall 003 drains upgradient off-Site properties, only lateral lines were bulkheaded and options for addressing the main sewers are being developed. Most of the Site's contribution to Outfall 005 has been eliminated, only leaving the drainage for Leith Street and the drainage from an adjacent property owner.

## 7. References

*BBL, 2001. Resource Conservation and Recovery Act Facility Investigation Work Plan. 2001.*

ARCADIS, 2010. *Corrective Measures Implementation Work Plan*, August 13, 2010.

ARCADIS, 2011. *NPMP Sampling Notification and Response Plan letter to USEPA-Region 5*, March 18, 2011.

ARCADIS, 2011b. *Southend: Natural Source Zone Depletion and LNAPL Transmissivity Measurement Work Plan.*

ARCADIS

# Tables

**Table 1. Summary of 2012 LIF Investigation Results, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID | Maximum Signal % | Maximum Signal Depth (feet) | Final Depth (feet) | Data Summary |
|---|---|---|---|---|
| **Calibration Borings** | | | | |
| LIF-CAL-1 | 624.4361 | 14.241 | 30.511 | NA |
| LIF-CAL-2 | 115.6615 | 6.3 | 30.014 | NA |
| LIF-CAL-5 | 113.7646 | 15.513 | 15.513 | NA |
| ***Northend*** | | | | |
| **AOI 03-1** Located south of Stewart Avenue, east of Division Street (vacated) and west of onsite decommissioned railroad tracks. | | | | |
| LIF-03-004 | 113.0917 | 12.294 | 28.538 | - The highest LIF response at the AOI 03-1 area was detected at LIF-03-002,which is located adjacent to monitoring well 03-03R. LIF-03-002 was completed during the previous LIF investigation.<br>- Several refusals were encountered to the north and northwest limiting investigation in this direction.<br>- Vertical distribution of impact is 7 - 15 feet below ground surface.<br>- LIF responses returned to background levels prior to target bottom depth indicating the impact is vertically delineated. |
| LIF-03-005 | 28.1082 | 13.835 | 28.196 | |
| LIF-03-006 | 30.8448 | 12.138 | 30.002 | |
| LIF-03-007 | 175.3427 | 9.709 | 29.656 | |
| LIF-03-008 | 2.239202 | 29.98 | 30.039 | |
| LIF-03-009 | 130.7469 | 10.519 | 25.789 | |
| LIF-03-010 | 1.24115 | 21.048 | 25.016 | |
| **AOI 05-1 and -5** Located beneath former Factory 05. | | | | |
| LIF-05-001 | 115.9293 | 15.721 | 30.179 | - The highest response at AOI 05-1/05-5 were detected at LIF-05-003, LIF-05-007, LIF-05-013 and LIF-05-016.<br>- Vertical distribution of impact is 5 - 15 feet below ground surface.<br>- The LIF responses returned to background levels prior to target bottom depth indicating the LNAPL is vertically defined.<br>- Shallow refusal was encountered at LIF-05-14; however, the vertical extent of impact was defined by other LIF borings in the area.<br>- Refusal was encountered at several locations east of the the AOI 05-1/05-5 LNAPL plumes. |
| LIF-05-002 | 10.6272 | 8.761 | 30.253 | |
| LIF-05-003 | 203.6788 | 13.506 | 30.152 | |
| LIF-05-004 | 118.7248 | 7.543 | 30.227 | |
| LIF-05-005 | 4.492881 | 0.006 | 30.326 | |
| LIF-05-006 | 1.35528 | 0.004 | 30.316 | |
| LIF-05-007 | 262.1087 | 6.685 | 30.339 | |
| LIF-05-008 | 20.5441 | 0.006 | 30.409 | |
| LIF-05-009 | 2.429639 | 0.086 | 30.53 | |
| LIF-05-010 | 2.043511 | 0.06 | 30.035 | |
| LIF-05-011 | 157.397 | 9.883 | 30.027 | |
| LIF-05-012 | 85.36108 | 7.652 | 29.998 | |
| LIF-05-013 | 195.2888 | 11.238 | 30.056 | |
| LIF-05-014 | 34.86459 | 6.745 | 12.149 | |
| LIF-05-015 | 7.996995 | 4.212 | 29.655 | |
| LIF-05-016 | 245.8852 | 13.138 | 30.043 | |
| LIF-05-017 | 11.43082 | 0.002 | 30.02 | |
| LIF-05-018 | 1.333704 | 24.36 | 29.971 | |
| LIF-05-019 | 1.195584 | 20.858 | 30.037 | |
| LIF-05-020 | 1.985706 | 4.495 | 30.029 | |
| **AOI 10-1 and -4** Located south of Stewart Avenue, east of Division Street (vacated) and west of on-site decommissioned railroad tracks. | | | | |
| LIF-10-017 | 6.245903 | 4.975 | 29.427 | - The highest LIF responses at the AOI 10-1/10-4 LNAPL Area were detected at LIF-10-002 (completed as part of the previous investigation) and LIF-10-018.<br>- LIF-10-002 is located adjacent to monitoring well 20-FP9. LNAPL has not been detected at 20-FP9.<br>- LIF-10-18 is located adjacent to monitoring well 20-162. LNAPL has been detected at 20-162 historically and as recently as 2008 (20-162 has not been gauged during more recent groundwater events.)<br>- Vertical distribution of impact is primarily from 4 - 15 feet below ground surface.<br>- LIF responses returned to background levels prior to target bottom depth indicating the impact is vertically defined. |
| LIF-10-018 | 206.9312 | 17.09 | 29.238 | |
| LIF-10-019 | 195.7088 | 12.543 | 29.789 | |
| LIF-10-020 | 8.601605 | 11.135 | 29.548 | |
| LIF-10-021 | 11.24971 | 5.558 | 30.069 | |
| LIF-10-022 | 27.28018 | 8.548 | 30 | |
| LIF-10-023 | 7.240182 | 0.355 | 30.053 | |
| LIF-10-024 | 15.18643 | 6.771 | 31.125 | |
| LIF-10-025 | 3.499688 | 4.711 | 29.206 | |
| LIF-10-026 | 32.99667 | 4.809 | 26.151 | |
| LIF-10-027 | 1.243173 | 22.265 | 30.014 | |
| LIF-10-028 | 2.041061 | 4.737 | 6.795 | |

**Table 1. Summary of 2012 LIF Investigation Results, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID | Maximum Signal % | Maximum Signal Depth (feet) | Final Depth (feet) | Data Summary |
|---|---|---|---|---|
| **AOI 36-1, -2 and -5** AOIs 36-1 and -2 are located north of Stewart Avenue, west of the CSX Railroad tracks and east of Andrew Street in the area of Former Factory 36. AOI 36-5 is located south of Stewart Avenue, west of the CSX Railroad tracks and east of Andrew Street in the area of former Tank Farm 37. | | | | |
| LIF-36-052 | 215.1874 | 16.576 | 29.945 | - Thirty-one of the 64 borings completed in the AOI 36-1, 36-2, and 36-5 areas had a maximum response of greater than 100%.<br>- The vertical distribution of impacts are primarily from 5 - 22 feet below ground surface.<br>- LIF responses returned to background levels prior to target bottom depth indicating the impacts are vertically defined. |
| LIF-36-053 | 291.0771 | 9.081 | 30.029 | |
| LIF-36-054 | 6.543789 | 4.583 | 29.997 | |
| LIF-36-055 | 46.97664 | 3.116 | 30.001 | |
| LIF-36-056 | 12.41446 | 4.507 | 29.866 | |
| LIF-36-057 | 230.7043 | 13.863 | 29.991 | |
| LIF-36-058 | 13.33339 | 4.844 | 30.02 | |
| LIF-36-059 | 13.48031 | 1.299 | 30.101 | |
| LIF-36-060 | 2.23492 | 21.235 | 30.024 | |
| LIF-36-061 | 3.121189 | 0.078 | 30.013 | |
| LIF-36-062 | 13.40479 | 0.062 | 30.023 | |
| LIF-36-063 | 14.35482 | 0.094 | 30.039 | |
| LIF-36-064 | 9.597025 | 0.123 | 30.128 | |
| **AOI 81-2** Located west of the CSX Railroad tracks, east of former Factory 81 and north of Leith Street. | | | | |
| LIF-81-012 | 8.924115 | 5.54 | 30.031 | - The highest impact was detected at LIF-81-002, which is located adjacent to monitoring well 70-107. LIF-81-002 was completed during the previous LIF investigation.<br>- Vertical distribution of impacts are primarily 5 - 11 feet below ground surface.<br>- LIF responses returned to background levels prior to target bottom depth indicating the impacts are vertically defined. |
| LIF-81-013 | 17.21966 | 6.714 | 26.757 | |
| LIF-81-014 | 10.58862 | 4.343 | 30.033 | |
| LIF-81-015 | 7.435493 | 13.859 | 30.037 | |
| LIF-81-016 | 3.980539 | 0.788 | 30.08 | |
| LIF-81-017 | 46.79811 | 4.663 | 30.035 | |
| **AOI 83/84-2 and -4** Located on the former Factory 83/84 slab, north of Leith Street, east of Industrial Avenue and east of Division Street (vacant). | | | | |
| LIF-83-020 | 173.3518 | 6.166 | 26.753 | - Eighteen of the 43 borings complete beneath former Factory 83/84 had a maximum response greater than 100%.<br>- Vertical distribution of impacts are primarily from 4 - 19 feet below ground surface.<br>- LIF responses returned to background levels prior to target bottom depth indicating the impacts are vertically defined. |
| LIF-83-021 | 81.37961 | 5.912 | 23.362 | |
| LIF-83-022 | 142.285 | 11.032 | 30.041 | |
| LIF-83-023 | 43.97179 | 5.934 | 5.94 | |
| LIF-83-024 | 276.1162 | 9.565 | 27.172 | |
| LIF-83-025 | 3.965581 | 4.766 | 22.835 | |
| LIF-83-026 | 5.596211 | 0 | 6.856 | |
| LIF-83-027 | 2.075597 | 0.006 | 9.779 | |
| LIF-83-028 | 346.017 | 4.399 | 27.413 | |
| LIF-83-029 | 7.344858 | 5.195 | 13.5 | |
| LIF-83-030 | 4.223869 | 0.01 | 30.006 | |
| LIF-83-031 | 25.21808 | 6.677 | 30.055 | |
| LIF-83-032 | 2.44166 | 1.609 | 30.074 | |
| LIF-83-033 | 266.8553 | 7.523 | 30.005 | |
| LIF-83-034 | 328.1552 | 8.684 | 30.066 | |
| LIF-83-035 | 321.0303 | 6.54 | 30.007 | |
| LIF-83-036 | 12.06715 | 0.008 | 29.582 | |
| LIF-83-037 | 0.9178897 | 23.849 | 30.009 | |
| LIF-83-038 | 1.181982 | 23.638 | 25.941 | |
| LIF-83-039 | 361.1646 | 10.37 | 30.078 | |
| LIF-83-040 | 229.114 | 7.058 | 30.023 | |
| LIF-83-041 | 7.717483 | 6.575 | 23.816 | |
| LIF-83-042 | 1.223193 | 17.285 | 30.016 | |
| LIF-83-043 | 0.9989442 | 24.969 | 28.605 | |
| **AOI 86-1** Located north of Leith Street and west of the CSX Railroad tracks. | | | | |
| LIF-86-006 | 2.726659 | 18.955 | 30.125 | - The highest impact was detected at LIF-86-004, which is located adjacent to monitoring well 87-FP5. LIF-86-004 was completed during the previous LIF investigation.<br>- LNAPL has not been detected at 87-FP5.<br>- Vertical distribution of impacts are primarily 13 - 23 and 28 to 35 feet below ground surface. |
| LIF-86-007 | 1.459239 | 0.482 | 30.031 | |
| LIF-86-008 | 1.55873 | 0.008 | 22.593 | |
| LIF-86-009 | 2.554672 | 0.103 | 30.017 | |

**Table 1. Summary of 2012 LIF Investigation Results, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID | Maximum Signal % | Maximum Signal Depth (feet) | Final Depth (feet) | Data Summary |
|---|---|---|---|---|
| ***Southend*** | | | | |
| **AOI 02-B** Located between Division Street (vacated) and the CSX Railroad tracks. | | | | |
| LIF-02-029 | 25.81745 | 1.562 | 30.064 | - Four borings previously completed at AOI 02-B had LIF responses which exceeded 100%.<br>- The response form the two borings completed during this portion of the investigation were below background levels.<br>- Vertical distribution of impact 5 - 12 feet below ground surface.<br>- Refusal was encountered at several locations north of the plume. |
| LIF-02-030 | 3.064178 | 16.305 | 30.094 | |
| **AOI 16-C** Located southwest of AOI 40-B along Division Avenue (vacated). | | | | |
| LIF-16-025 | 2.567687 | 0.033 | 30.042 | - Three borings previously completed at AOI 16-C had LIF responses which exceeded 100%.<br>- LIF-16-027 had the highest response during this investigation.<br>- Several refusals were encountered to the west of AOI 16-C limiting delineation in this direction. |
| LIF-16-026 | 24.49529 | 3.697 | 5.437 | |
| LIF-16-027 | 225.7014 | 10.362 | 30.021 | |
| LIF-16-028 | 5.517649 | 4.834 | 28.956 | |
| LIF-16-029 | 0.4082877 | 0.129 | 4.023 | |
| **AOI 40-A and -B** Located south of AOI 02-B between Division Street (vacated) and the CSX Railroad property. | | | | |
| LIF-40-030 | 26.43297 | 25.457 | 30.018 | - Six borings previously completed at AOI 40-A,-B had LIF responses which exceeded 100%.<br>- The response from the two borings completed during this portion of the investigation were relatively low. |
| LIF-40-031 | 59.33418 | 14.688 | 30.017 | |

Notes:
A) RE: The Reference Emitter (RE) is a standard substance that is used to calibrate the UVOST instrument prior to every log.
The RE serves two purposes. 1) Qualitative: It needs to be the correct shape so that all channels are intact and functioning.
2) Quantitative: It sets the proper signal intensity by adjusting laser energy.
B) Signal %: All fluorescence is reported as a percentage of the RE's fluorescence.

**Table 2. Currently Approved NPMP Sampling Program and Rationale, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall | Monitoring Point | Current Frequency | Sample Type | Analytes | Sampling Rationale |
|---|---|---|---|---|---|
| 001 | MP001 | Monthly | Dry weather - Grab | antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, cyanide, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, zinc | Metals and cyanide will continue to be sampled until an upgradient sample can be collected to confirm the source of metals is from sources located upgradient of the Site. |
| 002 | MP002 | Monthly | Dry weather - Grab | arsenic, chromium, copper, cyanide, mercury, selenium, silver | Rationale 5. |
| | | Quarterly | Dry weather - Grab | lead, vanadium | Rationale 4. |
| | | Annually | Dry weather - Grab | VOC (MDEQ List), barium, cadmium, manganese, zinc | Rationale 2. |
| 003/004 | MP003 | Monthly | Dry weather - Grab | antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, cyanide, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, zinc | Metals and cyanide will continue to be sampled until an upgradient sample can be collected to confirm the source of metals is from sources located upgradient of the Site. |
| | | Monthly | Dry weather - 24-hr Composite | PCB | Requested by the USEPA. |
| 005 | MP005 | Monthly | Dry weather - Grab | arsenic, copper, lead, mercury, silver, zinc | Rationale 5. |
| | | Monthly | Dry weather - 24-hr Composite | PCB | Requested by USEPA. |
| | | Quarterly | Dry weather - Grab | chromium, nickel | Rationale 4. |
| | | Semi-annually | Dry weather - Grab | manganese | Rationale 3. |
| | | Annually | Dry weather - Grab | cadmium, vanadium | Rationale 2. |
| 006 | MP006 | Monthly | Dry weather - Grab | mercury | Rationale 5. |
| | | Quarterly | Dry weather - Grab | chromium, copper | Rationale 4. |
| | | Semi-annually | Dry weather - Grab | arsenic, lead | Rationale 3. |
| 007 | MP007 | Monthly | Dry weather - Grab | mercury | Rationale 5. |
| | | Semi-annually | Dry weather - Grab | chromium, lead | Rationale 3. |
| | | Annually | Dry weather - Grab | arsenic | Rationale 2. |
| 009 | MP009 | Monthly | Dry weather - Grab | arsenic, cadmium, chromium, copper, cyanide, lead, manganese, mercury, vanadium, zinc | Rationale 5. |
| | | Annually | Dry weather - Grab | barium, thallium | Rationale 2. |
| 010 | MP010 | Monthly | Dry weather - Grab | arsenic, cadmium, chromium, copper, cyanide, lead, manganese, mercury, zinc | Rationale 5. |
| | | Quarterly | Dry weather - Grab | barium | Rationale 4. |
| | | Semi-annually | Dry weather - Grab | nickel, vanadium | Rationale 3. |
| 011 | MP011 | Quarterly | Dry weather - Grab | copper, mercury | Rationale 4. |
| | | Semi-annually | Dry weather - Grab | lead | Rationale 3. |
| | | Annually | Dry weather - Grab | vanadium | Rationale 2. |
| 013 | MP013 | Monthly | Dry weather - Grab | arsenic, chromium, copper, cyanide, lead, mercury | Rationale 5. |
| | | Semi-annually | Dry weather - Grab | zinc | Rationale 3. |
| | | Annually | Dry weather - Grab | manganese, vanadium | Rationale 2. |

Rationale 1 - If an analyte has not been detected in the past 12 months or has only been detected at concentrations that are less than 25% of the GSI criteria then no additional sampling of that analyte is recommended.

Rationale 2 - If in the past 12 months an analyte was detected in one or more samples at a concentration greater than 25% of GSI criteria then annual sampling is recommended for that analyte.
Rationale 3 - If in the past 12 months one or more samples detected an analyte at a concentration greater than 25% of GSI criteria and the data collected to date show an increasing trend then semi-annual sampling is recommended for that analyte.

Rationale 4 - If in the past 12 months one or more samples detected an analyte at a concentration greater than 75% of GSI criteria then quarterly sampling is recommended for that analyte.

Rationale 5 - If in the past 12 months one or more samples detected an analyte at a concentration exceeding the GSI criteria then continued monthly sampling is recommended.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 001<br>MP001<br>01/03/12 | Outfall 001<br>MP001<br>02/06/12 | Outfall 001<br>MP001<br>03/22/12 | Outfall 001<br>MP001<br>04/09/12 | Outfall 001<br>MP001<br>05/10/12 | Outfall 001<br>MP001<br>06/04/12 | Outfall 001<br>MP001<br>09/10/12 | Outfall 001<br>MP001<br>10/22/12 | Outfall 001<br>MP001<br>11/19/12 | Outfall 001<br>MP001<br>12/18/12 | Outfall 002<br>MP002<br>01/03/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | 89 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 7 |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,1,2-Trichloroethane | ug/L | 330 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,1-Dichloroethane | ug/L | 740 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 10 |
| 1,1-Dichloroethene | ug/L | 130 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | 99 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 17 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| 1,2-Dibromoethane | ug/L | 5.7 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2-Dichlorobenzene | ug/L | 13 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2-Dichloroethane | ug/L | 360 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,2-Dichloropropane | ug/L | 230 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | 45 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | 28 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 1,4-Dichlorobenzene | ug/L | 17 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| 2-Butanone | ug/L | 2,200 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | NA | NA | NA | NA | 25 U |
| 2-Hexanone | ug/L | - - | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA | 50 U |
| 2-Methylnaphthalene | ug/L | 19 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA | 50 U |
| Acetone | ug/L | 1,700 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA | 50 U |
| Acrylonitrile | ug/L | 2 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Bromobenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Bromoform | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Bromomethane | ug/L | 35 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Carbon Disulfide | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Carbon Tetrachloride | ug/L | 45 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Chlorobenzene | ug/L | 25 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Chloroethane | ug/L | 1,100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 11 |
| Chloroform | ug/L | 350 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Chloromethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| cis-1,2-Dichloroethene | ug/L | 620 | 1 | 2 | 1 U | 1 | 1 U | 2 | NA | NA | NA | NA | 24 |
| cis-1,3-Dichloropropene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Dibromochloromethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Dibromomethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Diethyl ether | ug/L | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 18 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Hexachloroethane | ug/L | 6.7 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 28 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| m&p-Xylene | ug/L | - - | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | 2 U |
| Methyl tert-butyl ether | ug/L | 7,100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Methylene Chloride | ug/L | 1,500 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| Naphthalene | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| o-Xylene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| p-Isopropyltoluene | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 80 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| tert-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | 60 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Tetrahydrofuran | ug/L | 11,000 | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | NA | NA | NA | NA | 90 U |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 001<br>MP001<br>01/03/12 | Outfall 001<br>MP001<br>02/06/12 | Outfall 001<br>MP001<br>03/22/12 | Outfall 001<br>MP001<br>04/09/12 | Outfall 001<br>MP001<br>05/10/12 | Outfall 001<br>MP001<br>06/04/12 | Outfall 001<br>MP001<br>09/10/12 | Outfall 001<br>MP001<br>10/22/12 | Outfall 001<br>MP001<br>11/19/12 | Outfall 001<br>MP001<br>12/18/12 | Outfall 002<br>MP002<br>01/03/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| trans-1,2-Dichloroethene | ug/L | 1,500 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 4 |
| Trichlorofluoromethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 U |
| Vinyl Chloride | ug/L | 13 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | 1 |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | ug/L | 10 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 3 | 2 U | 2 U | 2 U | 10 |
| Barium | ug/L | 1,308 | 96 | 104 | 90 | 89 | 69 | 75 | 56 | 45 | 60 | 61 | 300 |
| Beryllium | ug/L | 32.3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | ug/L | 4.8 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | ug/L | 100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | ug/L | 21.6 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 11 | 4 U | 4 U | 4 U | 4 |
| Cyanide (total) | ug/L | 5.2 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **7** |
| Lead | ug/L | 30.9 | 6 | 14 | 8 | 4 | 3 U | 3 U | 3 U | 5 | 9 | 3 U | 7 |
| Manganese | ug/L | 4,767 | 7 | 5 U | 5 U | 5 U | 5 U | 5 U | 10 | 5 U | 5 U | 5 U | 554 |
| Mercury | ng/L | 1.3 | 0.51 O | 0.50 UO | 0.81 O | **2.4 O** | **2.6 O** | 1.2 O | **6.7 O** | **1.4 O** | 0.50 O | **1.5 O** | **3.0 O** |
| Nickel | ug/L | 124.3 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Selenium | ug/L | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | ug/L | 0.2 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.5 U |
| Thallium | ug/L | 3.7 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | **14** | 2 U | 2 U |
| Vanadium | ug/L | 12 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | ug/L | 282.7 | 14 | 5 U | 5 U | 5 | 10 | 5 U | **704** | 5 U | 6 | 8 | 32 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 3,000 | 3,000 | 4,000 | 9,000 | 2,000 | 5,000 | 19,000 | 4,000 | 3,000 | 2,000 | 22,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 002<br>MP002<br>02/06/12 | Outfall 002<br>MP002<br>03/22/12 | Outfall 002<br>MP002<br>04/09/12 | Outfall 002<br>MP002<br>05/10/12 | Outfall 002<br>MP002<br>06/04/12 | Outfall 002<br>MP002<br>07/09/12 | Outfall 002<br>MP002<br>08/06/12 | Outfall 002<br>MP002<br>09/10/12 | Outfall 002<br>MP002<br>10/22/12 | Outfall 002<br>MP002<br>11/19/12 | Outfall 002<br>MP002<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | 4 | 4 | 4 [4] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | 8 | 8 | 11 [11] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | 1 U | 1 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | 25 U | 25 U | 25 U [25 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | 50 U | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 50 U | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | 50 U | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | 2 U | 2 U | 2 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 200 | 1 U | 2 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | 9 | 12 | 12 [12] | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | 29 | 62 | 48 [48] | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | 10 U | 10 U | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | 1 U | 2 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | 2 U | 4 | 2 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | 1 U | 2 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 80 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | 1 | 4 | 2 [2] | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | 90 U | 90 U | 90 U [90 U] | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 002<br>MP002<br>02/06/12 | Outfall 002<br>MP002<br>03/22/12 | Outfall 002<br>MP002<br>04/09/12 | Outfall 002<br>MP002<br>05/10/12 | Outfall 002<br>MP002<br>06/04/12 | Outfall 002<br>MP002<br>07/09/12 | Outfall 002<br>MP002<br>08/06/12 | Outfall 002<br>MP002<br>09/10/12 | Outfall 002<br>MP002<br>10/22/12 | Outfall 002<br>MP002<br>11/19/12 | Outfall 002<br>MP002<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | 1 U | 3 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | 4 | 8 | 7 [6] | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | 2 | 3 | 2 [2] | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | **0.064 O** | **0.051 O** | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | 5 U | 5 U | 5 U [5 U] | 5 U | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | 10 | 9 | 9 | **12 [9]** | 9 | 9 | 10 | 9 | 8 | **47** | **11** | 9 |
| Barium | ug/L | 1,308 | 273 | 293 | 298 [280] | 231 | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | 32.3 | 1 U | 1 U | 1 U [1 U] | 1 U | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | 4.8 | 0.5 | 0.5 U | 0.5 U [0.5 U] | 0.5 U | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | 11 | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | **28** | 5 U | 5 U |
| Cobalt | ug/L | 100 | 5 U | 5 U | 5 U [5 U] | 5 U | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | 21.6 | 4 U | 4 U | 10 [4 U] | **40** | 7 | 4 U | 4 U | 21 | **124** | 4 U | 4 U |
| Cyanide (total) | ug/L | 5.2 | 5 U | **9** | **9 [10]** | **9** | 5 U | 5 U | **6** | **8** | 5 U | **8** | 5 U |
| Lead | ug/L | 30.9 | 9 | 6 | 10 [3 U] | 8 | NA | 3 U | NA | NA | **80** | NA | NA |
| Manganese | ug/L | 4,767 | 542 | 777 | 764 [601] | 673 | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ng/L | 1.3 | **2.9 O** | **1.6 O** | **3.1 O** | **1.6 O** | **29 O** | **8.4 O** | 0.94 | NA | NA | **1.7 O** | **1.8 O** |
| Nickel | ug/L | 124.3 | 5 U | 5 U | 5 U [5 U] | 5 | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | 5 | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | ug/L | 0.2 | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.2 U | 0.2 U | **0.3** | 0.2 U | **0.4** | **0.3** | 0.2 U |
| Thallium | ug/L | 3.7 | 2 U | 2 U | 2 U [2 U] | 2 U | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | 12 | 4 U | 4 U | 4 U [4 U] | 4 U | NA | 4 U | NA | NA | **13** | NA | NA |
| Zinc | ug/L | 282.7 | 5 U | 7 | 27 [6] | 40 | NA | NA | NA | NA | NA | NA | NA |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 10,000 | 8,000 | 22,000 [18,000] | 36,000 | 19,000 | 166,000 | 13,000 | 153,000 | 687,000 | 8,000 | 11,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 003<br>MP003A<br>01/03/12 | Outfall 003<br>MP003A<br>02/06/12 | Outfall 003<br>MP003A<br>03/22/12 | Outfall 003<br>MP003A<br>04/09/12 | Outfall 003<br>MP003A<br>05/10/12 | Outfall 003<br>MP003A<br>06/04/12 | Outfall 003<br>MP003A<br>07/09/12 | Outfall 003<br>MP003A<br>08/06/12 | Outfall 003<br>MP003A<br>09/10/12 | Outfall 003<br>MP003A<br>10/22/12 | Outfall 003<br>MP003A<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U [25 U] | NA | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | NA | NA | NA | NA | NA |
| Benzene | ug/L | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Bromoform | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | 1 U | 1 | 1 | 1 | 1 U | 1 [1] | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Styrene | ug/L | 80 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U [90 U] | NA | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 003<br>MP003A<br>01/03/12 | Outfall 003<br>MP003A<br>02/06/12 | Outfall 003<br>MP003A<br>03/22/12 | Outfall 003<br>MP003A<br>04/09/12 | Outfall 003<br>MP003A<br>05/10/12 | Outfall 003<br>MP003A<br>06/04/12 | Outfall 003<br>MP003A<br>07/09/12 | Outfall 003<br>MP003A<br>08/06/12 | Outfall 003<br>MP003A<br>09/10/12 | Outfall 003<br>MP003A<br>10/22/12 | Outfall 003<br>MP003A<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | 1 U | 2 | 1 | 2 | 1 U | 1 [1] | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | ug/L | 0.2 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U |
| Arsenic | ug/L | 10 | 5 | 4 | 3 | 7 | 3 | 3 [3] | **14 [4]** | 4 [4] | 5 | 3 | 5 |
| Barium | ug/L | 1,308 | 151 | 135 | 150 | 170 | 97 | 139 [136] | 265 [183] | 156 [164] | 153 | 133 | 208 |
| Beryllium | ug/L | 32.3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U |
| Cadmium | ug/L | 4.8 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U |
| Cobalt | ug/L | 100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U |
| Copper | ug/L | 21.6 | 5 | 4 U | 4 U | 6 | 7 | 4 U [4 U] | 16 [4 U] | 4 U [4 U] | 5 | 4 U | 4 U |
| Cyanide (total) | ug/L | 5.2 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 [5] | **8** | 5 U | **6** |
| Lead | ug/L | 30.9 | 9 | 15 | 8 | 6 | 3 U | 3 U [3 U] | 22 [3 U] | 6 [6] | 5 | 13 | 14 |
| Manganese | ug/L | 4,767 | 421 | 234 | 341 | 734 | 143 | 227 [224] | 2,140 [275] | 242 [243] | 238 | 182 | 376 |
| Mercury | ng/L | 1.3 | **1.7 O** | 1.2 O | 1.3 O | 1.0 O | **3.4 O** | **1.4 O** | **30 O** | 1.1 | **4.3 O** | **1.5 O** | **7.9 O** |
| Nickel | ug/L | 124.3 | 10 | 7 | 8 | 9 | 9 | 10 [10] | 19 [16] | 13 [13] | 9 | 10 | 16 |
| Selenium | ug/L | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U |
| Silver | ug/L | 0.2 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U [0.2 U] | 0.2 U [0.2 U] | **0.3 [0.2 U]** | 0.2 U | 0.2 U | 0.2 U |
| Thallium | ug/L | 3.7 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U [2 U] | 2 U | 2 U | 3 |
| Vanadium | ug/L | 12 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 [4 U] | 4 U [4 U] | 4 U | 4 U | 4 U |
| Zinc | ug/L | 282.7 | 42 | 11 | 8 | 32 | 16 | 7 [7] | 79 [8] | 15 [7] | 9 | 16 | 10 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 7,000 | 4,000 | 2,000 | 87,000 | 6,000 | 8,000 [9,000] | 21,000 [6,000] | 10,000 [35,000] | 9,000 | 9,000 | 3,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 003<br>MP003A<br>12/18/12 | Outfall 005<br>MP005<br>01/03/12 | Outfall 005<br>MP005<br>02/06/12 | Outfall 005<br>MP005<br>03/22/12 | Outfall 005<br>MP005<br>04/09/12 | Outfall 005<br>MP005<br>05/10/12 | Outfall 005<br>MP005<br>06/04/12 | Outfall 005<br>MP005<br>07/11/12 | Outfall 005<br>MP005<br>08/06/12 | Outfall 005<br>MP005<br>09/10/12 | Outfall 005<br>MP005<br>10/22/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 003<br>MP003A<br>12/18/12 | Outfall 005<br>MP005<br>01/03/12 | Outfall 005<br>MP005<br>02/06/12 | Outfall 005<br>MP005<br>03/22/12 | Outfall 005<br>MP005<br>04/09/12 | Outfall 005<br>MP005<br>05/10/12 | Outfall 005<br>MP005<br>06/04/12 | Outfall 005<br>MP005<br>07/11/12 | Outfall 005<br>MP005<br>08/06/12 | Outfall 005<br>MP005<br>09/10/12 | Outfall 005<br>MP005<br>10/22/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | ug/L | - - | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | ug/L | 0.2 | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Arsenic | ug/L | 10 | 5 | **39** | 9 | **11** | 8 | 7 | 9 | NA | 8 | **17** | 7 |
| Barium | ug/L | 1,308 | 165 | 101 | 98 | 91 | 81 | 78 | NA | NA | NA | NA | NA |
| Beryllium | ug/L | 32.3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA |
| Cadmium | ug/L | 4.8 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | 5 U | NA | 5 U |
| Cobalt | ug/L | 100 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Copper | ug/L | 21.6 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | NA | 4 U | 4 U | 4 U |
| Cyanide (total) | ug/L | 5.2 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Lead | ug/L | 30.9 | 3 U | 8 | 10 | 7 | 3 U | 3 U | 3 U | NA | 7 | 13 | 7 |
| Manganese | ug/L | 4,767 | 288 | 490 | 144 | 159 | 127 | 121 | 115 | NA | 104 | NA | NA |
| Mercury | ng/L | 1.3 | **1.5 O** | **7.8 O** | **8.6 O** | 1.1 O | 0.50 UO | 1.3 O | **7.3 O** | NA | **1.4** | **1.6 O** | 0.50 UO |
| Nickel | ug/L | 124.3 | 13 | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | 5 U | NA | 5 U |
| Selenium | ug/L | 5 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Silver | ug/L | 0.2 | 0.2 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U | NA | 0.2 U | 0.2 U | 0.2 |
| Thallium | ug/L | 3.7 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA |
| Vanadium | ug/L | 12 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | NA | NA | NA | NA | NA |
| Zinc | ug/L | 282.7 | 7 | 22 | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U | 12 | 5 U |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 15,000 | 36,000 | 5,000 | 40,000 | 5,000 | 6,000 | 12,000 | NA | 106,000 | 17,000 | 2,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 005<br>MP005<br>11/19/12 | Outfall 005<br>MP005<br>12/18/12 | Outfall 006<br>MP006<br>01/03/12 | Outfall 006<br>MP006<br>02/06/12 | Outfall 006<br>MP006<br>03/22/12 | Outfall 006<br>MP006<br>04/09/12 | Outfall 006<br>MP006<br>05/10/12 | Outfall 006<br>MP006<br>06/04/12 | Outfall 006<br>MP006<br>08/06/12 | Outfall 006<br>MP006<br>09/10/12 | Outfall 006<br>MP006<br>10/22/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | 1 U | 1 U [1 U] | 2 | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | 25 U | 25 U [25 U] | 25 U | 25 U | 25 U | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | 1 U | 1 U [1 U] | 1 | 1 U | 1 U | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 005<br>MP005<br>11/19/12 | Outfall 005<br>MP005<br>12/18/12 | Outfall 006<br>MP006<br>01/03/12 | Outfall 006<br>MP006<br>02/06/12 | Outfall 006<br>MP006<br>03/22/12 | Outfall 006<br>MP006<br>04/09/12 | Outfall 006<br>MP006<br>05/10/12 | Outfall 006<br>MP006<br>06/04/12 | Outfall 006<br>MP006<br>08/06/12 | Outfall 006<br>MP006<br>09/10/12 | Outfall 006<br>MP006<br>10/22/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Arsenic | ug/L | 10 | **314** | **21** | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 | 3 | NA | NA |
| Barium | ug/L | 1,308 | NA | NA | 85 | 69 [86] | 68 | 66 | 80 | NA | NA | NA | NA |
| Beryllium | ug/L | 32.3 | NA | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Cadmium | ug/L | 4.8 | NA | NA | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA |
| Chromium Total | ug/L | 11 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | 5 U | NA | 5 U |
| Cobalt | ug/L | 100 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Copper | ug/L | 21.6 | **32** | 4 U | 4 U | 4 U [4 U] | 4 U | 4 U | 4 U | NA | 4 U | NA | 4 U |
| Cyanide (total) | ug/L | 5.2 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Lead | ug/L | 30.9 | **99** | 9 | 3 U | 3 U [3 U] | 3 U | 3 U | 3 U | 3 U | 3 U | NA | NA |
| Manganese | ug/L | 4,767 | NA | NA | 339 | 239 [253] | 276 | 207 | 97 | NA | NA | NA | NA |
| Mercury | ng/L | 1.3 | 0.70 O | 0.70 O | 0.93 O | 1.00 O | 0.97 O | **1.4 O** | 1.3 O | 1.3 O | 1.1 | **1.5 O** | **1.5 O** |
| Nickel | ug/L | 124.3 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Selenium | ug/L | 5 | NA | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Silver | ug/L | 0.2 | 0.2 | 0.2 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA |
| Thallium | ug/L | 3.7 | NA | NA | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Vanadium | ug/L | 12 | NA | NA | 4 U | 4 U [4 U] | 4 U | 4 U | 4 U | NA | NA | NA | NA |
| Zinc | ug/L | 282.7 | 189 | 16 | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 204,000 | 36,000 | 9,000 | 1,000 [34,000] | 1,000 | 2,000 | 1,000 U | 3,000 | 82,000 | 4,000 | 15,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 006<br>MP006<br>11/19/12 | Outfall 006<br>MP006<br>12/18/12 | Outfall 007<br>MP007<br>01/03/12 | Outfall 007<br>MP007<br>02/06/12 | Outfall 007<br>MP007<br>03/22/12 | Outfall 007<br>MP007<br>04/09/12 | Outfall 007<br>MP007<br>05/10/12 | Outfall 007<br>MP007<br>06/04/12 | Outfall 007<br>MP007<br>08/06/12 | Outfall 007<br>MP007<br>09/10/12 | Outfall 007<br>MP007<br>10/22/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | 1 U | 1 U | 1 U | 1 U | 2 | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | 25 U | 25 U | 25 U | 25 U | 25 U | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | 1 U | 1 U | 15 | 1 U | 1 | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | 10 U | 10 U | 10 U | 10 U | 10 U | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | 90 U | 90 U | 90 U | 90 U | 90 U | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 006<br>MP006<br>11/19/12 | Outfall 006<br>MP006<br>12/18/12 | Outfall 007<br>MP007<br>01/03/12 | Outfall 007<br>MP007<br>02/06/12 | Outfall 007<br>MP007<br>03/22/12 | Outfall 007<br>MP007<br>04/09/12 | Outfall 007<br>MP007<br>05/10/12 | Outfall 007<br>MP007<br>06/04/12 | Outfall 007<br>MP007<br>08/06/12 | Outfall 007<br>MP007<br>09/10/12 | Outfall 007<br>MP007<br>10/22/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | 1 U | 1 U | 9 | 1 U | 1 | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Arsenic | ug/L | 10 | NA | NA | 3 | 4 | 3 | 3 | 3 | NA | NA | NA | NA |
| Barium | ug/L | 1,308 | NA | NA | 71 | 61 | 70 | 63 | 58 | NA | NA | NA | NA |
| Beryllium | ug/L | 32.3 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Cadmium | ug/L | 4.8 | NA | NA | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA |
| Chromium Total | ug/L | 11 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 7 | NA | NA |
| Cobalt | ug/L | 100 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Copper | ug/L | 21.6 | NA | NA | 4 U | 5 | 6 | 4 U | 4 U | NA | NA | NA | NA |
| Cyanide (total) | ug/L | 5.2 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Lead | ug/L | 30.9 | NA | NA | 3 U | 5 | 10 | 4 | 3 U | 3 U | **41** | NA | NA |
| Manganese | ug/L | 4,767 | NA | NA | 51 | 146 | 111 | 82 | 35 | NA | NA | NA | NA |
| Mercury | ng/L | 1.3 | **3.0 O** | **3.3 O** | **3.5 O** | **10 O** | **12 O** | **32 O** | **2.7 O** | **31 O** | **3.6** | **5.6 O** | **21 O** |
| Nickel | ug/L | 124.3 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Selenium | ug/L | 5 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Silver | ug/L | 0.2 | NA | NA | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA |
| Thallium | ug/L | 3.7 | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Vanadium | ug/L | 12 | NA | NA | 4 U | 4 U | 4 U | 4 U | 4 U | NA | NA | NA | NA |
| Zinc | ug/L | 282.7 | NA | NA | 13 | 22 | 40 | 33 | 10 | NA | NA | NA | NA |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 5,000 | 6,000 | 91,000 | 32,000 | 54,000 | 22,000 | 4,000 | 42,000 | 5,000 | 35,000 | 183,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 007<br>MP007<br>11/19/12 | Outfall 007<br>MP007<br>12/18/12 | Outfall 009<br>MP009<br>01/03/12 | Outfall 009<br>MP009<br>02/06/12 | Outfall 009<br>MP009<br>03/22/12 | Outfall 009<br>MP009<br>04/09/12 | Outfall 009<br>MP009<br>05/10/12 | Outfall 009<br>MP009<br>06/04/12 | Outfall 009<br>MP009<br>07/09/12 | Outfall 009<br>MP009<br>08/06/12 | Outfall 009<br>MP009<br>09/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | 25 U [25 U] | 25 U | 25 U | 25 U | 25 U | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | 13 [12] | 13 | 1 | 14 | 12 | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 007<br>MP007<br>11/19/12 | Outfall 007<br>MP007<br>12/18/12 | Outfall 009<br>MP009<br>01/03/12 | Outfall 009<br>MP009<br>02/06/12 | Outfall 009<br>MP009<br>03/22/12 | Outfall 009<br>MP009<br>04/09/12 | Outfall 009<br>MP009<br>05/10/12 | Outfall 009<br>MP009<br>06/04/12 | Outfall 009<br>MP009<br>07/09/12 | Outfall 009<br>MP009<br>08/06/12 | Outfall 009<br>MP009<br>09/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | 7 [6] | 7 | 1 U | 7 | 7 | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | 1 [1] | 2 | 1 U | 1 U | 1 | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Arsenic | ug/L | 10 | NA | NA | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 | 2 U | 3 | 2 |
| Barium | ug/L | 1,308 | NA | NA | 114 [105] | 100 | 132 | 201 | 238 | NA | NA | NA | NA |
| Beryllium | ug/L | 32.3 | NA | NA | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Cadmium | ug/L | 4.8 | NA | NA | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | ug/L | 11 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | ug/L | 100 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Copper | ug/L | 21.6 | NA | NA | 4 U [4 U] | 5 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Cyanide (total) | ug/L | 5.2 | NA | NA | **12 [10]** | 5 U | **8** | 5 U | 5 U | 5 U | 5 U | 5 U | **15** |
| Lead | ug/L | 30.9 | NA | NA | 3 U [3 U] | 3 U | 3 U | 13 | 3 U | 3 U | 3 | 3 U | 5 |
| Manganese | ug/L | 4,767 | NA | NA | 120 [110] | 133 | 409 | 846 | 1,660 | 3,900 | 1,080 | 3,500 | 401 |
| Mercury | ng/L | 1.3 | **7.1 O** | **7.3 O** | **35 O** | **150 O** | 1.1 O | **13 O** | **1.4 O** | 1.2 O | **5.3 O** | **3.7** | **29 O** |
| Nickel | ug/L | 124.3 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Selenium | ug/L | 5 | NA | NA | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Silver | ug/L | 0.2 | NA | NA | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA |
| Thallium | ug/L | 3.7 | NA | NA | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Vanadium | ug/L | 12 | NA | NA | 4 U [4 U] | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | ug/L | 282.7 | NA | NA | 16 [5 U] | 13 | 9 | 24 | 24 | 10 | 11 | 37 | 13 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 46,000 | 140,000 | 20,000 [7,000] | 6,000 | 4,000 | 8,000 | 10,000 | 15,000 | 12,000 | 28,000 | 10,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 009<br>MP009<br>10/22/12 | Outfall 009<br>MP009<br>11/19/12 | Outfall 009<br>MP009<br>12/18/12 | Outfall 010<br>MP010<br>01/03/12 | Outfall 010<br>MP010<br>02/06/12 | Outfall 010<br>MP010<br>03/22/12 | Outfall 010<br>MP010<br>04/09/12 | Outfall 010<br>MP010<br>05/10/12 | Outfall 010<br>MP010<br>06/04/12 | Outfall 010<br>MP010<br>07/09/12 | Outfall 010<br>MP010<br>08/06/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | NA | 25 U | 25 U | 25 U [25 U] | 25 U | 25 U [25 U] | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | NA | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | NA | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | NA | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | NA | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | NA | 1 U | 1 | 1 [1 U] | 1 | 1 [1] | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | NA | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U [10 U] | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | NA | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | NA | 90 U | 90 U | 90 U [90 U] | 90 U | 90 U [90 U] | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 009<br>MP009<br>10/22/12 | Outfall 009<br>MP009<br>11/19/12 | Outfall 009<br>MP009<br>12/18/12 | Outfall 010<br>MP010<br>01/03/12 | Outfall 010<br>MP010<br>02/06/12 | Outfall 010<br>MP010<br>03/22/12 | Outfall 010<br>MP010<br>04/09/12 | Outfall 010<br>MP010<br>05/10/12 | Outfall 010<br>MP010<br>06/04/12 | Outfall 010<br>MP010<br>07/09/12 | Outfall 010<br>MP010<br>08/06/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Arsenic | ug/L | 10 | 2 U | 2 U | 3 | 2 | 2 | 2 U [2 U] | 3 | 6 [2 U] | 2 U | 2 U | NA |
| Barium | ug/L | 1,308 | NA | NA | NA | 103 | 108 | 98 [106] | 114 | 143 [96] | NA | 119 | NA |
| Beryllium | ug/L | 32.3 | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA |
| Cadmium | ug/L | 4.8 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.9 [0.5 U] | 0.5 U | 0.5 U | NA |
| Chromium Total | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | **13 [5 U]** | 5 U | 5 U | NA |
| Cobalt | ug/L | 100 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Copper | ug/L | 21.6 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 | 21 [4 U] | 4 U | 4 U | NA |
| Cyanide (total) | ug/L | 5.2 | **14** | **6** | **9** | **10** | 5 U | **12 [11]** | **9** | **10 [10]** | **10** | **7** | NA |
| Lead | ug/L | 30.9 | 3 U | 5 | 9 | 3 U | 3 U | 3 U [3 U] | 8 | **33 [3 U]** | 3 U | 4 | NA |
| Manganese | ug/L | 4,767 | 80 | 460 | 1,170 | 133 | 92 | 125 [165] | 452 | 659 [123] | 91 | 111 | NA |
| Mercury | ng/L | 1.3 | **3.3 O** | **3.1 O** | **72 O** | 0.50 UO | **6.4 O** | 1.2 O | **75 O** | **4.2 O** | **91 O** | **90 O** | **54** |
| Nickel | ug/L | 124.3 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 40 [5 U] | 5 U | 6 | NA |
| Selenium | ug/L | 5 | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA |
| Silver | ug/L | 0.2 | NA | NA | NA | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U [0.5 U] | NA | NA | NA |
| Thallium | ug/L | 3.7 | NA | NA | NA | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | NA | NA | NA |
| Vanadium | ug/L | 12 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 U | 4 U [4 U] | 4 U | 4 U | NA |
| Zinc | ug/L | 282.7 | 8 | 10 | 37 | 9 | 5 | 8 [10] | 29 | 157 [9] | 7 | 13 | NA |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 11,000 | 8,000 | 267,000 | 56,000 | 14,000 | 4,000 [3,000] | 12,000 | 6,000 [12,000] | 27,000 | 13,000 | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 010<br>MP010<br>08/06/12 | Outfall 010<br>MP010<br>09/10/12 | Outfall 010<br>MP010<br>10/22/12 | Outfall 010<br>MP010<br>11/19/12 | Outfall 010<br>MP010<br>12/18/12 | Outfall 011<br>MP011<br>04/09/12 | Outfall 011<br>MP011<br>07/09/12 | Outfall 013<br>MP013<br>01/03/12 | Outfall 013<br>MP013<br>02/06/12 | Outfall 013<br>MP013<br>03/22/12 | Outfall 013<br>MP013<br>04/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | NA | NA | NA | 25 U | NA | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | NA | NA | NA | 50 U | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | NA | NA | NA | 50 U | NA | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | NA | NA | NA | 50 U | NA | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | NA | NA | NA | 3 | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 010<br>MP010<br>08/06/12 | Outfall 010<br>MP010<br>09/10/12 | Outfall 010<br>MP010<br>10/22/12 | Outfall 010<br>MP010<br>11/19/12 | Outfall 010<br>MP010<br>12/18/12 | Outfall 011<br>MP011<br>04/09/12 | Outfall 011<br>MP011<br>07/09/12 | Outfall 013<br>MP013<br>01/03/12 | Outfall 013<br>MP013<br>02/06/12 | Outfall 013<br>MP013<br>03/22/12 | Outfall 013<br>MP013<br>04/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | NA | NA | NA | 2 | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | NA | NA | NA | 6 | NA | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | NA | **0.16 O** | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | ug/L | 130 | NA | NA | NA | NA | NA | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Arsenic | ug/L | 10 | 2 | 2 | **26** | 2 | 2 U | 2 U | NA | 2 U | 2 U | 2 U | 2 U |
| Barium | ug/L | 1,308 | NA | NA | 346 | NA | NA | 79 | NA | 93 | 87 | 86 | 72 |
| Beryllium | ug/L | 32.3 | NA | NA | NA | NA | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Cadmium | ug/L | 4.8 | 0.5 U | 0.5 U | 1.3 | 0.5 U | 0.5 U | 0.5 U | NA | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | ug/L | 11 | 5 U | 5 U | **17** | 5 U | 5 U | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Cobalt | ug/L | 100 | NA | NA | NA | NA | NA | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Copper | ug/L | 21.6 | 6 | 4 U | **34** | 4 U | 4 U | 4 U | 4 | 4 U | 4 U | 4 U | 7 |
| Cyanide (total) | ug/L | 5.2 | **10** | **10** | **12** | **8** | **8** | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Lead | ug/L | 30.9 | 6 | 3 U | **85** | 3 | 3 U | 3 U | 7 | 3 U | 4 | 3 U | 3 U |
| Manganese | ug/L | 4,767 | 203 | 157 | **6,130** | 66 | 68 | 50 | NA | 87 | 96 | 114 | 78 |
| Mercury | ng/L | 1.3 | NA | **5.1 O** | 5.0 UO | 1.1 O | **370 O** | 1.0 O | 0.77 O | **92 O** | **220 O** | **74 O** | **48 O** |
| Nickel | ug/L | 124.3 | NA | NA | NA | NA | NA | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Selenium | ug/L | 5 | NA | NA | NA | NA | NA | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Silver | ug/L | 0.2 | NA | NA | NA | NA | NA | 0.5 U | NA | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | ug/L | 3.7 | NA | NA | NA | NA | NA | 2 U | NA | 2 U | 2 U | 2 U | 2 U |
| Vanadium | ug/L | 12 | NA | NA | NA | NA | NA | 4 U | NA | 4 U | 4 U | 4 U | 4 U |
| Zinc | ug/L | 282.7 | 60 | 7 | **379** | 5 U | 5 U | 5 U | NA | 5 U | 5 U | 5 U | 6 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 3,000 | 6,000 | 6,000 | 3,000 | 7,000 | 7,000 | 6,000 | 12,000 | 19,000 | 3,000 | 3,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 013<br>MP013<br>05/10/12 | Outfall 013<br>MP013<br>06/04/12 | Outfall 013<br>MP013<br>07/09/12 | Outfall 013<br>MP013<br>09/10/12 | Outfall 013<br>MP013<br>10/22/12 | Outfall 013<br>MP013<br>11/19/12 | Outfall 013<br>MP013<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | 89 | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | 78 | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | ug/L | 330 | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | ug/L | 740 | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | ug/L | 130 | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | 99 | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 17 | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | ug/L | 5.7 | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | 13 | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | ug/L | 360 | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | ug/L | 230 | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | 45 | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | 28 | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | 17 | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | ug/L | 2,200 | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | 19 | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Acetone | ug/L | 1,700 | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | ug/L | 2 | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 200 | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | ug/L | 35 | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | ug/L | 45 | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | ug/L | 25 | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | ug/L | 1,100 | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | ug/L | 350 | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 620 | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 18 | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | 6.7 | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 28 | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | ug/L | 7,100 | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | ug/L | 1,500 | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | 11 | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 80 | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | 60 | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | ug/L | 11,000 | NA | NA | NA | NA | NA | NA | NA |

**Table 3. 2012 NPMP Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | Outfall 013<br>MP013<br>05/10/12 | Outfall 013<br>MP013<br>06/04/12 | Outfall 013<br>MP013<br>07/09/12 | Outfall 013<br>MP013<br>09/10/12 | Outfall 013<br>MP013<br>10/22/12 | Outfall 013<br>MP013<br>11/19/12 | Outfall 013<br>MP013<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 270 | NA | NA | NA | NA | NA | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 1,500 | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | 200 | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | ug/L | 13 | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | 0.2 | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | |
| Mercury (Dissolved) | ug/L | 0.0013 | NA | NA | NA | **0.22 O** | **0.041 O** | NA | NA |
| **Inorganic** | | | | | | | | | |
| Antimony | ug/L | 130 | 5 U | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | 10 | 2 U | 2 U | 2 | 2 | 3 | 2 U | 2 U |
| Barium | ug/L | 1,308 | 61 | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | 32.3 | 1 U | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | 4.8 | 0.5 U | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | 11 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | ug/L | 100 | 5 U | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | 21.6 | 16 | 10 | **69** | **23** | **26** | 5 | 4 U |
| Cyanide (total) | ug/L | 5.2 | 5 U | 5 U | 5 U | **10** | 5 U | 5 U | 5 U |
| Lead | ug/L | 30.9 | 3 U | 3 U | 6 | 3 U | 5 | 4 | 3 U |
| Manganese | ug/L | 4,767 | 61 | NA | NA | NA | NA | NA | NA |
| Mercury | ng/L | 1.3 | **51 O** | **99 O** | **>100 O** | NA | NA | **40 O** | **2.8 O** |
| Nickel | ug/L | 124.3 | 5 U | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | 5 | 5 U | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | 0.2 | 0.5 U | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | 3.7 | 2 U | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | 12 | 4 U | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | 282.7 | 26 | 12 | 46 | NA | NA | NA | NA |
| **Miscellaneous** | | | | | | | | | |
| Total Suspended Solids (TSS) | ug/L | - - | 14,000 | 8,000 | 50,000 | 9,000 | 127,000 | 2,000 | 1,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
O - Indicates that the analysis was performed by an outside laboratory.

**Table 4. 2012 NPMP Upgradient Sampling Analytical Results, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | Units | GSI | MH3-25-3_07092012<br><br>07/09/12 | MH3-31_07092012<br><br>07/09/12 | MH3-51_07092012<br><br>07/09/12 | MH4-21_07092012<br><br>07/09/12 | MH13-14_07092012<br><br>07/09/12 |
|---|---|---|---|---|---|---|---|
| **Inorganic** | | | | | | | |
| Antimony | ug/L | 130 | 5 U [5 U] | 5 U | 5 U | 5 U | NA |
| Arsenic | ug/L | 10 | 2 U [2 U] | 8 | 2 U | 3 | NA |
| Barium | ug/L | 1,308 | 19 [19] | 303 | 30 | 143 | NA |
| Beryllium | ug/L | 32.3 | 1 U [1 U] | 1 U | 1 U | 1 U | NA |
| Cadmium | ug/L | 4.8 | 0.5 U [0.5 U] | 1.3 | 0.5 U | 0.5 U | NA |
| Chromium Total | ug/L | 11 | 5 U [5 U] | **49** | 8 | 5 U | NA |
| Cobalt | ug/L | 100 | 5 U [5 U] | 5 U | 5 U | 5 U | NA |
| Copper | ug/L | 21.6 | 4 U [4 U] | **113** | 4 | 17 | NA |
| Cyanide (total) | ug/L | 5.2 | 5 U [5 U] | **28** | 5 U | 5 U | NA |
| Lead | ug/L | 30.9 | 3 U [3 U] | **93** | 8 | **52** | NA |
| Manganese | ug/L | 4,767 | 17 [18] | 1,070 | 35 | 679 | NA |
| Mercury | ng/L | 1.3 | **110 O** | **41 O** | **1.6 O** | **11 O** | **16 O** |
| Nickel | ug/L | 124.3 | 5 U [5 U] | 34 | 5 U | 8 | NA |
| Selenium | ug/L | 5 | 5 U [5 U] | 5 U | 5 U | 5 U | NA |
| Silver | ug/L | 0.2 | 0.2 U [0.2 U] | 0.2 U | 0.2 U | 0.2 U | NA |
| Thallium | ug/L | 3.7 | 2 U [2 U] | 2 U | 2 U | 2 U | NA |
| Vanadium | ug/L | 12 | 4 U [4 U] | 7 | 4 U | 4 U | NA |
| Zinc | ug/L | 282.7 | 8 [10] | **367** | 94 | 159 | NA |

Notes:

GSI - Groundwater/Surface Water Interface Criteria.

NA - Not Analyzed

ug/L - micrograms per liter

ng/L - nanograms per liter

Shaded and Bolded results exceed GSI criteria.

U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Table 5. Proposed NPMP Sampling Program and Rationale, 2012 CMI Annual Report**
**RACER Trust, Buick City Site, Flint, Michigan**

| Outfall | Monitoring Point | Current Frequency | Current Analytes | Sample Type | Proposed Frequency | Proposed Analytes | Sampling Rationale |
|---|---|---|---|---|---|---|---|
| 001 | MP001 | Monthly | antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, cyanide, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, zinc | Dry weather - Grab | Quarterly | mercury, thallium, zinc | Rationale 3. |
| 002 | MP002 | Monthly | arsenic, chromium, copper, cyanide, mercury, selenium, silver | Dry weather - Grab | None | NA | The Site's contribution to the Outfall has been eliminated by bulkheading. |
| | | Quarterly | lead, vanadium | | | | |
| | | Annually | VOC (MDEQ List), barium, cadmium, manganese, zinc | | | | |
| 003/004 | MP003 | Monthly | antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, cyanide, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, zinc | Dry weather - Grab | Quarterly | arsenic, cyanide, mercury, silver | Rationale 3. |
| | | Monthly | PCB | Dry weather - 24-hr Composite | Quarterly | PCB | Requested by the USEPA. Weekly dry weather PCB sampling is also required by the NPDES permit. |
| 005 | MP005 | Monthly | arsenic, copper, lead, mercury, silver, zinc | Dry weather - Grab | None | NA | The Site's contribution to the Outfall has been eliminated by bulkheading. |
| | | Monthly | PCB | Dry weather - 24-hr Composite | | | |
| | | Quarterly | chromium, nickel | Dry weather - Grab | | | |
| | | Semi-annually | manganese | Dry weather - Grab | | | |
| | | Annually | cadmium, vanadium | Dry weather - Grab | | | |
| 006 | MP006 | Monthly | mercury | Dry weather - Grab | Quarterly | mercury | Rationale 3. |
| | | Quarterly | chromium, copper | | | | |
| | | Semi-annually | arsenic, lead | | | | |
| 007 | MP007 | Monthly | mercury | Dry weather - Grab | None | NA | The Site's contribution to the Outfall has been eliminated by bulkheading. |
| | | Semi-annually | chromium, lead | | | | |
| | | Annually | arsenic | | | | |
| 009 | MP009 | Monthly | arsenic, cadmium, chromium, copper, cyanide, lead, manganese, mercury, vanadium, zinc | Dry weather - Grab | None | NA | Rationale 4. |
| | | Annually | barium, thallium | | | | |
| 010 | MP010 | Monthly | arsenic, cadmium, chromium, copper, cyanide, lead, manganese, mercury, zinc | Dry weather - Grab | Quarterly | arsenic, chromium, copper, cyanide, lead, manganese, mercury, zinc | Rationale 3. |
| | | Quarterly | barium | | | | |
| | | Semi-annually | nickel, vanadium | | | | |
| 011 | MP011 | Quarterly | copper, mercury | Dry weather - Grab | None | NA | Rationale 4. |
| | | Semi-annually | lead | | | | |
| | | Annually | vanadium | | | | |
| 013 | MP013 | Monthly | arsenic, chromium, copper, cyanide, lead, mercury | Dry weather - Grab | Quarterly | copper, cyanide, mercury | Rationale 3. |
| | | Semi-annually | zinc | | | | |
| | | Annually | manganese, vanadium | | | | |

Rationale 1 - If an analyte has not been detected in the past 12 months or has only been detected at concentrations that are less than 75% of the GSI criteria then no additional sampling of that analyte is recommended.

Rationale 2 - If in the past 12 months an analyte was detected in one or more samples at a concentration less than 75% of GSI criteria and the data collected to date show an increasing trend then quarterly sampling is recommended for that analyte.

Rationale 3 - If in the past 12 months one or more samples detected an analyte at a concentration greater than 75% of GSI criteria then quarterly sampling is recommended for that analyte.

Rationale 4 - If the sample location is at the outfall to the Flint River and no samples detected an analyte at a concentration exceeding the GSI criteria then no additional sampling of that location is recommended.

**Table 6. Groundwater and LNAPL Elevation Monitoring Locations - Northend, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Location | Monitoring Program | Comments |
|---|---|---|---|
| 03-1 | 03-03R | LNAPL Monitoring Program Location | |
| 03-1 | RFI-03-03 | Groundwater Elevation Monitoring Location | |
| 03-1 | RFI-03-15R | LNAPL Monitoring Program Location | |
| 03-1 | 70-109 | Groundwater Elevation Monitoring Location | |
| 03-1 | 70-100 | Groundwater Elevation Monitoring Location | |
| 03-1 | 43-102 | LNAPL Monitoring Program Location | |
| 05-1 | 43-161 | LNAPL Monitoring Program Location | |
| 05-1 | 43-165 | LNAPL Monitoring Program Location | |
| 05-1 | 43-166 | LNAPL Monitoring Program Location | |
| 05-1 | 43-167 | LNAPL Monitoring Program Location | |
| 05-1 | RFI-05-09 | Groundwater Elevation Monitoring Location | |
| 05-1 | RFI-05-12 | Groundwater Elevation Monitoring Location | |
| 05-1 | RFI-05-13 | LNAPL Monitoring Program Location | |
| 05-1 | RFI-05-14 | LNAPL Monitoring Program Location | |
| 05-1 | RFI-05-19S | Groundwater Elevation Monitoring Location | |
| 05-4 | 43-103 | Groundwater Elevation Monitoring Location | |
| 05-5 | RFI-05-08 | Groundwater Elevation Monitoring Location | |
| 05-5 | RW-05 North | LNAPL Monitoring Program Location | |
| 07-1 | OW-3S | Groundwater Elevation Monitoring Location | |
| 07-1 | OW-5 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-1 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-2 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-3 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-4 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-5 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-6 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-7 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-8 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-9 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-10 | Groundwater Elevation Monitoring Location | |
| 07-1 | GM-12 | Groundwater Elevation Monitoring Location | |
| 07-3 | 07-01 | Groundwater Elevation Monitoring Location | |
| 07-3 | RFI-07-01R2 | Groundwater Elevation Monitoring Location | |
| 07-3 | RFI-07-08 | Groundwater Elevation Monitoring Location | |
| 10-1 | 20-143 | Groundwater Elevation Monitoring Location | |
| 10-1 | 20-144 | Groundwater Elevation Monitoring Location | |
| 10-2 | RFI-10-24 | Groundwater Elevation Monitoring Location | |
| 10-2 | RFI-10-26 | Groundwater Elevation Monitoring Location | |
| 10-2 | RFI-10-29 | Groundwater Elevation Monitoring Location | |
| 10-2 | RFI-10-31 | Groundwater Elevation Monitoring Location | |
| 10-2 | RFI-10-33 | Groundwater Elevation Monitoring Location | |
| 10-2 | RFI-10-35 | Groundwater Elevation Monitoring Location | |
| 10-3 | RFI-10-07 | Groundwater Elevation Monitoring Location | |
| 10-4 | 20-163R | LNAPL Monitoring Program Location | |
| 10-4 | 20-164 | LNAPL Monitoring Program Location | |
| 10-4 | 20-168 | LNAPL Monitoring Program Location | |
| 10-4 | 20-FP10R | Groundwater Elevation Monitoring Location | |
| 10-4 | RFI-10-37 | Groundwater Elevation Monitoring Location | |
| 10-4 | 20-FP12 | LNAPL Monitoring Program Location | |
| 10-4 | 20-FP8 | LNAPL Monitoring Program Location | |
| 10-4 | 20-FP9 | LNAPL Monitoring Program Location | |
| 10-4 | RFI-03-04 | LNAPL Monitoring Program Location | |

**Table 6. Groundwater and LNAPL Elevation Monitoring Locations - Northend, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Location | Monitoring Program | Comments |
|---|---|---|---|
| 36-1 | 36-FP2 | LNAPL Monitoring Program Location | |
| 36-1 | 36-160 | LNAPL Monitoring Program Location | |
| 36-1 | 36-FP4 | LNAPL Monitoring Program Location | |
| 36-1 | 36-FP7 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-01 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-03 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-44 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-04 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-05 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-06 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-07 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-08 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-19 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-20 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - LaSalle Property |
| 36-1 | RFI-36-24 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-27 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-29R | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-43 | LNAPL Monitoring Program Location | |
| 36-1 | RFI-36-46 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-47 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-48 | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-55R | Groundwater Elevation Monitoring Location | |
| 36-1 | RFI-36-56 | Groundwater Elevation Monitoring Location | |
| 36-1 | 36-160 | LNAPL Monitoring Program Location | |
| 36-1 | RW-1 | LNAPL Monitoring Program Location | |
| 36-1 | RW-3 | LNAPL Monitoring Program Location | |
| 36-2 | RFI-36-19 | Groundwater Elevation Monitoring Location | |
| 36-2 | RFI-36-37 | Groundwater Elevation Monitoring Location | |
| 36-4 | RFI-36-12 | Groundwater Elevation Monitoring Location | |
| 36-5 | 20-500R | Groundwater Elevation Monitoring Location | |
| 36-5 | 20-502 | LNAPL Monitoring Program Location | |
| 36-5 | 20-503 | LNAPL Monitoring Program Location | |
| 36-5 | 20-506 | LNAPL Monitoring Program Location | |
| 36-5 | 37-RW-NORTH | LNAPL Monitoring Program Location | |
| 36-5 | 37-RW-SOUTH | LNAPL Monitoring Program Location | |
| 36-5 | RFI-36-13 | LNAPL Monitoring Program Location | |
| 36-5 | RFI-36-14 | Groundwater Elevation Monitoring Location | |
| 38-1 | RFI-38-04 | Groundwater Elevation Monitoring Location | |
| 38-1 | RFI-38-06 | Groundwater Elevation Monitoring Location | |
| 38-1 | 36-101 | Groundwater Elevation Monitoring Location | |
| 38-1 | 38-120 | Groundwater Elevation Monitoring Location | |
| 55-1 | 55-1 | Groundwater Elevation Monitoring Location | |
| 55-1 | 55-2 | Groundwater Elevation Monitoring Location | |
| 55-1 | RFI-55-01 | Groundwater Elevation Monitoring Location | |
| 55-1 | RFI-55-02 | Groundwater Elevation Monitoring Location | |
| 55-1 | RFI-55-11 | Groundwater Elevation Monitoring Location | |
| 81-1 | RFI-81-02 | Groundwater Elevation Monitoring Location | |
| 81-1 | RFI-81-35 | Groundwater Elevation Monitoring Location | |
| 81-1 | RFI-81-43 | LNAPL Monitoring Program Location | |
| 81-2 | 70-101 | LNAPL Monitoring Program Location | |
| 81-2 | 70-103 | LNAPL Monitoring Program Location | |
| 81-2 | 70-105 | LNAPL Monitoring Program Location | |
| 81-2 | 70-107 | LNAPL Monitoring Program Location | |
| 81-2 | 70-107R | LNAPL Monitoring Program Location | |
| 81-2 | 70-108R | LNAPL Monitoring Program Location | |
| 81-2 | 70-163 | Groundwater Elevation Monitoring Location | |
| 81-2 | 70-164 | LNAPL Monitoring Program Location | |
| 81-2 | 70-165 | Groundwater Elevation Monitoring Location | |
| 81-2 | RFI-81-03 | Groundwater Elevation Monitoring Location | |
| 81-2 | RFI-81-13 | Groundwater Elevation Monitoring Location | |

**Table 6. Groundwater and LNAPL Elevation Monitoring Locations - Northend, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Location | Monitoring Program | Comments |
|---|---|---|---|
| 81-2 | RFI-81-21 | Groundwater Elevation Monitoring Location | |
| 81-2 | RFI-81-45 | Groundwater Elevation Monitoring Location | |
| 81-2 | RFI-81-47 | LNAPL Monitoring Program Location | |
| 81-2 | RFI-81-49 | LNAPL Monitoring Program Location | |
| 81-2 | RFI-81-50 | Groundwater Elevation Monitoring Location | |
| 81-3 | RFI-81-07 | Groundwater Elevation Monitoring Location | |
| 81-3 | RFI-81-08 | Groundwater Elevation Monitoring Location | |
| 81-3 | RFI-81-33 | Groundwater Elevation Monitoring Location | |
| 81-3 | RFI-81-51 | Groundwater Elevation Monitoring Location | |
| 83/84-1 | RFI-83/84-01 | Groundwater Elevation Monitoring Location | |
| 83/84-1 | RFI-83/84-07 | LNAPL Monitoring Program Location | |
| 83/84-1 | RFI-83/84-29 | Groundwater Elevation Monitoring Location | |
| 83/84-2 | RFI-83/84-04 | LNAPL Monitoring Program Location | |
| 83/84-2 | RFI-83/84-05 | LNAPL Monitoring Program Location | |
| 83/84-2 | RFI-83/84-06 | LNAPL Monitoring Program Location | |
| 83/84-2 | RFI-83/84-49 | LNAPL Monitoring Program Location | |
| 83/84-2 | RFI-83/84-27 | LNAPL Monitoring Program Location | |
| 83/84-2 | RFI-83/84-53 | Groundwater Elevation Monitoring Location | |
| 83/84-4 | 11-140 | Groundwater Elevation Monitoring Location | |
| 83/84-4 | RFI-83/84-54 | Groundwater Elevation Monitoring Location | |
| 83/84-7 | 88-7 | Groundwater Elevation Monitoring Location | |
| 83/84-7 | RFI-83/84-11 | Groundwater Elevation Monitoring Location | |
| 85-1 | RFI-85-02R | LNAPL Monitoring Program Location | |
| 85-1 | RFI-85-04R | Groundwater Elevation Monitoring Location | |
| 85-1 | RFI-85-05 | Groundwater Elevation Monitoring Location | |
| 86-1 | 87-FP1 | LNAPL Monitoring Program Location | |
| 86-1 | 87-FPD2 | Groundwater Elevation Monitoring Location | |
| 86-1 | 87-FPD3 | Groundwater Elevation Monitoring Location | |
| 86-1 | MW-00-FP6 | LNAPL Monitoring Program Location | |
| 86-1 | RFI-86-02 | LNAPL Monitoring Program Location | |
| 86-1 | RFI-86-03 | LNAPL Monitoring Program Location | |
| 86-1 | RFI-86-01R | Groundwater Elevation Monitoring Location | |
| 86-1 | RFI-86-06D | LNAPL Monitoring Program Location | |
| 86-1 | RFI-86-06S | LNAPL Monitoring Program Location | |
| 86-1 | RFI-86-08R | Groundwater Elevation Monitoring Location | |
| 86-1 | RFI-86-16R | Groundwater Elevation Monitoring Location | |

**Note:**
Measurements will be collected on an annual basis.

**Table 7. Groundwater and LNAPL Elevation Monitoring Locations - Southend, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Monitoring Location | Monitoring Program | Comments |
|---|---|---|---|
| 02-B | RFI-02-12 | Groundwater Elevation Monitoring Location | |
| 02-B | RFI-02-14 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-15 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-16 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-17 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-18 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-19 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-22 | LNAPL Monitoring Program Location | |
| 02-B | RFI-02-23 | LNAPL Monitoring Program Location | |
| 02-E | RFI-02-05R | Groundwater Elevation Monitoring Location | |
| 09-A | MW-16 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-A | MW-17 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-A | MW-18 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-A | MW-19 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-A | MW-25 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-A | MW-26 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-A | RFI-09-04R | Groundwater Elevation Monitoring Location | |
| 09-A | RFI-09-49R | Groundwater Elevation Monitoring Location | |
| 09-A | RFI-09-53 | Groundwater Elevation Monitoring Location | |
| 09-A | RFI-09-56 | Groundwater Elevation Monitoring Location | |
| 09-A | RFI-09-57 | Groundwater Elevation Monitoring Location | |
| 09-A | RFI-09-58 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-B | RFI-09-46 | Groundwater Elevation Monitoring Location | |
| 09-B | 31-1 | Groundwater Elevation Monitoring Location | |
| 09-B | 31-3 | Groundwater Elevation Monitoring Location | |
| 09-B | 31-4D | Groundwater Elevation Monitoring Location | |
| 09-B | 31-4S | Groundwater Elevation Monitoring Location | |
| 09-B | 31-5 | Groundwater Elevation Monitoring Location | |
| 09-B | 31-7 | LNAPL Monitoring Program Location | |
| 09-B | 31-8 | LNAPL Monitoring Program Location | |
| 09-B | MW-23 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-B | RFI-09-11 | LNAPL Monitoring Program Location | |
| 09-B | RFI-09-14 | Groundwater Elevation Monitoring Location | Access Agreement Not Finalized - Dupont Property |
| 09-B | RFI-09-40R | LNAPL Monitoring Program Location | |
| 09-B | RFI-09-44 | LNAPL Monitoring Program Location | |
| 09-B | RFI-09-45R | LNAPL Monitoring Program Location | |
| 09-B | RFI-09-47 | Groundwater Elevation Monitoring Location | |
| 09-B | RFI-09-48 | Groundwater Elevation Monitoring Location | |
| 09-B | RFI-09-52 | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-01R | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-02/02R | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-07R2 | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-08R | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-42 | Groundwater Elevation Monitoring Location | |
| 12-A | RFI-12-09R | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-15 | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-22R | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-24 | Groundwater Elevation Monitoring Location | |
| 12-A | RFI-12-25 | Groundwater Elevation Monitoring Location | |
| 12-A | RFI-12-26 | LNAPL Monitoring Program Location | |
| 12-A | RFI-12-27 | LNAPL Monitoring Program Location | |

**Table 7. Groundwater and LNAPL Elevation Monitoring Locations - Southend, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Monitoring Location | Monitoring Program | Comments |
|---|---|---|---|
| 12-C | RFI-12-11D | LNAPL Monitoring Program Location | |
| 12-C | RFI-12-11S | LNAPL Monitoring Program Location | |
| 12-C | RFI-12-14R | LNAPL Monitoring Program Location | |
| 12-C | RFI-12-23 | LNAPL Monitoring Program Location | |
| 12-C | RFI-12-33 | Groundwater Elevation Monitoring Location | |
| 12-C | RFI-12-34 | Groundwater Elevation Monitoring Location | |
| 12-C | RFI-12-35 | Groundwater Elevation Monitoring Location | |
| 12-C | RFI-12-38 | LNAPL Monitoring Program Location | |
| 12-C | RFI-12-40 | LNAPL Monitoring Program Location | |
| 12-C | RFI-12-41 | LNAPL Monitoring Program Location | |
| 16-A | RFI-16-01 | Groundwater Elevation Monitoring Location | |
| 16-C | RFI-16-04R | LNAPL Monitoring Program Location | |
| 40-A | RFI-40-07 | Groundwater Elevation Monitoring Location | |
| 40-A | RFI-40-09 | Groundwater Elevation Monitoring Location | |
| 40-B | 40-07R2 | LNAPL Monitoring Program Location | |
| 40-B | RFI-40-02R | LNAPL Monitoring Program Location | |
| 40-B | RFI-40-10R | LNAPL Monitoring Program Location | |
| 40-B | RFI-40-12R | LNAPL Monitoring Program Location | |
| 40-B | RFI-40-14R | LNAPL Monitoring Program Location | |
| 40-B | RFI-40-20 | LNAPL Monitoring Program Location | |
| 40-B | RFI-40-27 | Groundwater Elevation Monitoring Location | |
| 40-B | RFI-40-26 | LNAPL Monitoring Program Location | |
| 40-C | RFI-40-03 | Groundwater Elevation Monitoring Location | |
| 40-D | 40-304 | Groundwater Elevation Monitoring Location | |
| 40-D | 40-305 | Groundwater Elevation Monitoring Location | |
| 40-D | RFI-40-04 | Groundwater Elevation Monitoring Location | |
| 44-A | 04-160 | Groundwater Elevation Monitoring Location | |
| 44-A | RFI-44-05 | Groundwater Elevation Monitoring Location | |
| 84-A | RFI-84-06R | Groundwater Elevation Monitoring Location | |
| 84-D | 84-6R2D | Groundwater Elevation Monitoring Location | |
| 84-D | 84-7D | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-17-02D | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-03S | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-04D | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-04I | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-05 | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-06R | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-06RD | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-07S | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-09D | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-09S | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-11S | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-12 | Groundwater Elevation Monitoring Location | |
| 84-D | RFI-84-8S | Groundwater Elevation Monitoring Location | |

**Table 7. Groundwater and LNAPL Elevation Monitoring Locations - Southend, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Monitoring Location | Monitoring Program | Comments |
|---|---|---|---|
| 86-1 | RFI-02-08R | Groundwater Elevation Monitoring Location | |
| 86-1 | RFI-86-01R | Groundwater Elevation Monitoring Location | |
| 86-1 | RFI-86-15 | Groundwater Elevation Monitoring Location | |
| 94-B | RFI-94-08 | Groundwater Elevation Monitoring Location | |
| 94-B | RFI-94-11 | Groundwater Elevation Monitoring Location | |
| 94-B | 94-100 | Groundwater Elevation Monitoring Location | |
| 94-D | RFI-94-05 | Groundwater Elevation Monitoring Location | |
| 94-D | RFI-02-22 | Groundwater Elevation Monitoring Location | |
| BD01 | BD01-01 | Groundwater Elevation Monitoring Location | |
| BD01 | BD01-02R | Groundwater Elevation Monitoring Location | |
| BD01 | BD01-04 | Groundwater Elevation Monitoring Location | |
| Harriet Street | ACSP-B2AR | Groundwater Elevation Monitoring Location | |

**Note:**
Measurements will be collected on an annual basis.

**Table 8. Groundwater Quality Monitoring Locations, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Sampling Location | Groundwater Analytical Parameters | Sampling Rationale | Comments |
|---|---|---|---|---|
| **North of Leith Street** | | | | |
| 7-03 | 07-01 | VOCs | Sentinel location downgradient of LNAPL plume | NA |
| 10-2 | RFI-10-24 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 10-2 | RFI-10-29 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 10-2 | RFI-10-33 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 10-2 | RFI-10-35 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 10-3 | RFI-10-37 | VOCs | Plume fringe well located at downgradient edge of VOC impacted area | NA |
| 10-3 | 20-500R | VOCs | Plume fringe well located at downgradient edge of VOC impacted area | NA |
| 10-3 | RFI-10-31 | VOCs | Plume fringe well located at downgradient edge of VOC impacted area | Could not locate |
| 10-4 | 20-FP10R | VOCs | Plume fringe well located at downgradient edge of VOC impacted area | NA |
| 10-4 | RFI-10-26 | VOCs and Lead | Sentinel location at downgradient edge of VOC, and lead impacted area | NA |
| 36-1 | RFI-36-02 | VOCs and Arsenic | Monitoring VOCs and arsenic downgradient of LNAPL plume. | NA |
| 36-1 | RFI-36-19 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 36-1 | RFI-36-37 | VOCs, Lead, and Arsenic | Off-site; plume fringe location at downgradient edge of VOC impacted area | NA |
| 36-1 | RFI-36-47 | VOCs | Off-site; Plume fringe location at downgradient edge of VOC impacted area | Dry |
| 36-1 | RFI-36-48 | VOCs | Off-site; Plume fringe location at downgradient edge of VOC impacted area | NA |
| 36-1 | RFI-36-55R | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 36-1 | RFI-36-56 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area. | NA |
| 36-1 | RFI-36-03 | Lead | Plume fringe well; to assess lead concentrations | NA |
| 36-1 | RFI-36-44 | Lead | Sentinel location downgradient of LNAPL plume | NA |
| 36-5 | RFI-36-20 | VOCs | Sentinel location downgradient of LNAPL plume | Access Agreement Not Finalized - LaSalle Property |
| 36-5 | RFI-36-14 | VOCs | Sentinel location downgradient of LNAPL plume | NA |
| 81-2 | 70-165 | VOCs | Sentinel location downgradient of LNAPL plume | NA |
| 81-2 | 70-164 | VOCS | Sentinel location downgradient of LNAPL plume | Could not locate |
| 81-2 | RFI-81-50 | Lead | Sentinel location downgradient of lead exceedance | NA |
| 81-3 | RFI-81-51 | VOCs | Plume fringe monitoring location at downgradient edge of VOC plume | NA |
| 86-1 | RFI-86-16R | VOCs | Sentinel location at downgradient edge of VOC impacted area | NA |
| 86-1 | RFI-86-01R | VOCs, lead, and manganese | Sentinel location at downgradient edge of VOC and inorganic impacted area | NA |

**Table 8. Groundwater Quality Monitoring Locations, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Area of Interest (AOI) | Sampling Location | Groundwater Analytical Parameters | Sampling Rationale | Comments |
|---|---|---|---|---|
| **South of Leith Street** | | | | |
| 02-E | RFI-02-05 | VOCs | Sentinel location at downgradient edge of VOC impacted area | NA |
| 04-D | 04-4 | Cyanide | Sentinel location upgradient of storm sewer | NA |
| 04-D | 04-3 | Cyanide | Sentinel location upgradient of storm sewer | NA |
| 09-A | RFI-09-04R | VOCs | Plume well; monitoring TCE to confirm stable concentrations. | NA |
| 09-A | RFI-09-53 | VOCs | Plume well; monitoring to confirm stable concentrations of VOCs. | NA |
| 09-A | MW-26 | VOCs | Off-site; sentinel location to confirm VOC plume has not migrated | Access Agreement Not Finalized - Dupont Property |
| 09-B | RFI-09-14 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | Access Agreement Not Finalized - Dupont Property |
| 09-B | RFI-09-48 | VOCs And Cyanide | Sentinel location at downgradient of VOC and cyanide impacted areas | NA |
| 09-B | RFI-09-46 | VOCs | Plume well; monitoring benzene concentrations to confirm stable concentrations | NA |
| 12-A | RFI-12-42 | VOCs | Sentinel location downgradient of VOC impacted area | NA |
| 17-A | RFI-17-02 | VOCs and selenium | Plume well located at downgradient edge of VOC impacted area and GSI monitoring point | NA |
| 40-D | 40-304 | VOCs and PCBs | Sentinel location downgradient of building 40 Tunnel (PCBs required by 9/13/2005 EPA letter) | NA |
| 44-A | RFI-44-05 | Cyanide | Sentinel location upgradient of storm sewer | NA |
| 84-A | MW-23 | VOCs | Off-site; downgradient of VOC impacted area | Access Agreement Not Finalized - Dupont Property |
| 84-D | RFI-17-02D | VOCs and selenium | Plume monitoring location | NA |
| 84-D | RFI-84-06R | Cyanide and Silver | Plume monitoring location | NA |
| 84-D | RFI-84-06RD | Cyanide | Plume monitoring location | NA |
| 84-D | RFI-84-09D | VOCs | Sentinel location at downgradient edge of VOC impacted area | NA |
| 84-D | RFI-84-09S | VOCs | Sentinel location at downgradient edge of VOC impacted area | NA |
| 84-D | RFI-84-11S | VOCs | Sentinel location at downgradient edge of VOC impacted area | NA |
| 84-D | RFI-84-12 | VOCs and selenium | Sentinel location at downgradient edge of VOC impacted area and GSI monitoring point | NA |
| 94-B | RFI-94-11 | VOCs | Off-site; sentinel location at downgradient edge of VOC impacted area | NA |
| 94-D | RFI-02-22 | VOCs | Sentinel locations, downgradient of LNAPL plumes | NA |

**Note:**
VOCs = Volatile Organic Compounds.
LNAPL = light non-aqueous phase liquid.

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| **NORTH OF LEITH STREET** | | | | | |
| RFI-03-03 | GW Elevation | NP | 1.97 | 11.70 | |
| 70-109 | GW Elevation | NP | 3.31 | 10.70 | |
| 70-100 | GW Elevation | NP | 5.53 | 25.30 | |
| 03-03R | LNAPL | Couldn't Locate | | | |
| 20-FP12 | LNAPL | NP | 2.78 | 8.9 | |
| RFI-03-04 | LNAPL | NP | 6.65 | 14.00 | |
| 20-FP10R | GW Elevation | NP | 6.38 | 13.50 | |
| 20-FP8 | LNAPL | 7.71 | 9.42 | 13.50 | |
| 20-FP9 | LNAPL | NP | 8.12 | 14.80 | |
| RFI-10-26 | Sampling | NP | 7.96 | 14.75 | |
| 20-163R | LNAPL | Obstruction | | | |
| 20-168 | LNAPL | NP | 11.52 | 17.50 | |
| 20-144 | GW Elevation | NP | 7.15 | 12.24 | |
| RFI-10-24 | Sampling | NP | 11.39 | 18.00 | |
| RFI-10-29 | Sampling | Well not gauged | | | Based on water level and depth to bottom data, it appears that the wrong well was gauged. |
| RFI-10-35 | Sampling | NP | 15.68 | 20.00 | |
| RFI-10-31 | Sampling | Could not locate | | | |
| RFI-10-33 | Sampling | NP | 13.5 | 20.07 | |
| RFI-36-55R | Sampling | NP | 13.13 | 20.20 | |
| RFI-36-48 | Sampling | Well not gauged | | | Based on water level and depth to bottom data, it appears that the wrong well was gauged. |
| RFI-36-56 | Sampling | NP | 12.25 | 19.20 | |
| RFI-36-19 | Sampling | NP | 14.54 | 21.5 | |
| RFI-36-20 | Sampling | No Access Agreement | | | |
| RFI-81-21 | GW Elevation | NP | 14.88 | 15.10 | |
| GM-1 | GW Elevation | NP | 11.83 | 58.20 | |
| GM-2 | GW Elevation | NP | 11.29 | 31.20 | |
| GM-3 | GW Elevation | NP | 12.74 | 40.60 | |
| GM-10 | GW Elevation | NP | 12.97 | 43.00 | |
| OW-5 | GW Elevation | NP | 7.28 | 18.40 | |
| GM-9 | GW Elevation | NP | 11.58 | 27.30 | |
| GM-6 | GW Elevation | NP | 21.61 | 68.80 | |
| GM-7 | GW Elevation | NP | 25.70 | 50.40 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| GM-8 | GW Elevation | NP | 22.13 | 43.90 | |
| OW-3S | GW Elevation | NP | 13.56 | 15.50 | |
| GM-4 | GW Elevation | NP | 24.68 | 81.50 | |
| GM-12 | GW Elevation | NP | 22.03 | 37.40 | |
| GM-5 | GW Elevation | NP | 23.60 | 61.20 | |
| RFI-81-33 | GW Elevation | NP | 4.76 | 13.70 | |
| RFI-07-08 | GW Elevation | NP | 12.00 | 19.90 | |
| RFI-86-16R | Sampling | NP | 15.79 | 20.00 | |
| 07-01 | Sampling | NP | 14.32 | 15.50 | |
| RFI-86-06D | LNAPL | NP | 11.79 | 14.20 | |
| RFI-86-06S | LNAPL | NP | 22.42 | 24.20 | |
| 43-103 | GW Elevation | NP | 7.73 | 13.65 | |
| 43-161 | LNAPL | 7.64 | 9.36 | 13.53 | (Could not locate in 2010 and 2011) |
| 43-167 | LNAPL | NP | 6.25 | 14.75 | |
| 43-166 | LNAPL | NP | 5.67 | 12.50 | |
| 43-165 | LNAPL | 6.56 | -- | 15.55 | Field notes indicate: "Appears as product to bottom" |
| RW-05-NORTH | LNAPL | Could not locate | | | |
| RFI-05-13 | LNAPL | Obstruction | | | |
| RFI-05-14 | LNAPL | 11.39 | 13.92 | 16.30 | |
| RFI-05-08 | GW Elevation | NP | 13.35 | 13.70 | |
| 55-1 | GW Elevation | Could not locate | | | |
| 55-2 | GW Elevation | NP | 10.07 | 15.80 | |
| RFI-55-02 | GW Elevation | NP | 9.76 | 19.70 | |
| RFI-36-13 | LNAPL | NP | 9.34 | 17.10 | |
| 37-RW-SOUTH | LNAPL | NP | 9.64 | 13.90 | |
| 20-503 | LNAPL | 9.89 | 10.12 | 15.05 | |
| 20-502 | LNAPL | 8.45 | 10.90 | 13.00 | |
| 37-RW-NORTH | LNAPL | 9.10 | -- | 17.00 | Field notes indicate: "Appears as product to bottom" |
| 20-500R | Sampling | NP | 7.45 | 17.40 | |
| 20-506 | LNAPL | NP | 0.70 | 6.10 | Based on water level and depth to bottom data, it appears that the wrong well was gauged. |
| RFI-36-14 | Sampling | NP | 6.99 | 15.60 | |
| RFI-10-07 | GW Elevation | NP | 8.77 | 16.70 | |
| RFI-85-04R | GW Elevation | NP | 18.26 | 26.30 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| RFI-85-05 | GW Elevation | NP | 20.85 | 24.00 | |
| RFI-85-02/02R | LNAPL | NP | 11.00 | 16.50 | |
| 87-FPD2 | GW Elevation | NP | 27.61 | 34.30 | |
| 87-FP1 | LNAPL | NP | 1.35 | 6.20 | |
| MW-00-FP6 | LNAPL | NP | 16.54 | 18.10 | |
| RFI-86-02 | LNAPL | 8.00 | -- | -- | Bailer in Well |
| 87-FPD3 | GW Elevation | NP | 24.58 | 46.00 | |
| RFI-86-03 | LNAPL | NP | 6.85 | 15.00 | |
| RFI-86-08R | GW Elevation | NP | 9.76 | 20.20 | |
| RFI-81-07 | GW Elevation | NP | 5.19 | 13.80 | |
| RFI-81-08 | GW Elevation | NP | 8.10 | 17.30 | |
| RFI-81-51 | Sampling | NP | 11.98 | 17.10 | |
| RFI-81-03 | GW Elevation | NP | 11.82 | 12.00 | |
| RFI-81-13 | LNAPL | NP | 10.56 | 15.60 | |
| RFI-81-49 | LNAPL | NP | 10.93 | 12.90 | |
| RFI-81-47 | LNAPL | NP | 7.64 | 12.40 | |
| RFI-81-50 | Sampling | NP | 4.11 | 13.00 | |
| 70-165 | Sampling | NP | 4.21 | 10.00 | |
| RFI-81-45 | GW Elevation | Could not locate | | | |
| RFI-81-43 | LNAPL | NP | 6.20 | 12.20 | |
| 70-107 | LNAPL | NP | 6.27 | 20.10 | |
| 70-107R | LNAPL | 4.40 | 9.10 | 12.70 | |
| 70-105 | LNAPL | NP | 4.87 | 11.00 | |
| 70-101 | LNAPL | 3.81 | 10.25 | 11.80 | |
| 70-103 | LNAPL | 4.75 | 4.80 | 11.60 | |
| 70-108R | LNAPL | NP | 4.13 | 15.50 | |
| RFI-81-35 | GW Elevation | NP | 12.53 | 19.50 | |
| RFI-81-02 | GW Elevation | NP | 11.00 | 20.60 | |
| 88-7 | GW Elevation | NP | 5.32 | 14.70 | |
| RFI-83/84-01 | LNAPL | NP | 3.12 | 11.70 | |
| RFI-83/84-54 | GW Elevation | NP | 8.22 | 14.80 | |
| RFI-83/84-11 | GW Elevation | Could not locate | | | |
| RFI-83/84-27 | LNAPL | 7.80 | 14.76 | 15.50 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| RFI-83/84-06 | LNAPL | 8.60 | 12.80 | 16.40 | |
| RFI-83/84-04 | LNAPL | 8.45 | 8.50 | 16.00 | |
| RFI-83/84-49 | LNAPL | 8.00 | 14.04 | 17.90 | |
| RFI-83/84-53 | GW Elevation | 7.76 | 9.94 | 16.70 | |
| RFI-83/84-29 | GW Elevation | NP | 11.64 | 16.80 | |
| RFI-83/84-07 | GW Elevation | 6.20 | 11.43 | 17.60 | |
| 36-FP2 | LNAPL | 11.00 | 12.20 | 17.70 | |
| 36-FP4 | LNAPL | NP | 13.59 | 20.60 | |
| 36-FP7 | LNAPL | 10.28 | 14.25 | 17.00 | |
| RFI-36-03 | Sampling | NP | 11.96 | 18.00 | |
| RFI-36-04 | Sampling | NP | 16.56 | 23.00 | |
| RFI-36-05 | LNAPL | Could not locate | | | |
| RFI-36-06 | LNAPL | 15.14 | 15.16 | 21.90 | |
| RFI-36-07 | LNAPL | 10.44 | 10.46 | 16.50 | |
| RFI-36-29R | GW Elevation | 11.03 | 17.69 | 21.30 | |
| RFI-36-27 | GW Elevation | Could not open | | | |
| RFI-36-46 | GW Elevation | NP | 11.58 | 19.60 | |
| RW-1 | LNAPL | 10.86 | 12.51 | 23.10 | |
| RW-3 | LNAPL | NP | 7.90 | 22.40 | |
| RFI-36-12 | GW Elevation | NP | 8.92 | 13.70 | |
| RFI-36-14 | GW Elevation | NP | 6.97 | 15.50 | |
| RFI-38-04 | GW Elevation | NP | 17.10 | 24.80 | |
| RFI-38-06 | GW Elevation | NP | 13.11 | 21.90 | |
| 36-101 | GW Elevation | NP | 12.53 | 17.60 | |
| 38-120 | GW Elevation | NP | 11.84 | 17.50 | |
| RFI-55-01 | GW Elevation | NP | 8.19 | 17.60 | |
| RFI-36-01 | GW Elevation | NP | 16.86 | 24.60 | |
| RFI-36-02 | Sampling | NP | 13.30 | 22.70 | |
| RFI-36-24 | GW Elevation | Could not locate | | | |
| RFI-36-43 | GW Elevation | NP | 10.17 | 19.60 | |
| RFI-36-08 | GW Elevation | NP | 5.92 | 15.50 | |
| RFI-36-44 | Sampling | NP | 13.82 | 22 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| RFI-36-160 | GW Elevation | 8.51 | 9.02 | 12.00 | |
| RFI-05-09 | GW Elevation | NP | 9.39 | 15.20 | |
| RFI-05-19S | GW Elevation | NP | 8.67 | 16.60 | |
| RFI-07-01R2 | GW Elevation | NP | 13.22 | 18.90 | |
| RFI-10-37 | GW Elevation | NP | 2.81 | 12.50 | |
| RFI-36-47 | GW Elevation | NP | Dry | 14.14 | |
| RFI-36-37 | Sample | NP | 18.09 | 27.01 | |
| 20-164 | GW Elevation | NP | 10.00 | 15.70 | |
| 05-12 | GW Elevation | Could not locate | | | |
| 20-143 | GW Elevation | Could not locate | | | |
| 43-102 | GW Elevation | Could not locate | | | |
| 03-15R | GW Elevation | Could not locate | | | |
| 11-140 | | No Access through Fence | | | |
| **SOUTH OF LEITH STREET** | | | | | |
| 04-3 | Sampling | NP | 6.12 | 13.50 | |
| 04-4 | Sampling | NP | 6.55 | 12.00 | |
| 04-160 | GW Elevation | NP | 12.35 | 20.58 | |
| 31-1 | GW Elevation | NP | 7.57 | 19.93 | |
| 31-3 | GW Elevation | NP | 6.07 | 17.46 | |
| 31-4D | GW Elevation | NP | 5.42 | 15.56 | |
| 31-4S | GW Elevation | NP | 5.46 | 11.44 | |
| 31-5 | GW Elevation | NP | 9.96 | 13.45 | |
| 31-7 | GW Elevation | 6.84 | 7.65 | 15.90 | |
| 31-8 | GW Elevation | NP | 7.97 | 14.70 | |
| 40-07R2 | LNAPL | 11.23 | 14.21 | 22.50 | |
| RFI-40-27 | GW Elevation | NP | 7.35 | 21.50 | |
| 40-304 | Sampling | NP | 3.30 | 8.00 | |
| 40-305 | GW Elevation | NP | 4.24 | 9.70 | |
| 84-6R2D | GW Elevation | NP | 5.04 | 34.36 | |
| 84-7D | GW Elevation | NP | 7.43 | 33.33 | |
| 94-100 | GW Elevation | NP | 7.50 | 18.64 | |
| ACSP-B2AR | GW Elevation | NP | 25.72 | 32.68 | |
| BD01-01 | GW Elevation | NP | Dry | 29.21 | |
| BD01-02R | GW Elevation | NP | 12.83 | 19.77 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| BD01-04 | GW Elevation | NP | 15.57 | 20.41 | |
| RFI-02-05R | Sampling | NP | 3.03 | 7.79 | |
| RFI-02-08R | GW Elevation | NP | 4.86 | 13.55 | |
| RFI-02-12 | GW Elevation | NP | 5.17 | 13.69 | |
| RFI-02-14 | LNAPL | 5.20 | 9.45 | 17.90 | |
| RFI-02-15 | LNAPL | 5.10 | 13.39 | 17.90 | |
| RFI-02-16 | LNAPL | NP | 4.74 | 17.83 | |
| RFI-02-17 | LNAPL | NP | 5.16 | 17.95 | |
| RFI-02-18 | LNAPL | 4.88 | 4.89 | 13.00 | |
| RFI-02-19 | LNAPL | 5.65 | 7.25 | 17.00 | |
| RFI-02-22 | Sampling | NP | 0.82 | 15.00 | |
| RFI-02-23 | LNAPL | NP | 4.84 | 14.93 | |
| RFI-09-04R | GW Elevation | NP | 14.99 | 19.00 | |
| RFI-09-11 | GW Elevation | NP | 6.54 | 13.99 | |
| RFI-09-40R | LNAPL | 6.95 | 8.01 | 17.00 | |
| RFI-09-44 | LNAPL | NP | 5.40 | 14.75 | |
| RFI-09-45R | LNAPL | NP | 5.90 | 13.65 | |
| RFI-09-46 | Sampling | NP | 8.84 | 14.43 | |
| RFI-09-47 | GW Elevation | 6.47 | 7.93 | 16.50 | |
| RFI-09-48 | Sampling | NP | 11.13 | 18.00 | |
| RFI-09-49R | GW Elevation | NP | 14.86 | 19.73 | |
| RFI-09-52 | LNAPL | NP | 7.85 | 14.71 | |
| RFI-09-53 | Sampling | NP | 10.03 | 15.00 | |
| RFI-09-56 | GW Elevation | NP | 4.89 | 10.44 | |
| RFI-09-57 | GW Elevation | NP | 4.13 | 12.76 | |
| RFI-12-01R | LNAPL | NP | 5.37 | 14.56 | |
| RFI-12-02/02R | LNAPL | 7.20 | 13.11 | 19.00 | |
| RFI-12-07R2 | LNAPL | NP | 5.15 | 19.79 | |
| RFI-12-08R | LNAPL | 8.68 | 10.93 | 20.00 | |
| RFI-12-09R | LNAPL | 4.52 | 9.94 | 13.00 | |
| RFI-12-11D | LNAPL | 5.72 | 15.34 | 23.00 | |
| RFI-12-11S | LNAPL | NP | 4.76 | 14.58 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| RFI-12-14R | LNAPL | NP | 4.83 | 12.74 | |
| RFI-12-15 | LNAPL | NP | 5.73 | 17.68 | |
| RFI-12-22R | LNAPL | 5.40 | 7.97 | 13.00 | |
| RFI-12-23 | LNAPL | 7.58 | 9.46 | 18.00 | |
| RFI-12-24 | GW Elevation | NP | 4.61 | 15.17 | |
| RFI-12-25 | GW Elevation | 5.17 | 5.18 | 17.00 | |
| RFI-12-26 | LNAPL | NP | 5.16 | 19.18 | |
| RFI-12-27 | LNAPL | NP | 0.81 | 13.65 | |
| RFI-12-33 | GW Elevation | NP | 6.56 | 13.79 | |
| RFI-12-34 | GW Elevation | NP | 7.14 | 15.72 | |
| RFI-12-35 | GW Elevation | 5.25 | 5.86 | 14.50 | |
| RFI-12-38 | LNAPL | 5.02 | 6.03 | 8.00 | |
| RFI-12-40 | LNAPL | NP | 5.27 | 7.53 | |
| RFI-12-41 | LNAPL | NP | 3.34 | 11.83 | |
| RFI-12-42 | Sampling | NP | 2.73 | 15.00 | |
| RFI-16-01 | GW Elevation | NP | 7.40 | 13.48 | |
| RFI-16-04R | LNAPL | NP | 7.89 | 16.01 | |
| RFI-17-02 | Sampling | NP | 5.08 | 14.00 | |
| RFI-17-02D | Sampling | NP | 4.62 | 24.00 | |
| RFI-40-02R | LNAPL | 7.55 | 8.40 | 19.03 | |
| RFI-40-03 | GW Elevation | NP | 8.00 | 15.54 | |
| RFI-40-04 | GW Elevation | NP | 10.20 | 31.35 | |
| RFI-40-07 | GW Elevation | NP | 1.83 | 18.72 | |
| RFI-40-09 | GW Elevation | NP | 7.73 | 18.69 | |
| RFI-40-10R | LNAPL | NP | 6.95 | 14.32 | |
| RFI-40-12R | LNAPL | 8.89 | 9.51 | 20.8 | |
| RFI-40-14R | LNAPL | 7.19 | 17.79 | 22.50 | |
| RFI-40-20 | LNAPL | 6.72 | 6.73 | 12.92 | |
| RFI-40-26 | LNAPL | NP | 8.82 | 16.88 | |
| RFI-44-05 | Sampling | NP | 7.51 | 18.00 | |
| RFI-84-03S | GW Elevation | NP | 9.44 | 20.96 | |
| RFI-84-04D | GW Elevation | NP | 9.16 | 46.91 | |
| RFI-84-04I | GW Elevation | NP | 8.20 | 33.00 | |

**Table 9.** **November 2012 Groundwater Elevation Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| | | 2012 Data | | | |
|---|---|---|---|---|---|
| **Monitoring Well ID Number** | **Monitoring Program** | **Depth to LNAPL (feet)** | **Depth to Water (feet)** | **Depth to Bottom (feet)** | **Comments** |
| RFI-84-05 | GW Elevation | NP | 5.86 | 17.60 | |
| RFI-84-06R | Sampling | NP | 5.41 | 13.00 | |
| RFI-84-06RD | Sampling | NP | 6.80 | 22.00 | |
| RFI-84-07S | GW Elevation | NP | 7.71 | 12.55 | |
| RFI-84-09D | Sampling | NP | 9.21 | 29.05 | |
| RFI-84-09S | Sampling | NP | 9.64 | 15.00 | |
| RFI-84-11S | Sampling | NP | 3.83 | 13.00 | |
| RFI-84-12 | Sampling | NP | 8.23 | 18.00 | |
| RFI-84-8S | GW Elevation | NP | 9.70 | 20.00 | |
| RFI-86-01R | Sampling | NP | 21.23 | 26.00 | |
| RFI-86-15 | GW Elevation | NP | 3.91 | 19.64 | |
| RFI-94-05 | GW Elevation | NP | 2.76 | 15.44 | |
| RFI-94-08 | GW Elevation | NP | 14.00 | 24.58 | |
| RFI-94-11 | Sampling | NP | 7.96 | 18.00 | |

**Table 10.** **November 2012 Monitoring Well Field Parameters, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Well ID | Date Sampled | Temperature (°C) | pH (SU) | Conductivity (mS/cm) | Dissolved Oxygen (mg/l) | Turbidity (NTU) | Oxidation Reduction Potential (mV) |
|---|---|---|---|---|---|---|---|
| RFI-36-02 | 11/7/2012 | 14.00 | 7.16 | 1.525 | 0.58 | 7.00 | 14.0 |
| RFI-36-03 | 11/7/2012 | 14.50 | 7.20 | 1.268 | 0.61 | 0.00 | 135.7 |
| RFI-36-14 | 11/7/2012 | 14.00 | 7.21 | 0.713 | 2.33 | 13.50 | 185.3 |
| 20-500R | 11/7/2012 | 15.00 | 7.10 | 5.003 | 0.27 | 0.00 | -57.3 |
| RFI-10-26 | 11/7/2012 | 12.70 | 7.29 | 0.349 | 6.75 | 0.00 | 145 |
| 20-FP10R | 11/7/2012 | 14.30 | 7.19 | 0.822 | 0.30 | 17.40 | -35 |
| 70-165 | 11/7/2012 | 12.80 | 6.90 | 1.173 | 0.61 | 4.00 | 95.5 |
| 07--01 | 11/8/2012 | 17.10 | 7.23 | 0.605 | 1.57 | 625.00 | 2.0 |
| RFI-10-24 | 11/8/2012 | 12.90 | 6.98 | 0.913 | 0.59 | 5.30 | 183 |
| RFI-10-29 | 11/8/2012 | 12.60 | 7.12 | 0.627 | 1.00 | 0.00 | 193 |
| RFI-10-33 | 11/8/2012 | 13.00 | 7.48 | 0.641 | 1.85 | 6.00 | 159 |
| RFI-10-35 | 11/8/2012 | 13.20 | 7.18 | 0.676 | 0.42 | 2.10 | 129 |
| RFI-36-19 | 11/8/2012 | 14.00 | 7.29 | 0.547 | 1.25 | 4.50 | 188.9 |
| RFI-81-50 | 11/8/2012 | 10.60 | 7.48 | 0.465 | 2.60 | 15.60 | 104 |
| RFI-81-51 | 11/8/2012 | 14.10 | 7.35 | 7.400 | 0.29 | 42.00 | 73 |
| RFI-86-01R | 11/8/2012 | 13.50 | 7.59 | 0.603 | 0.87 | 9.80 | 144 |
| RFI-86-01R | 11/13/2012 | 10.40 | 7.53 | 0.505 | 0.64 | 4.60 | 166 |
| RFI-86-16R | 11/8/2012 | 13.10 | 7.32 | 0.582 | 0.50 | 0.80 | 40 |
| RFI-10-37 | 11/9/2012 | 11.70 | 7.23 | 3.756 | 0.27 | 2.10 | -1.6 |
| RFI-36-44 | 11/9/2012 | 10.10 | 7.37 | 0.820 | 3.90 | 7.60 | 146 |
| RFI-36-48 | 11/9/2012 | 11.70 | 7.15 | 0.738 | 3.72 | 0.00 | 93 |
| RFI-36-55R | 11/9/2012 | 10.70 | 7.36 | 1.274 | 0.36 | 0.00 | -32 |
| RFI-36-56 | 11/9/2012 | 11.20 | 7.49 | 0.721 | 2.23 | 0.00 | 151 |
| RFI-84-06R | 11/13/2012 | 12.40 | 7.12 | 0.623 | 1.08 | 0.00 | 222.5 |
| RFI-84-06RD | 11/7/2012 | 13.69 | 7.15 | 5.950 | 1.13 | 0.00 | -107 |
| RFI-17-02 | 11/7/2012 | 16.78 | 6.63 | 1.020 | 7.91 | 20.10 | -51 |
| RFI-17-02D | 11/7/2012 | 15.62 | 7.15 | 1.240 | 3.11 | 14.80 | -173 |
| 04-4 | 11/8/2012 | 14.92 | 6.11 | 1.080 | 2.07 | 7.16 | -86 |
| 04-3 | 11/8/2012 | 14.17 | 6.27 | 0.972 | 2.31 | 0.00 | 98 |
| RFI-02-22 | 11/8/2012 | 13.32 | 6.31 | 3.240 | 1.94 | 0.00 | -98 |
| RFI-09-04R | 11/8/2012 | 13.94 | 6.30 | 1.450 | 3.85 | 0.00 | 83 |
| RFI-09-46 | 11/8/2012 | 13.28 | 6.32 | 2.700 | 1.63 | 0.00 | -122 |
| RFI-09-53 | 11/8/2012 | 13.36 | 6.29 | 1.050 | 0.87 | 0.00 | -9 |
| RFI-44-05 | 11/8/2012 | 14.50 | 6.22 | 1.440 | 3.30 | 0.00 | 64 |
| RFI-84-09D | 11/8/2012 | 12.45 | 7.15 | 1.420 | 1.33 | 0.00 | -136 |
| RFI-84-09S | 11/8/2012 | 14.51 | 6.81 | 1.340 | 6.80 | 8.40 | -161 |
| RFI-84-12 | 11/8/2012 | 14.18 | 6.17 | 1.190 | 3.09 | 0.00 | -135 |
| 40-304 | 11/9/2012 | 13.75 | 6.20 | 0.582 | 1.53 | 0.00 | -156 |
| RFI-02-05 | 11/9/2012 | 13.10 | 7.19 | 0.656 | 0.36 | 2.90 | -43 |
| RFI-09-48 | 11/9/2012 | 14.34 | 6.30 | 3.300 | 1.65 | 0.00 | -88 |
| RFI-12-42 | 11/9/2012 | 13.35 | 5.89 | 1.120 | 3.40 | 0.00 | -171 |
| RFI-84-11S | 11/9/2012 | 14.05 | 6.05 | 0.914 | 1.72 | 0.00 | -11 |
| RFI-94-11 | 11/9/2012 | 12.98 | 6.22 | 9.450 | 2.88 | 0.00 | -24 |
| RFI-36-37 | 11/14/2012 | 12.73 | 6.95 | 1.990 | 3.62 | 0.63 | -58.7 |

**Notes:**

ºC = Celsius.

mg/L = milligrams per liter.

mV = millivolts.

NTUs = Nephelometric Turbidity Units.

SU = Standard Units.

mS/cm = milliSiemens per centimeter.

NS = Not Sampled

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 04-3 11/08/12 | 04-4 11/08/12 | 07-01 11/08/12 | 20-500R 11/07/12 | 20-FP10R 11/07/12 | 40-304 11/09/12 | 70-165 11/07/12 | RFI-02-05 11/09/12 | RFI-02-22 11/08/12 | RFI-09-04R 11/08/12 | RFI-09-46 11/08/12 | RFI-09-48 11/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | NA | NA | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | NA | NA | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | NA | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | NA | NA | 1 U | 1 U | **9** | 1 U | 1 U | 1 U | 1 U | 1 U | 3 | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 UX | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | NA | NA | 4 | 1 U | 4 | 6 | 1 U | 1 U | 1 U | 1 | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 87 | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | NA | NA | 1 U | 1 U | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 8 | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 9 | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 40 | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **12** | 5 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 6 | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 3 | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | NA | NA | **11** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | NA | NA | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 4 | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | NA | NA | **9** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **10** | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 3 | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | NA | NA | 1 U | 1 U | 1 U | **7** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 04-3 11/08/12 | 04-4 11/08/12 | 07-01 11/08/12 | 20-500R 11/07/12 | 20-FP10R 11/07/12 | 40-304 11/09/12 | 70-165 11/07/12 | RFI-02-05 11/09/12 | RFI-02-22 11/08/12 | RFI-09-04R 11/08/12 | RFI-09-46 11/08/12 | RFI-09-48 11/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-53 11/08/12 | RFI-10-24 11/08/12 | RFI-10-26 11/07/12 | RFI-10-29 11/08/12 | RFI-10-33 11/08/12 | RFI-10-33 11/14/12 | RFI-10-35 11/08/12 | RFI-10-37 11/09/12 | RFI-12-42 11/09/12 | RFI-17-02 11/07/12 | RFI-17-02D 11/07/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 61 | 4 | 1 U | 1 U | 44 | 61 | 11 | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 74 | 9 | 1 U | 1 U | 21 | 35 | 8 | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 3 | 1 | 1 U | 1 U | 6 | **10** | 1 | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 | 2 | 1 U | 1 U | 1 U | 2 | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | **84** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 4 | 1 U | 1 U | 1 |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **23** | 5 U | 5 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | **29** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **175** | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | **27** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 | 1 U | 1 U | 1 U |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-53 11/08/12 | RFI-10-24 11/08/12 | RFI-10-26 11/07/12 | RFI-10-29 11/08/12 | RFI-10-33 11/08/12 | RFI-10-33 11/14/12 | RFI-10-35 11/08/12 | RFI-10-37 11/09/12 | RFI-12-42 11/09/12 | RFI-17-02 11/07/12 | RFI-17-02D 11/07/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | 3 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-02 11/07/12 | RFI-36-03 11/07/12 | RFI-36-14 11/07/12 | RFI-36-19 11/08/12 | RFI-36-37 11/14/12 | RFI-36-44 11/09/12 | RFI-36-48 11/09/12 | RFI-36-55R 11/09/12 | RFI-36-56 11/09/12 | RFI-44-05 11/08/12 | RFI-81-50 11/08/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 9 | 5 UY | 3 | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | NA | 30 U | 30 U | 30 U | NA | 30 U | 200 UY | 30 U | NA | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 | NA | 1 U | 1 U | 12 | NA | 33 | 231 Y | 5 | NA | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | NA | 1 U | 1 U | 1 U | NA | 7 | **12 Y** | 1 U | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | NA | 2 U | 2 U | 2 U | NA | 2 U | 10 UY | 2 U | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | NA | 20 U | 20 U | 20 U | NA | 20 U | 100 UY | 20 U | NA | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | NA | 50 U | 50 U | 50 U | NA | 50 U | 300 UY | 50 U | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | NA | 10 U | 10 U | 10 U | NA | 10 U | 50 UY | 10 U | NA | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | NA | 70 | 20 U | 20 U | NA | 20 U | 100 UY | 20 U | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | NA | 1 U | 1 U | 2 | NA | 1 U | 5 UY | 1 U | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | NA | 2 U | 2 U | 2 U | NA | 2 U | 10 UY | 2 U | NA | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | NA | 5 U | 5 U | 5 U | NA | 5 U | 30 UY | 5 U | NA | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | NA | 1 U | 1 U | 128 | NA | 2 | 5 UY | 1 U | NA | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | NA | 2 U | 2 U | 2 U | NA | 2 U | 10 UY | 2 U | NA | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | NA | 10 U | 10 U | 10 U | NA | 10 U | 50 UY | 10 U | NA | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | NA | 5 U | 5 U | 5 U | NA | 5 U | 30 UY | 5 U | NA | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | 20 U | 20 U | 20 U | NA | 20 U | 100 UY | 20 U | NA | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | NA | 5 U | 5 U | 5 U | NA | 5 U | 30 UY | 5 U | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | NA | 5 U | 5 U | 5 U | NA | 5 U | 30 UY | 5 U | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 U | 5 UY | 1 U | NA | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | NA | 1 U | 1 U | 1 U | NA | 1 | **8 Y** | 1 U | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-02 11/07/12 | RFI-36-03 11/07/12 | RFI-36-14 11/07/12 | RFI-36-19 11/08/12 | RFI-36-37 11/14/12 | RFI-36-44 11/09/12 | RFI-36-48 11/09/12 | RFI-36-55R 11/09/12 | RFI-36-56 11/09/12 | RFI-44-05 11/08/12 | RFI-81-50 11/08/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | **22 [23]** | NA | NA | NA | 6 | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | 4 | NA | NA | 3 U | 3 U | NA | NA | NA | NA | 3 U |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-81-51 11/08/12 | RFI-84-06R 11/07/12 | RFI-84-06R 11/13/12 | RFI-84-06RD 11/07/12 | RFI-84-09D 11/08/12 | RFI-84-09S 11/08/12 | RFI-84-11S 11/09/12 | RFI-84-12 11/08/12 | RFI-86-01R 11/08/12 | RFI-86-01R 11/13/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 2 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | NA | NA | NA | 30 U | 30 U | 30 U | 30 U | NA | 30 U [30 U] |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | NA | 2 U [2 U] |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | NA | 20 U [20 U] |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | NA | NA | NA | 50 U | 50 U | 50 U | 50 U | NA | 50 U [50 U] |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | NA | NA | NA | 10 U | 10 U | 10 U | 10 U | NA | 10 U [10 U] |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | NA | 80 [70] |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | NA | 2 U [2 U] |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | NA | 5 U [5 U] |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 | NA | NA | NA | 4 | 1 U | 1 U | 2 | NA | 1 U [1 U] |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | NA | 2 U [2 U] |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | NA | NA | NA | 10 U | 10 U | 10 U | 10 U | NA | 10 U [10 U] |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | NA | 5 U [5 U] |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | NA | 20 U [20 U] |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | NA | 5 U [5 U] |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | NA | 5 U [5 U] |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | **8** | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | **82** | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U [1 U] |
| **PCB** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-81-51 11/08/12 | RFI-84-06R 11/07/12 | RFI-84-06R 11/13/12 | RFI-84-06RD 11/07/12 | RFI-84-09D 11/08/12 | RFI-84-09S 11/08/12 | RFI-84-11S 11/09/12 | RFI-84-12 11/08/12 | RFI-86-01R 11/08/12 | RFI-86-01R 11/13/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | 5 U [5 U] | 5 U | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 3 U | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 6 [7] | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-86-16R 11/08/12 | RFI-94-11 11/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | 5 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U |
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U |
| **PCB** | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |

**Table 11. 2012 Annual Groundwater Sampling Event Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-86-16R 11/08/12 | RFI-94-11 11/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA |
| **Inorganic** | | | | | | | | | | |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

**Table 12.** **2013 Proposed Groundwater Monitoring Plan and Rationale, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Sampling Area | Proposed Sampling Location | Analytical Parameters | Sampling Rationale | Eliminated Sampling Locations | Rationale for Elimination |
|---|---|---|---|---|---|
| **North of Leith Street** | | | | | |
| North of Stewart Street | RFI-36-03 [3] | Cadmium and lead | Plume fringe well - sampling to assess cadmium and lead concentrations. | RFI-36-02 | During the 2012 sampling event RFI-36-02 was analyzed for VOCs and arsenic. Only arsenic was detected at a concentration which exceeded criteria (GSI). RFI-36-02 is being eliminated and arsenic has been added to the analyte list at downgradient well RFI-36-47 to determine if arsenic impacts have migrated off-Site. |
| | RFI-36-35 [1] | VOCs<br>Arsenic, chromium, manganese, silver and vanadium | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-36-19 | During the 2012 sampling event RFI-36-19 was a sentinel location downgradient of a VOC impacted area. No exceedances of criteria were detected. In addition, no exceedances of criteria have been detected in previous sampling events completed since 2001. RFI-36-19 is being replaced with fringe monitoring well RFI-36-37. |
| | RFI-36-37 [3] | VOCs | Off-Site Plume fringe well - Located at downgradient edge of VOC plume. Sampling to monitor concentrations. Replaces wells RFI-36-19 and RFI-36-20. | | |
| | RFI-36-44 [3] | VOCs | Off-Site Sentinel Well - Located side/downgradient edge of VOC plume. Sampling to monitor concentrations. Replaces well RFI-36-56. | RFI-36-20 | During the 2012 sampling event RFI-36-20 was a sentinel location downgradient of a VOC impacted area. No exceedances of criteria were detected. In addition, no exceedances of criteria have been detected in previous sampling events completed since 2001. RFI-36-20 is being replaced with fringe monitoring well RFI-36-37. |
| | RIF-36-46 [1] | Manganese | Plume Well - Monitoring well has not been sampled in 5 years. Sampling is proposed to determine current conditions at the property boundary. | | |
| | RFI-36-47 [2, 3] | VOCs | Off-Site Plume Fringe Well - Located at downgradient edge of VOC plumes sampling to monitor concentrations. | RFI-36-48 | During the 2012 sampling event RFI-36-48 was a plume fringe well being analyzed for VOCs. No exceedances of criteria were detected during the 2011 or 2012 monitoring events. The downgradient fringe of the VOC plume will now be monitored at nearby well RFI-36-55R. |
| | | Arsenic, chromium, manganese, silver and vanadium | Off-Site Sentinel Well - Sampling to determine whether historic groundwater impacts have migrated off-Site. Replaces well RFI-36-02. | | |
| | RFI-36-55R [3] | VOC | Off-Site Plume Fringe Well - Located at downgradient edge of VOC plume. Sampling to monitor concentrations. Replaces well RFI-36-48. | | |
| | 36-FP1 | VOCs | Plume Well - Monitoring well has not been analyzed for VOCs in 7 years. Sampling is proposed to determine current concentrations at the property boundary. | RFI-36-56 | During the 2012 Sampling event RFI-36-56 was a sentinel location downgradient of a VOC impacted area. No exceedances of criteria were detected. In addition, no exceedances of criteria have been detected in previous sampling events completed since 2005. RFI-36-56 will be replaced with RFI-36-44 as the sentinel monitoring location along the eastern boundary of the VOC plume. |
| | | Arsenic, lead, and manganese | Plume Fringe Well - Located downgradient edge of inorganic plume. Sampling to assess arsenic, lead and manganese concentrations. | | |

**Table 12. 2013 Proposed Groundwater Monitoring Plan and Rationale, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Sampling Area | Proposed Sampling Location | Analytical Parameters | Sampling Rationale | Eliminated Sampling Locations | Rationale for Elimination |
|---|---|---|---|---|---|
| Central Portion of the Northend | 20-500R | VOCs | Plume Fringe Well - Located at the downgradient edge of VOC Plume. Sampling to monitor concentrations. | RFI-36-14 | During the 2012 sampling event RFI-36-14 was a sentinel location downgradient of an LNAPL plume and was analyzed for VOCs. No exceedances of criteria were detected. In addition no exceedances of criteria for VOCs have been detected in previous sampling events completed since 2001. Therefore, RFI-36-14 will no longer be monitored. |
| | RFI-10-03 [1] | VOCs | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | | |
| | | Cyanide. Mercury, manganese, and silver | | | |
| | RFI-10-05 [1] | VOCs | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | 20-FP10R | During the 2012 sampling event 20-FP10R was a plume fringe location at the downgradient edge of a VOC plume. In 2012 RFI-10-37 was installed downgradient of 20-FP10R to determine if VOC impacts extended towards the Site boundary. Exceedances of VOCs were detected at RFI-10-37; therefore, 20-FP10R will be replaced with RFI-10-37 as the plume fringe well. In addition downgradient well 70-163 is added as a sentinel well to determine if VOC impacts extend off-Site. |
| | | Cyanide, lead, manganese, silver, and vanadium | | | |
| | RFI-10-11 [1] | Cyanide | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | | |
| | RFI-10-26 [3] | Cyanide, lead, mercury, selenium, and vanadium | Plume Fringe Well - located along the downgradient edge of metals plume. Sampling to monitor concentrations. | RFI-10-24 | During the 2012 sampling event RFI-10-24, RFI-10-29, RFI-10-32, and RFI-10-35 were sentinel locations downgradient of a VOC impacted area. No exceedances of criteria were detected. In addition, no exceedances of criteria have been detected at these wells in previous sampling events completed since 2001. Therefore, these wells are being eliminated and samples will be collected from the VOC impacted area using monitoring wells RFI-10-05, RFI-10-32, and RFI-10-33 to determine current concentrations of the plume |
| | RFI-10-32 [1] | VOC | Off-Site Plume Fringe Well - Located at the downgradient edge of VOC plume. Sampling to monitor concentrations. | RFI-10-29 | |
| | RFI-10-33 [3] | VOC | Off-Site Plume Fringe Well - Located at the downgradient edge of VOC and inorganics plume. | RFI-10-31 | |
| | | Cyanide, lead, manganese, silver, and vanadium | | | |
| | RFI-10-37 [3] | VOCs | Plume Fringe Well - Monitoring well was installed in 2012 to monitor VOC concentrations at the property boundary. Replaces 20-FP10R as the plume fringe well. | RFI-10-35 | |
| | 70-163 [1] | VOCs | Off-Site Sentinel Well - Located downgradient of the VOC plume. Sampling to assess current conditions. | | |
| | | Manganese | Plume well - Sampling to assess a historic manganese exceedance. | 70-165 | During the 2012 sampling event 70-165 was a sentinel location downgradient of an LNAPL plume and was analyzed for VOCs. No exceedances of criteria were detected. In addition no exceedances of criteria for VOCs have been detected in previous sampling events completed since 2001. Therefore, 70-165 will no longer be monitored. |
| | 70-164 [2,3] | VOCs | Off-Site Sentinel Well - Located downgradient of an LNAPL plume. Sampling to assess current conditions. | | |
| | | Selenium | Plume Well - Sampling to assess a historic selenium exceedance. | | |

**Table 12.** **2013 Proposed Groundwater Monitoring Plan and Rationale, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Sampling Area | Proposed Sampling Location | Analytical Parameters | Sampling Rationale | Eliminated Sampling Locations | Rationale for Elimination |
|---|---|---|---|---|---|
| North of Leith Street | RFI-81-11 [1] | VOCs<br>Arsenic, cyanide, lead, manganese, mercury | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-81-50 | During the 2012 sampling event RFI-81-50 was monitored as sentinel location downgradient of a lead exceedance. The sample did not exceed criteria. In addition no exceedances of criteria for lead have been exceeded in previous sampling events completed since 2005. Therefore, RFI-81-50 will no longer be monitored. |
| | RFI-81-12R [1] | Mercury, Silver | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | | |
| | RFI-81-33 [1] | Mercury | Plume Well - Monitoring well has not been sampled in 9 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-86-01R | During the 2012 sampling event RFI-86-01R and RFI-86-16R were sentinel locations downgradient of VOC and inorganic impacted area. No exceedances of criteria were detected. In addition, no exceedances of criteria have been detected at these wells in previous sampling events completed since 2002. Therefore, these wells are being eliminated and samples will be collected from the VOC and inorganic impacted area using monitoring wells 07-01 and RFI-86-06S to determine current concentrations of the plume |
| | RFI-81-51 [3] | VOCs | Plume Fringe Well - Located at downgradient edge of a VOC plume. Sampling to monitor concentrations. | | |
| | 07-01 [3] | VOCs | Plume Fringe Well - Located at downgradient edge of a VOC plume. Sampling to monitor concentrations. | RFI-86-16R | |
| | RFI-86-06S [1] | VOCs | Plume Well - Monitoring well has not been sampled in 9 years. Sampling is proposed to determine current conditions at the property boundary. | | |
| | 86-100 [1] | VOCs<br>Cadmium, Copper, lead, manganese, nickel, silver, selenium, and zinc | Plume Well - Monitoring well has not been sampled in 9 years. Sampling is proposed to determine current conditions at the property boundary. | | |
| **South of Leith Street** | | | | | |
| South of Leith Street | RFI-02-08R [1] | Arsenic | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-02-05R | During the 2012 sampling event RFI-02-05R was a sentinel location downgradient of an area which had VOC exceedances of drinking water criteria. However, as drinking water criteria are no longer applicable at the interior of the Site, monitoring at this location is no longer necessary. In addition no exceedances of criteria have been detected in previous sampling events completed since 2001. |
| | | | | RFI-02-22 | During the 2012 sampling event RFI-02-22 was a sentinel location downgradient of an LNAPL plume. No exceedances of criteria were detected. In addition no exceedances of criteria have been detected in previous sampling events completed since 2005. Therefore RFI-02-22 will no longer be monitored. |
| | | | | RFI-12-42 | During the 2012 sampling event RFI-12-42 was a sentinel location downgradient of an area which had VOC exceedances of drinking water criteria. However, as drinking water criteria are no longer applicable at the interior of the Site, monitoring at this location is no longer necessary. In addition, the only exceedances detected t this location were for GSI criteria, and as this area has been bulkheaded GSI is not a relevant pathway. |

**Table 12.** **2013 Proposed Groundwater Monitoring Plan and Rationale, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Sampling Area | Proposed Sampling Location | Analytical Parameters | Sampling Rationale | Eliminated Sampling Locations | Rationale for Elimination |
|---|---|---|---|---|---|
| Central Portion of the Southend | RFI-40-03 [1] | VOCs | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-84-09D | During the 2012 sampling event RFI-84-09D, RFI-84-09S, RFI-84-11S, RFI-84-12, RFI-17-02, and RFI-17-02D were sentinel or plume fringe locations downgradient of an area which had VOC and select metals exceedances of drinking water criteria. However, as drinking water criteria are no longer applicable at the interior of the Site, monitoring at these locations is no longer necessary. As discussed in the text, monitoring wells located within 200 feet of the downgradient property boundary where compared to drinking water in order to be protective of downgradient properties. The 2011 and 2012 groundwater samples collected from these wells did not exceed applicable criteria. |
| | RFI-40-09 [1] | VOCs | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-84-09S | |
| | | Arsenic, beryllium, cyanide, mercury, and silver | | RFI-84-11S | |
| | 40-304 [3] | VOCs | Plume well - Monitoring concentrations at property boundary. | RFI-84-12 | |
| | | PCBs | Sentinel Well - Located downgradient of Building 40 Tunnel (required by EPA 9/13/2005 correspondence). | RFI-17-02 | |
| | 40-305 [1] | Cyanide and lead | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions at the property boundary. | RFI-17-02D | |
| | RFI-84-06R [3] | Cyanide | Plume well - Monitoring concentrations at the property boundary. | RFI-84-06RD | During the 2012 sampling event RFI-84-06RD was a plume monitoring location for cyanide. No exceedances of criteria were detected. In addition no exceedances of criteria have been detected in previous sampling events completed since 2005. Therefore, RFI-84-06RD will no longer be monitored. |
| | RFI-94-02R [1] | VOCs | Plume Well - Monitoring well has not been sampled in 9 years. Sampling is proposed to determine current conditions at the property boundary. Replaces well RFI-94-11. | 04-3 | During the 2012 sampling event 04-3, 04-4, and RFI-44-05 were sentinel locations downgradient of historic releases and upgradient of a storm sewer. No exceedances of criteria were detected. In addition no exceedances of criteria have been detected in previous sampling events completed since 2001. Therefore, 04-3, 04-4, and RFI-44-05 will no longer be monitored. |
| | | | | 04-4 | |
| | | | | RFI-44-05 | |
| | | | | RFI-94-11 | During the 2012 sampling event RFI-94-11 was a sentinel location downgradient of a VOC impacted area. No exceedances of criteria were detected. In addition no exceedances of criteria have been detected in previous sampling events completed since 2005. RFI-94-11 will be replaced with plume fringe well RFI-94-02R. |

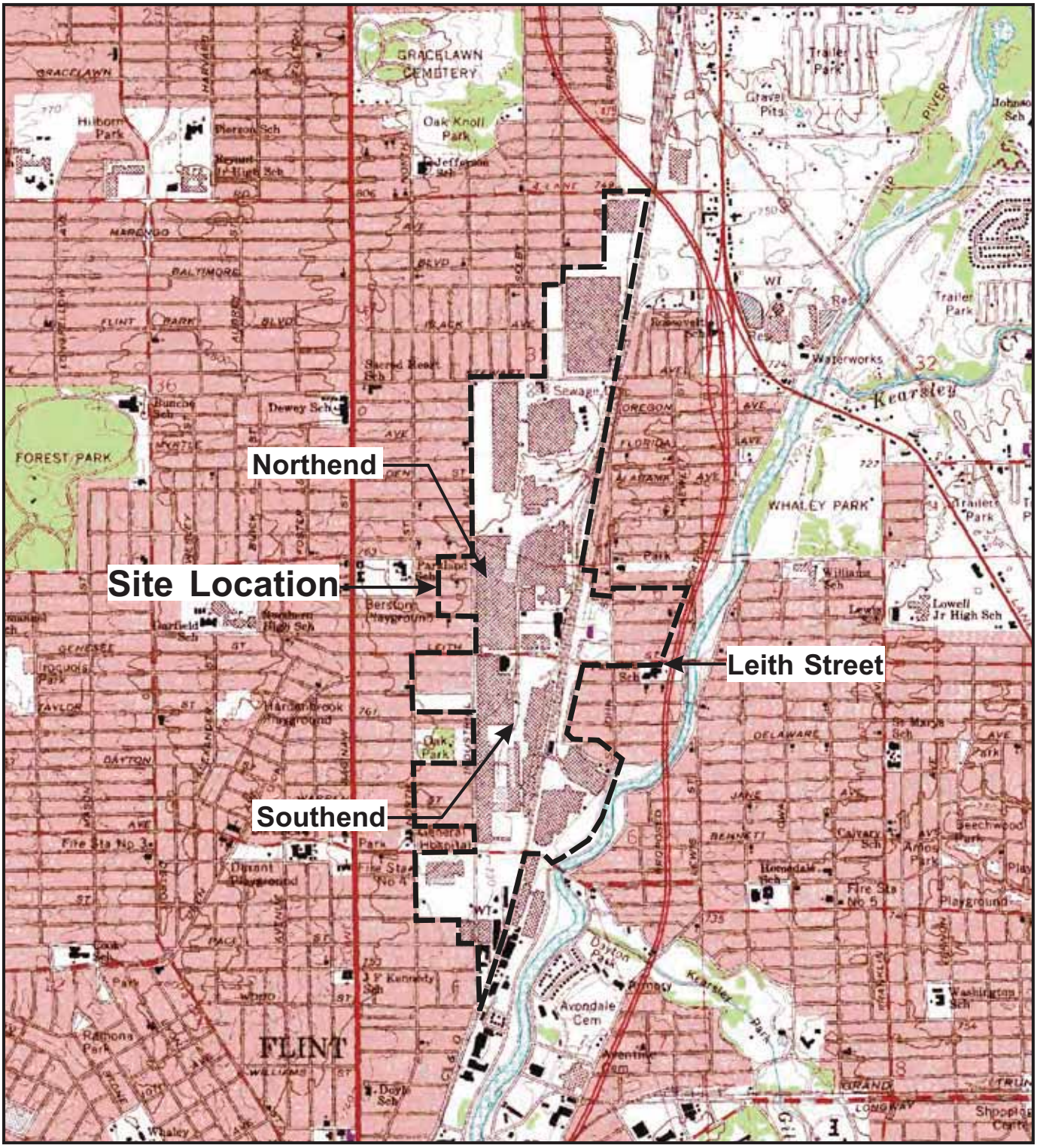
**Table 12.** **2013 Proposed Groundwater Monitoring Plan and Rationale, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Sampling Area | Proposed Sampling Location | Analytical Parameters | Sampling Rationale | Eliminated Sampling Locations | Rationale for Elimination |
|---|---|---|---|---|---|
| South of Hamilton Avenue | RFI-09-04R [3] | VOCs | Plume Well - Monitoring concentrations at property boundary. | RFI-09-14 | Monitoring well RFI-09-14 was a sentinel well for a VOC plume; however, it has not been able to be sampled due to access issues. RFI-09-14 is being replaced by monitoring wells RFI-09-08 and RFI-09-55S which are located on-Site within the footprint of the VOC plume. |
| | RFI-09-08 [1] | VOCs | Plume Well - Monitoring well has not been sampled in 10 years. Sampling is proposed to determine current conditions and property boundary. Replaces wells RFI-09-14 and MW-23. | | |
| | RI-09-36R [1] | VOCs | Nearby well RFI-09-01 had a historic exceedance (2003)for vinyl chloride; however, RFI-09-01 will be removed during lead soil excavation activities to be completed in Spring 2013. Therefore RFI -09-36R will be sampled to assess current conditions in this portion of the Site. | | |
| | RFI-09-46 [3] | VOCs | Off-Site Plume Well - Monitoring concentrations of plume downgradient of the Site. | MW-23 | Monitoring well MW-23 was a sentinel well for a VOC plume; however, it has not been able to be sampled due to access issues. MW-23 is being replaced by monitoring wells RFI-09-08 and RFI-09-55S which are located on-Site within the footprint of the VOC plume. |
| | RFI-09-48 [3] | VOCs and metals | Sentinel Well - Located downgradient of Site. | | |
| | RFI-09-53 [3] | VOCs | Plume Well - Monitoring concentrations at property boundary. | | |
| | RFI-09-55S [1] | VOCs | Plume well - Monitoring well has not been sampled in 8 years. Sampling is proposed to determine current conditions and property boundary. Replaces wells RFI-09-14 and MW-23. | | |
| | | Manganese | | | |
| | MW-26 [1,3] | VOCs | Off-Site Sentinel Well - Located downgradient of VOC plume to confirm that plume has not migrated. | | |

Notes:
1. Monitoring well will need to be redeveloped prior to sampling.
2. Monitoring well is silted in or has an obstruction. Well will need to be re-developed or re-installed.
3. Monitoring well was included in previous monitoring program.

ARCADIS

# Figures




**REFERENCE:** Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

**3/29/13**

2000' 0 2000'

**Approximate Scale: 1" = 2000'**

**Area Location**

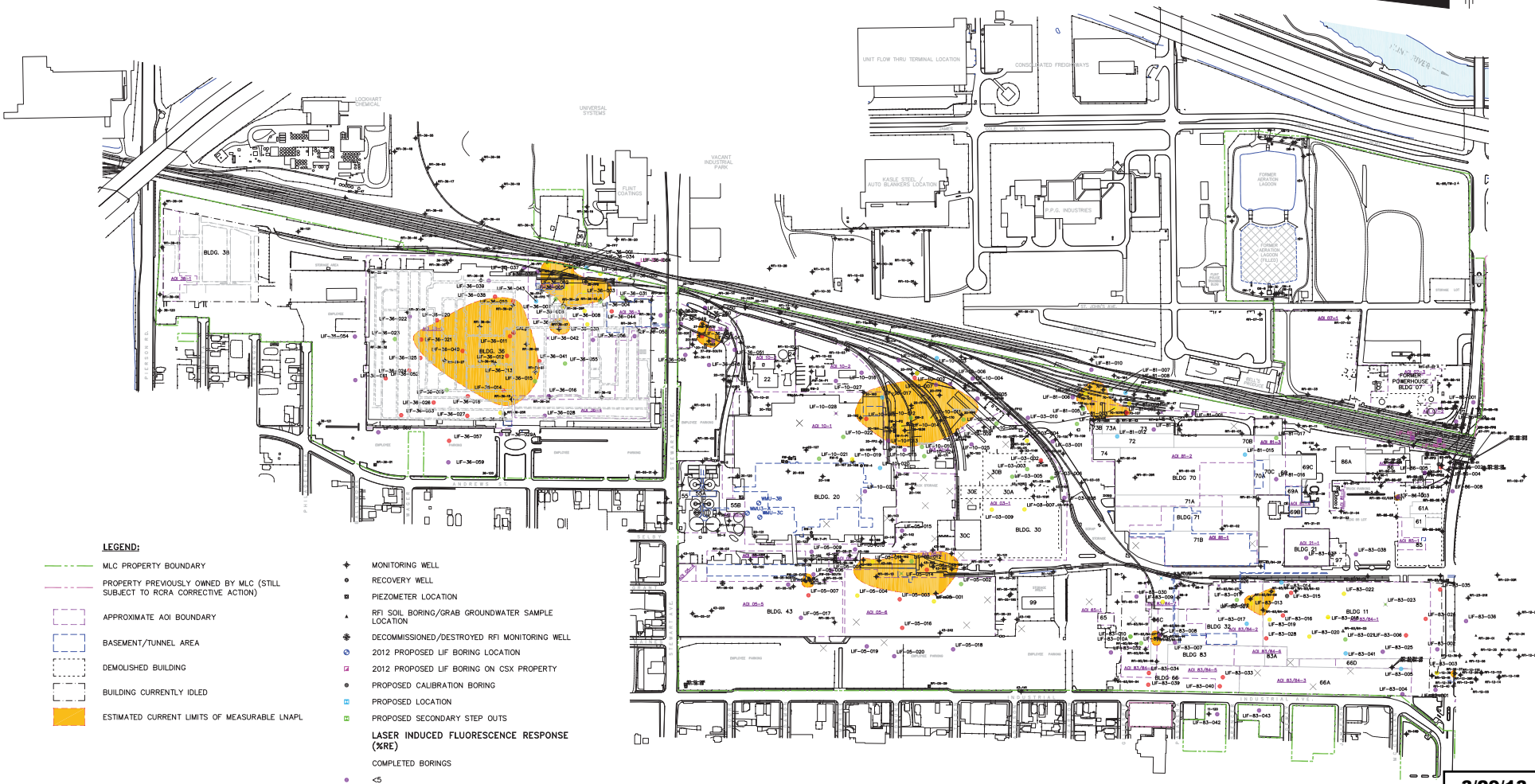
RACER TRUST
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

## SITE LOCATION MAP

ARCADIS

FIGURE
**1**

03/12/2012 SYRACUSE, NY-ENV/CAD-141-DJHOWES
B0064410/2012/01202/CDR/64410N01.CDR


UNIT FLOW THRU TERMINAL LOCATION
CONSOLIDATED FREIGHTWAYS
LOCKHART CHEMICAL
UNIVERSAL SYSTEMS
VACANT INDUSTRIAL PARK
FLINT COATINGS
KASLE STEEL / AUTO BLANKERS LOCATION
P.P.G. INDUSTRIES
FORMER AERATION LAGOON
FORMER AERATION LAGOON (FILLED)
FORMER POWERHOUSE BLDG 07
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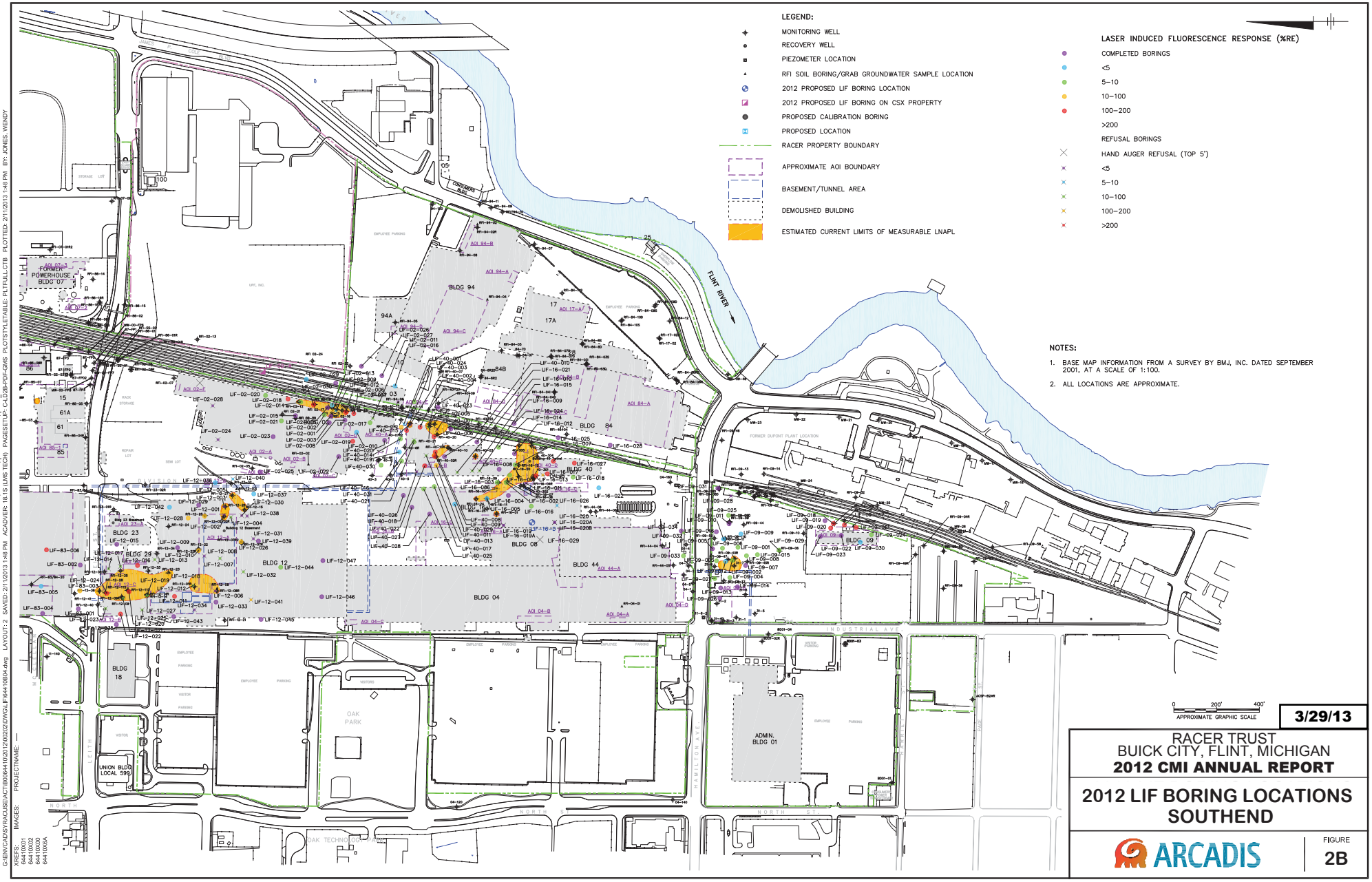


3/29/13

RACER TRUST
BUICK CITY, FLINT, MICHIGAN
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# 2012 LIF BORING LOCATIONS SOUTHEND

ARCADIS

FIGURE
**2B**

CITY:SYRACUSE DIV/GROUP:141 DB:G. STOWELL L:FORAKER PM:C. PETERS TM:B. NANZER LYR:ON=*;OFF=*REF*;JSHD-BUILDING;JHIST_SB
G:\ENVCAD\SYRACUSE\ACT\B0044\10201\20020\DWG\LIF\B44\10B44.dwg LAYOUT:2 SAVED: 2/11/2013 1:48 PM ACADVER: 18.1S (LMS Tech) PAGESETUP:C4D20-PDF-GMS PLOTSTYLETABLE:PLTFULL.CTB PLOTTED: 2/11/2013 1:48 PM BY: JONES, WENDY
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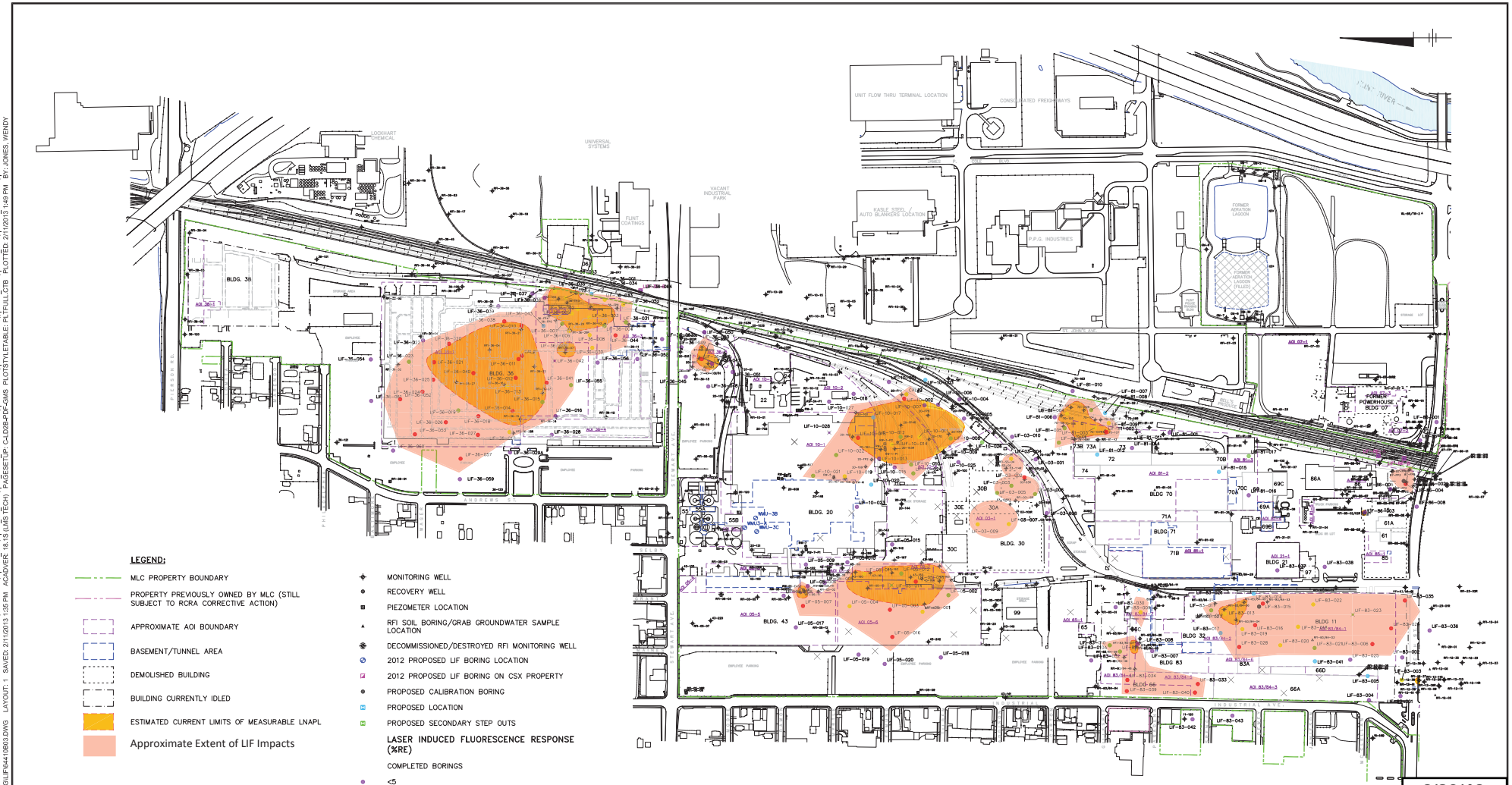
IMAGES:
PROJECTNAME:




**LEGEND:**

- MLC PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY MLC (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- Approximate Extent of LIF Impacts

- MONITORING WELL
- RECOVERY WELL
- PIEZOMETER LOCATION
- RFI SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION
- DECOMMISSIONED/DESTROYED RFI MONITORING WELL
- 2012 PROPOSED LIF BORING LOCATION
- 2012 PROPOSED LIF BORING ON CSX PROPERTY
- PROPOSED CALIBRATION BORING
- PROPOSED LOCATION
- PROPOSED SECONDARY STEP OUTS

**LASER INDUCED FLUORESCENCE RESPONSE (%RE)**

COMPLETED BORINGS

- <5
- 5–10
- 10–100
- 100–200
- >200

REFUSAL BORINGS

- HAND AUGER REFUSAL (TOP 5')
- <5
- 5–10
- 10–100
- 100–200
- >200

0 250' 500'
APPROXIMATE GRAPHIC SCALE

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. LNAPL THICKNESS CONTOURS BASED ON MAXIMUM LNAPL THICKNESS MEASUREMENTS COLLECTED DURING LNAPL MONITORING AND REMOVAL PROGRAM 2003–2005.

**3/29/13**

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# APPROXIMATE EXTENT OF LIF IMPACTS SOUTHEND

ARCADIS

FIGURE
**3A**

CITY:SYRACUSE DIV/GROUP:141 DB:GMS LD:G.STOWELL L:FORAKER PM:C.KIMER LYR:ON=*;OFF=*REF*,"IHIST_SB","RFI_SS_PIEZ_IHV_LAKE_POND-FILLED,IPROPERTY,ISHD-BUILDING,INAPL_EVID,INAPL_OBS,INAPL_OBS-HIST,INAPL-SHD
G:\ENVCAD\SYRACUSE\ACT\B0064\10201\20020\DWG\LIF\64410803.DWG LAYOUT:1 SAVED:2/11/2013 1:05 PM ACADVER:16.1S (LMS TECH) PAGESETUP:C4-D28-4-DF-GMS PLOTSTYLETABLE:PLTFULL.CTB PLOTTED:2/11/2013 1:49 PM BY:JONES,WENDY
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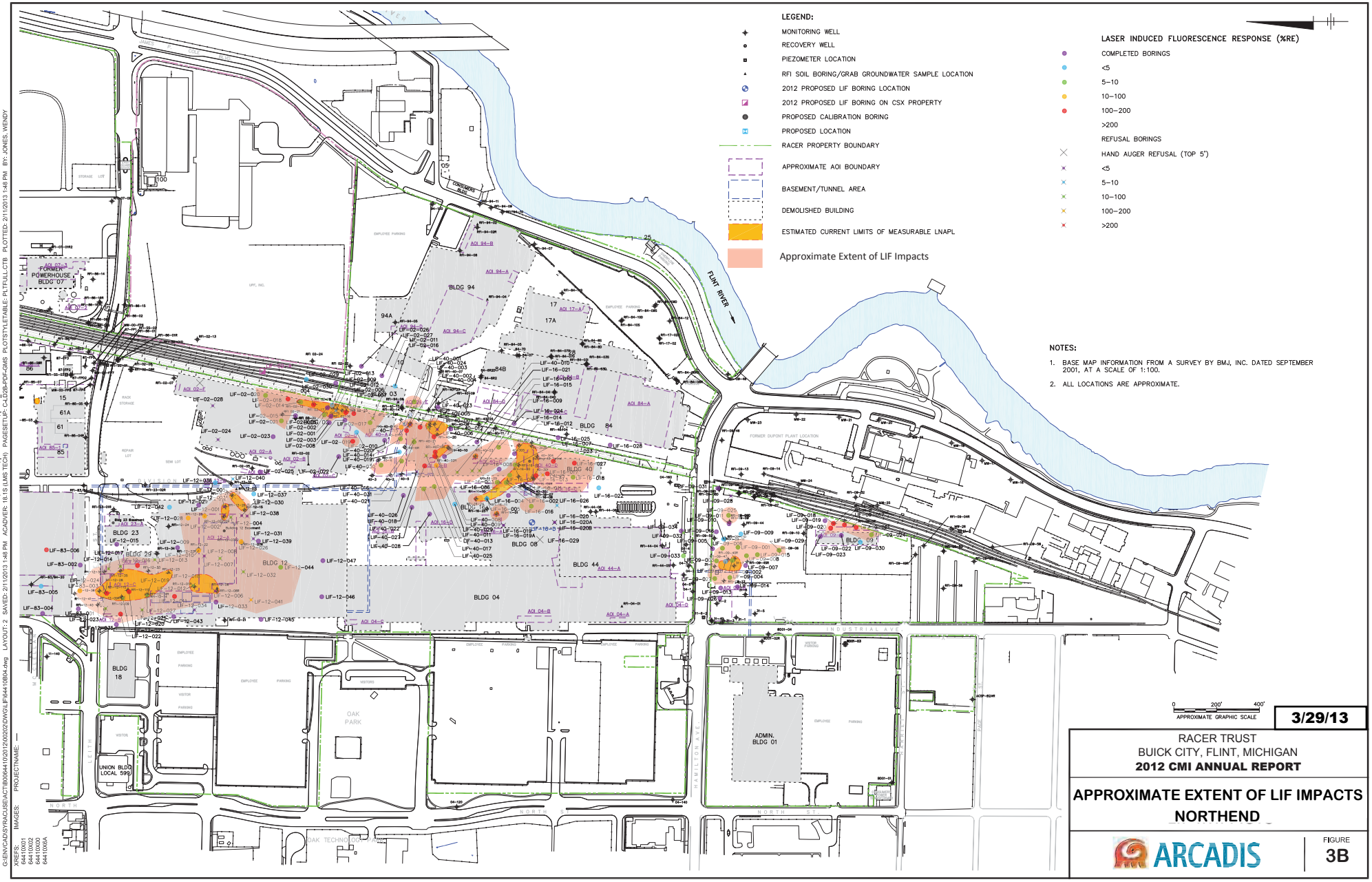


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**APPROXIMATE EXTENT OF LIF IMPACTS NORTHEND**

ARCADIS

FIGURE 3B

CITY:SYRACUSE DIV/GROUP:141 DB:G.STOWELL L:FORAKER PM:C.PETERS TM:B.NANZER LYR:ON=*;OFF=*REF*;BHD-BUILDING;IHST_SB
G:\ENVCAD\STRACUSE\ACT\B0064\10201\20022\DWG\LIF\64410B04.dwg LAYOUT:2 SAVED: 2/11/2013 1:48 PM ACADVER: 18.1S (LMS Tech) PAGESETUP:C4D28-PDF.GWG PLOTSTYLETABLE:PLTFULL.CTB PLOTTED: 2/11/2013 1:48 PM BY: JONES, WENDY

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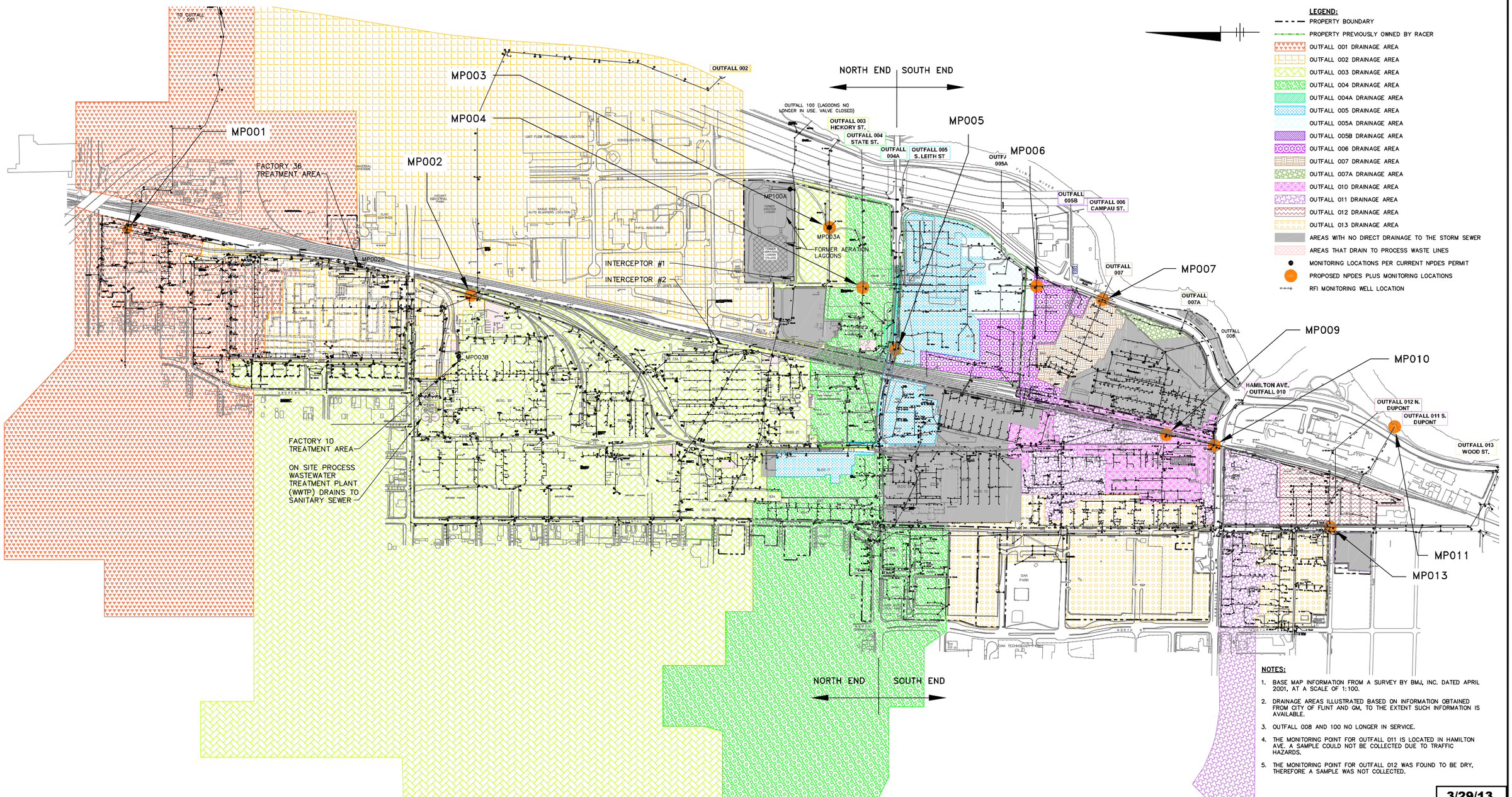
64410X01
64410X02
64410X03
64410X06A
IMAGES:
PROJECTNAME:




**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100.
2. DRAINAGE AREAS ILLUSTRATED BASED ON INFORMATION OBTAINED FROM CITY OF FLINT AND GM, TO THE EXTENT SUCH INFORMATION IS AVAILABLE.
3. OUTFALL 008 AND 100 NO LONGER IN SERVICE.
4. THE MONITORING POINT FOR OUTFALL 011 IS LOCATED IN HAMILTON AVE. A SAMPLE COULD NOT BE COLLECTED DUE TO TRAFFIC HAZARDS.
5. THE MONITORING POINT FOR OUTFALL 012 WAS FOUND TO BE DRY, THEREFORE A SAMPLE WAS NOT COLLECTED.

**3/29/13**

RACER TRUST
BUICK CITY, FLINT, MICHIGAN
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# NPDES PLUS MONITORING PROGRAM SAMPLING LOCATIONS

ARCADIS

FIGURE
**4**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L: FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00801\64410801.dwg LAYOUT: 4 SAVED: 3/18/2013 10:39 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C4_02B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/18/2013 10:42 AM BY: STOWELL, GARY
XREFS: 64410X03 64410X01 64410X00
IMAGES:
PROJECT NAME: ---

**LEGEND:**

- PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY RACER
- RFI MONITORING WELL LOCATION
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- LOCATION WHERE MEASURABLE LNAPL WAS DETECTED IN 2012
- GENERALIZED GROUNDWATER FLOW DIRECTION
- NEWLY INSTALLED MONITORING WELL
- ABANDONED MONITORING WELL

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100.
2. DRAINAGE AREAS ILLUSTRATED BASED ON INFORMATION OBTAINED FROM CITY OF FLINT AND GM, TO THE EXTENT SUCH INFORMATION IS AVAILABLE.
3. OUTFALL 008 AND 100 NO LONGER IN SERVICE.
4. THE MONITORING POINT FOR OUTFALL 011 IS LOCATED IN HAMILTON AVE. A SAMPLE COULD NOT BE COLLECTED DUE TO TRAFFIC HAZARDS.
5. THE MONITORING POINT FOR OUTFALL 012 WAS FOUND TO BE DRY, THEREFORE A SAMPLE WAS NOT COLLECTED.

0 250' 500'
APPROXIMATE GRAPHIC SCALE

3/29/13

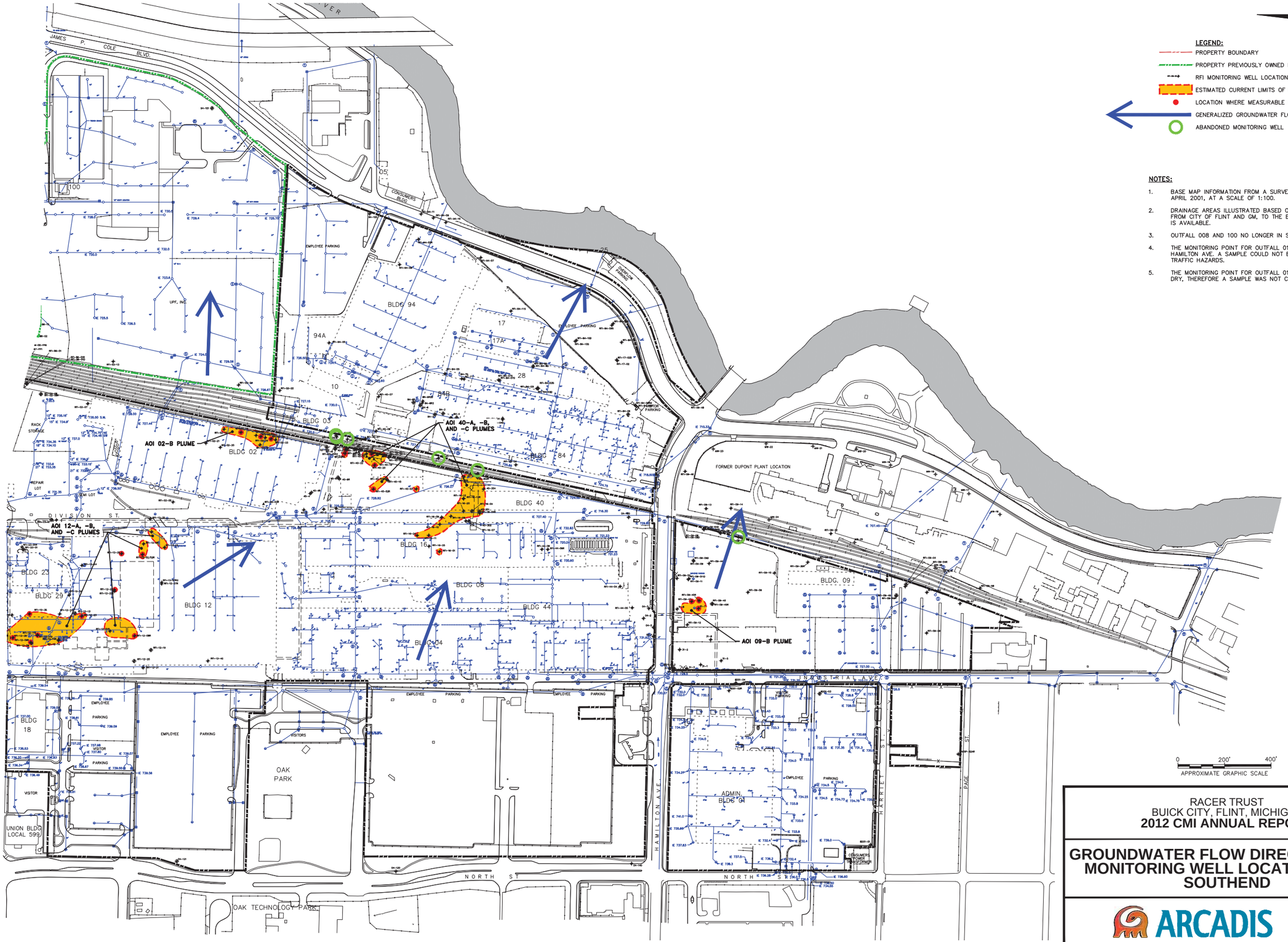
RACER TRUST
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

# GROUNDWATER FLOW DIRECTIONS AND MONITORING WELL LOCATION MAP - NORTHEND

ARCADIS

FIGURE
**5**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L. FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00701\DWG\2012 CMI\64410B01.DWG LAYOUT: 5 SAVED: 3/26/2013 1:56 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/26/2013 2:00 PM BY: STOWELL, GARY
XREFS: 64410X03 64410X01 64410X00 64410X6A IMAGES: PROJECTNAME: ----




**LEGEND:**

- PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY RACER
- RFI MONITORING WELL LOCATION
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- LOCATION WHERE MEASURABLE LNAPL WAS DETECTED IN 2012
- GENERALIZED GROUNDWATER FLOW DIRECTION
- ABANDONED MONITORING WELL

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100.
2. DRAINAGE AREAS ILLUSTRATED BASED ON INFORMATION OBTAINED FROM CITY OF FLINT AND GM, TO THE EXTENT SUCH INFORMATION IS AVAILABLE.
3. OUTFALL 008 AND 100 NO LONGER IN SERVICE.
4. THE MONITORING POINT FOR OUTFALL 011 IS LOCATED IN HAMILTON AVE. A SAMPLE COULD NOT BE COLLECTED DUE TO TRAFFIC HAZARDS.
5. THE MONITORING POINT FOR OUTFALL 012 WAS FOUND TO BE DRY, THEREFORE A SAMPLE WAS NOT COLLECTED.

3/29/13

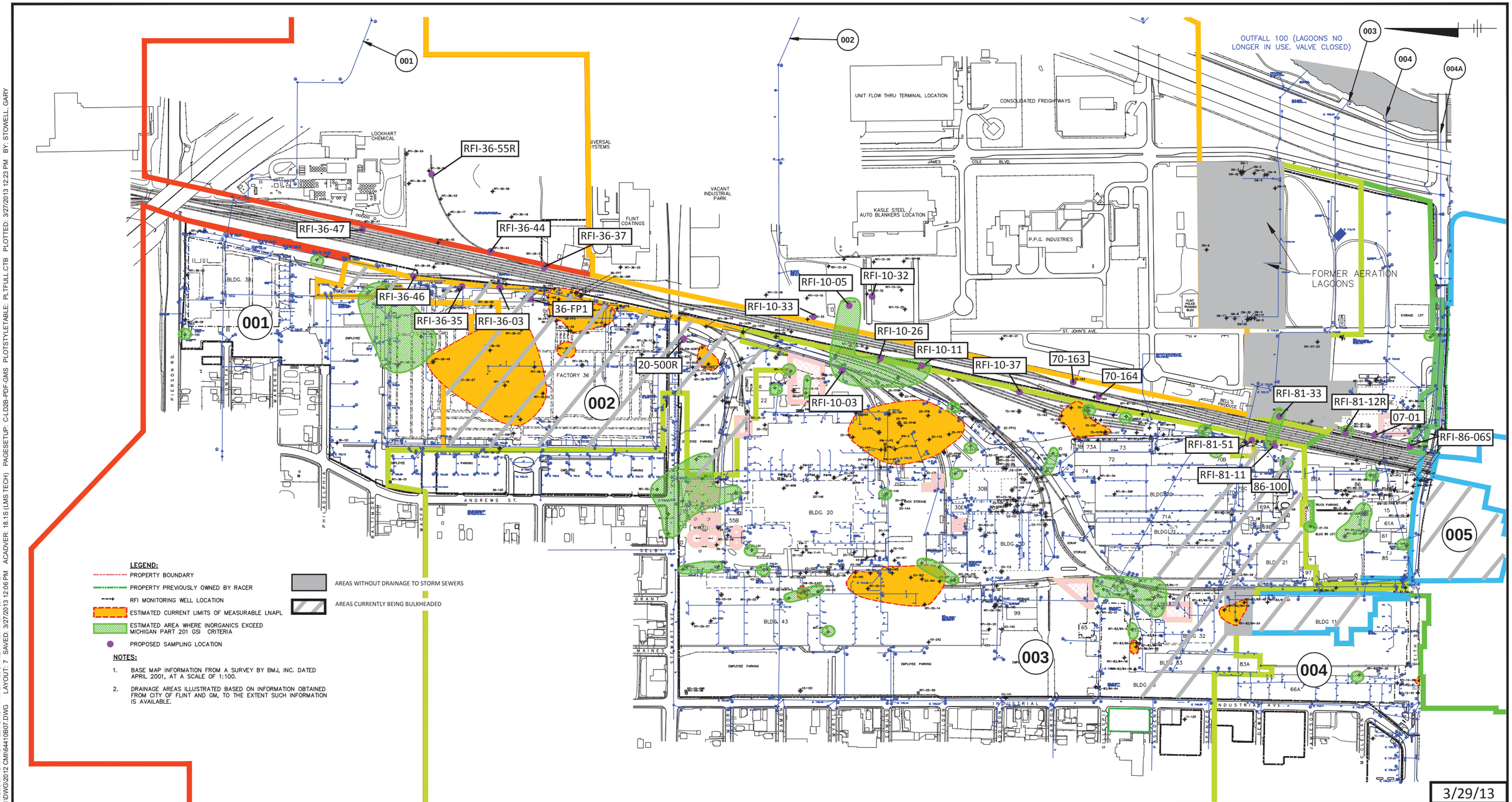
RACER TRUST
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

# GROUNDWATER FLOW DIRECTIONS AND MONITORING WELL LOCATION MAP - SOUTHEND

ARCADIS

FIGURE
**6**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L. FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00701\DWG\2012 CMI\64410B02.DWG LAYOUT: 6 SAVED: 3/26/2013 12:20 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: -- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/26/2013 2:01 PM BY: STOWELL, GARY
XREFS: 64410X03 64410X01 64410X00 64410X6A IMAGES: PROJECTNAME: ----




3/29/13

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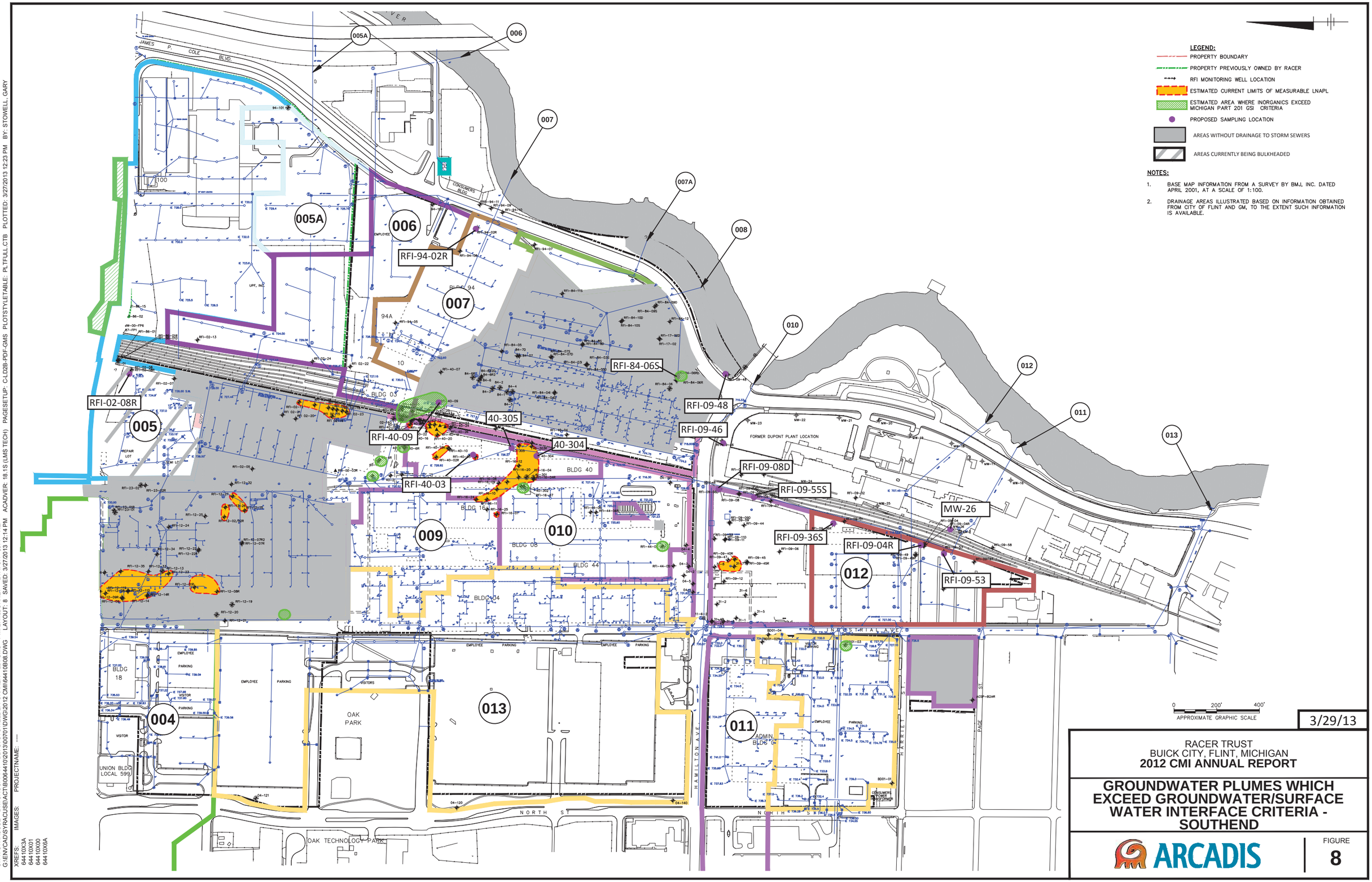
# GROUNDWATER PLUMES WHICH EXCEED GROUNDWATER/SURFACE WATER INTERFACE CRITERIA - NORTHEND

ARCADIS

FIGURE
7

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L. FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00701\DWG\2012 CMI\64410B07.DWG LAYOUT: 7 SAVED: 3/27/2013 12:06 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/27/2013 12:23 PM BY: STOWELL, GARY
XREFS: 64410X3A 64410X01 64410X00 64410X6A IMAGES: PROJECTNAME: ----

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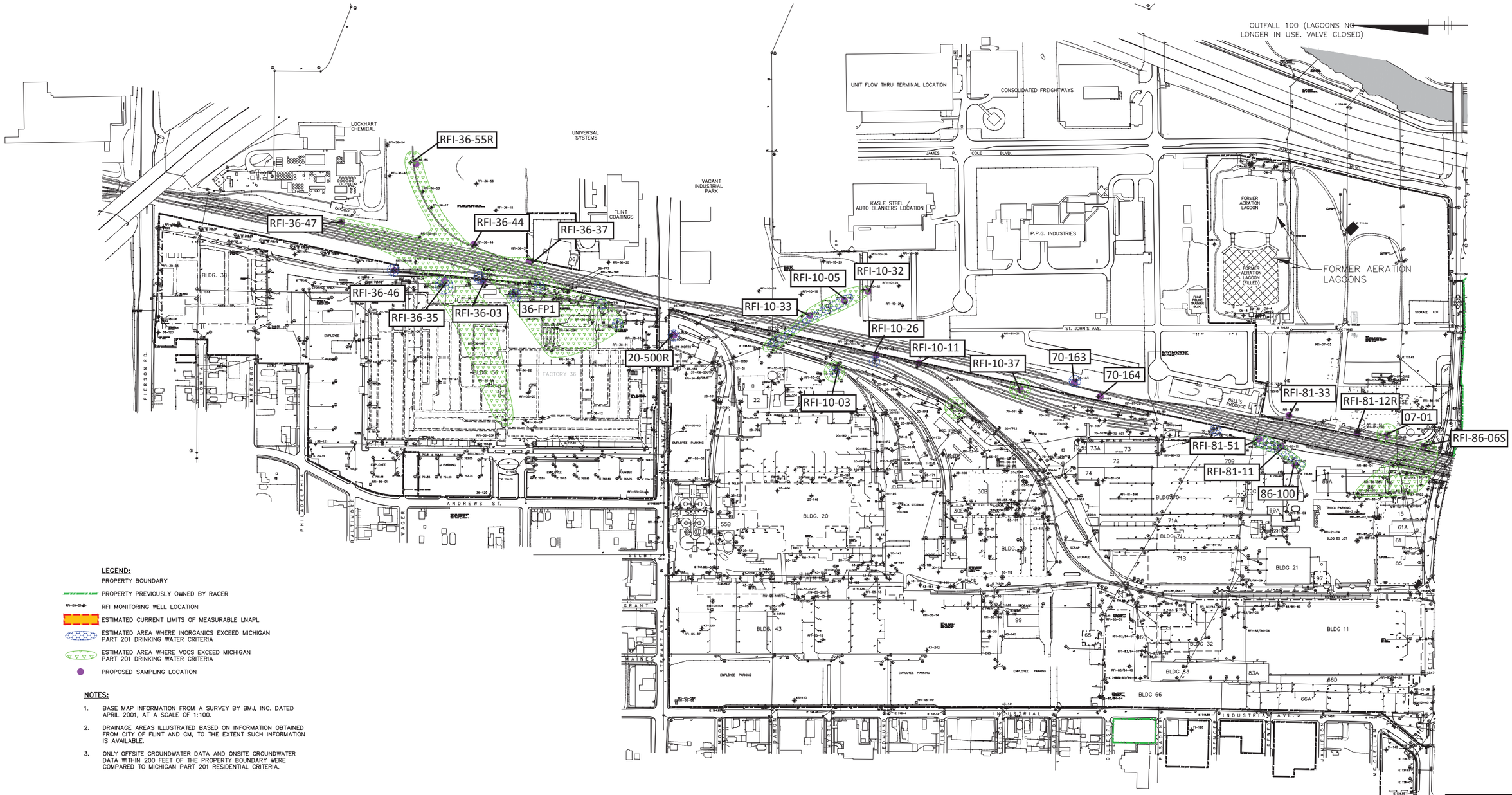
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

**GROUNDWATER PLUMES WHICH EXCEED GROUNDWATER/SURFACE WATER INTERFACE CRITERIA - SOUTHEND**

ARCADIS

FIGURE
**8**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L. FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF* PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/27/2013 12:23 PM BY: STOWELL, GARY
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00701\DWG\2012 CMI\64410B08.DWG LAYOUT: 8 SAVED: 3/27/2013 12:14 PM ACADVER: 18.1S (LMS TECH)
XREFS: 64410X3A 64410X01 64410X00 64410X6A IMAGES: PROJECTNAME: ----




**LEGEND:**

- PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY RACER
- RFI MONITORING WELL LOCATION
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- ESTIMATED AREA WHERE INORGANICS EXCEED MICHIGAN PART 201 DRINKING WATER CRITERIA
- ESTIMATED AREA WHERE VOCS EXCEED MICHIGAN PART 201 DRINKING WATER CRITERIA
- PROPOSED SAMPLING LOCATION

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100.
2. DRAINAGE AREAS ILLUSTRATED BASED ON INFORMATION OBTAINED FROM CITY OF FLINT AND GM, TO THE EXTENT SUCH INFORMATION IS AVAILABLE.
3. ONLY OFFSITE GROUNDWATER DATA AND ONSITE GROUNDWATER DATA WITHIN 200 FEET OF THE PROPERTY BOUNDARY WERE COMPARED TO MICHIGAN PART 201 RESIDENTIAL CRITERIA.

0 250' 500'
APPROXIMATE GRAPHIC SCALE

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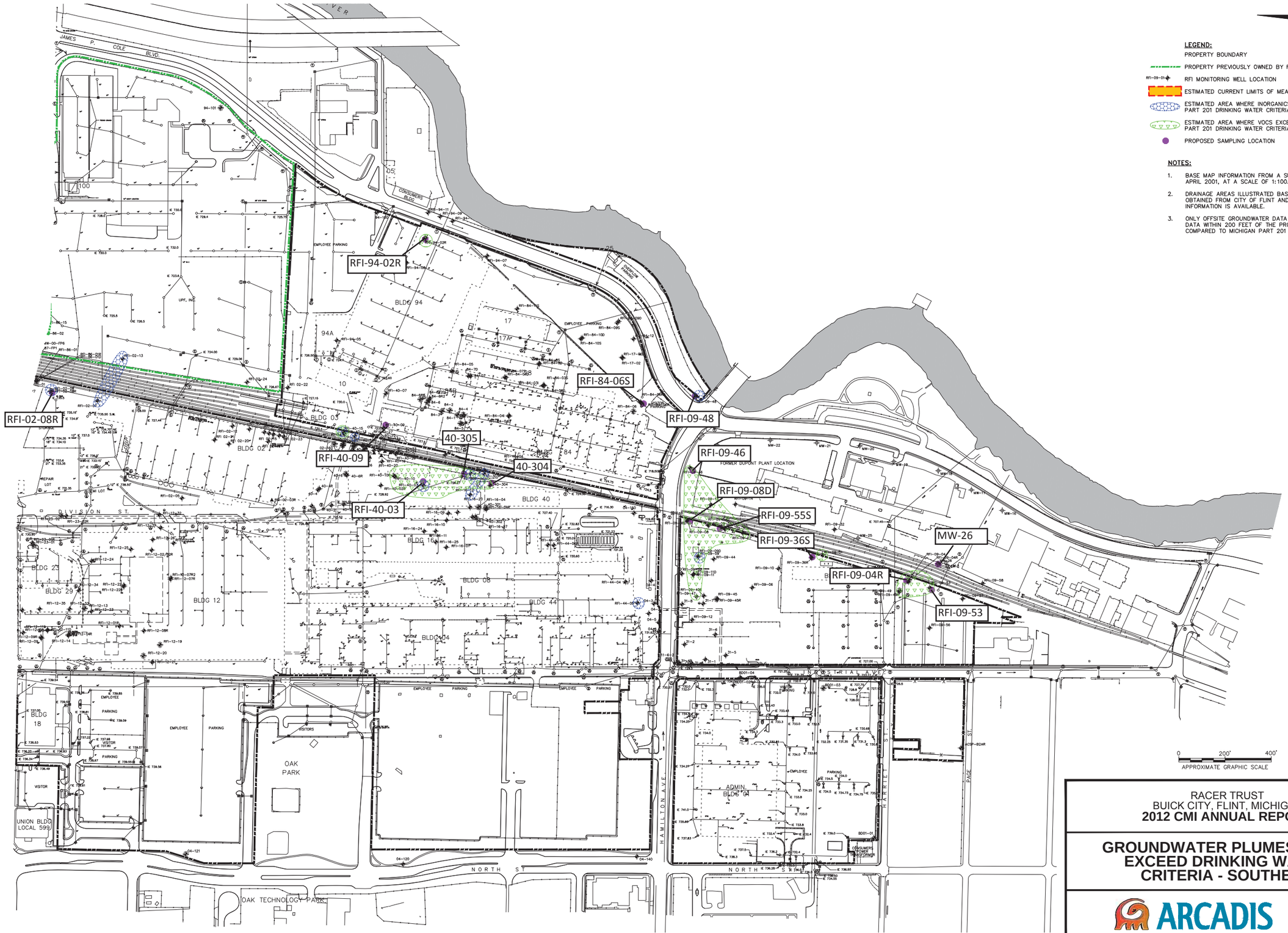
RACER TRUST
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

# GROUNDWATER PLUMES WHICH EXCEED DRINKING WATER CRITERIA - NORTHEND

ARCADIS

FIGURE
**9**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L. FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00701\DWG\2012 CMI\64410B05.DWG LAYOUT: 9 SAVED: 3/26/2013 10:19 AM PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/26/2013 10:19 AM BY: STOWELL, GARY
ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS
XREFS: 64410X3A 64410X01 64410X00 64410X6A IMAGES: PROJECTNAME: ----




**LEGEND:**

- PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY RACER
- RFI-09-01 RFI MONITORING WELL LOCATION
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- ESTIMATED AREA WHERE INORGANICS EXCEED MICHIGAN PART 201 DRINKING WATER CRITERIA
- ESTIMATED AREA WHERE VOCS EXCEED MICHIGAN PART 201 DRINKING WATER CRITERIA
- PROPOSED SAMPLING LOCATION

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100.
2. DRAINAGE AREAS ILLUSTRATED BASED ON INFORMATION OBTAINED FROM CITY OF FLINT AND GM, TO THE EXTENT SUCH INFORMATION IS AVAILABLE.
3. ONLY OFFSITE GROUNDWATER DATA AND ONSITE GROUNDWATER DATA WITHIN 200 FEET OF THE PROPERTY BOUNDARY WERE COMPARED TO MICHIGAN PART 201 RESIDENTIAL CRITERIA.

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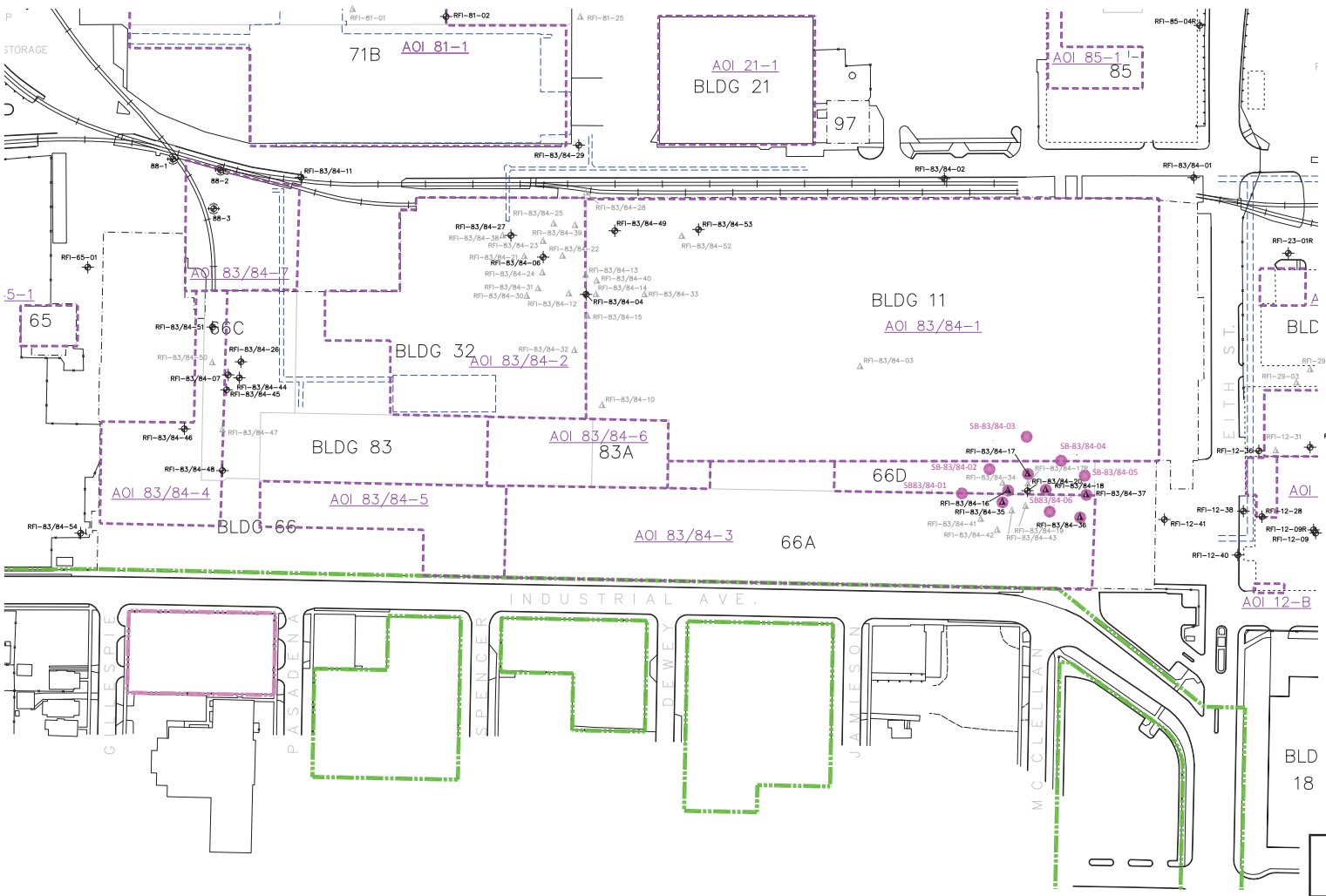
RACER TRUST
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

**GROUNDWATER PLUMES WHICH EXCEED DRINKING WATER CRITERIA - SOUTHEND**

ARCADIS

FIGURE
**10**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L. FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\00701\DWG\2012 CMI\64410B06.DWG LAYOUT: 10 SAVED: 3/26/2013 10:13 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/26/2013 10:19 AM BY: STOWELL, GARY
XREFS: 64410X3A 64410X01 64410X00 64410X6A IMAGES: PROJECTNAME: ----




**LEGEND:**

- RACER PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- BUILDING SCHEDULED FOR DEMOLITION
- MONITORING WELL
- DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI SOIL BORING LOCATION
- PROPOSED SOIL BORING LOCATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ANALYTICAL DATA SHOWN ARE FROM MOST RECENT SAMPLING EVENT AT EACH LOCATION. ESTIMATED LIMITS OF MEASURABLE LNAPL BASED ON MEASUREMENTS FROM MARCH 2004 TO JULY 2005.

0 80' 160'
GRAPHIC SCALE

3/29/13

RACER TRUST
BUICK CITY, FLINT, MICHIGAN
**2012 CMI ANNUAL REPORT**

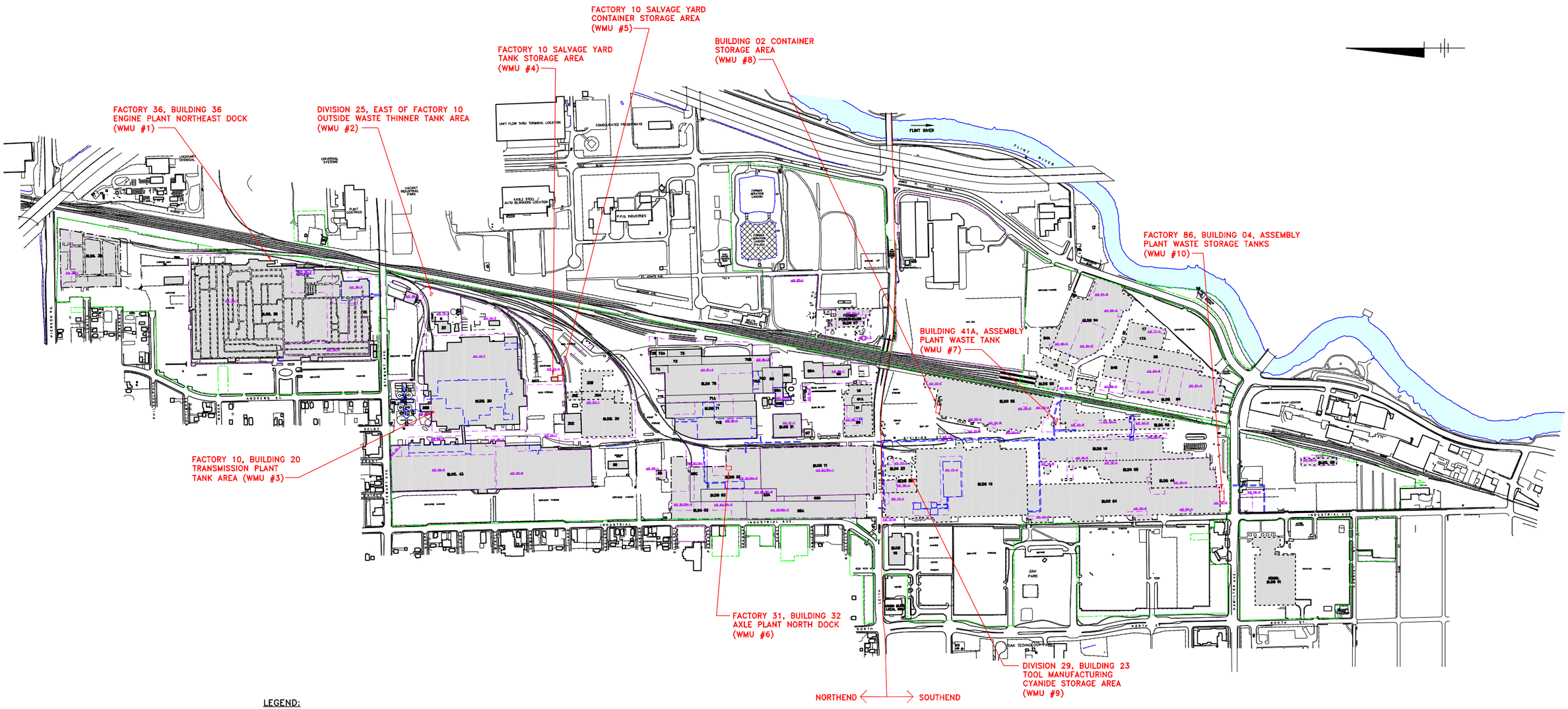
**AOI 83/84-3 LEAD SOIL INVESTIGATION**

ARCADIS

FIGURE **11**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL L: FORAKER PIC: C. PETERS PM: C. KIKER TM: M. MAKI LYR: ON=*;OFF=REF*;[SHD=BUILDING,HIST_SB]
G:\ENVCAD\SYRACUSE\ACT\B0064\10201\20060\DWG\AOI 83-84\64410601.DWG LAYOUT: 2 SAVED: 8/30/2012 1:08 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD28-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/30/2012 1:08 PM BY: FORAKER, LYDIA

XREFS:
64410002
64410001
64410X3A
64410X06
64410X00
IMAGES:
PROJECTNAME: —




**LEGEND:**

- PROPERTY BOUNDARY
- PROPERTY OWNED BY OTHERS
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE WMU AREA

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.

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RACER TRUST
BUICK CITY, FLINT, MICHIGAN
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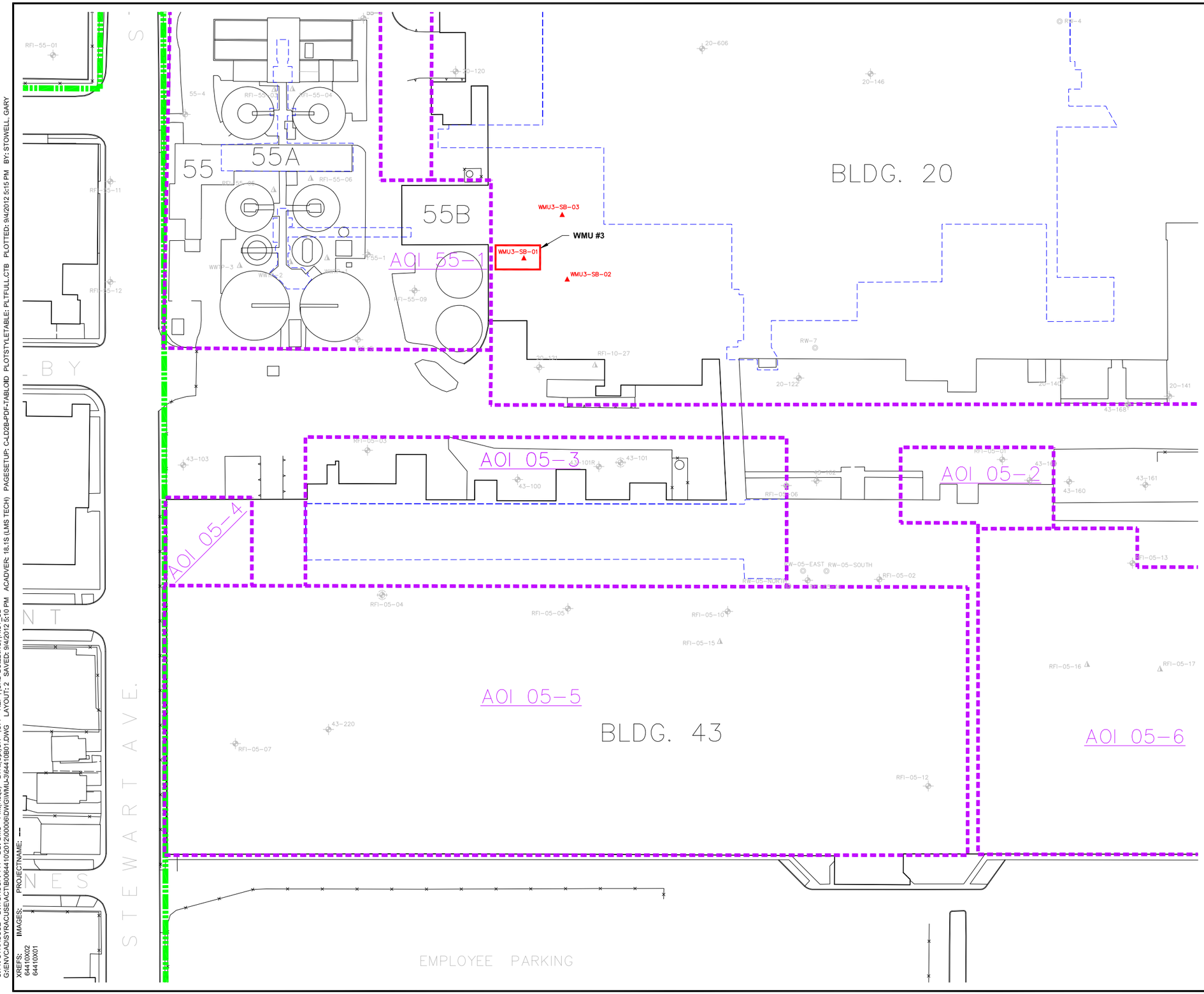
**Historic WMU Site Plan**

ARCADIS

FIGURE
**12**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL LD: G. STOWELL PIC: L. McBURNEY PM: C. PETERS TM: W. WHITE LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\2012DWG\2011CMIAR\64410B01.DWG LAYOUT: 14 SAVED: 3/12/2012 9:57 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/12/2012 9:57 AM BY: POSENAUER, LISA
XREFS: 64410X01 64410X02 64410X00 IMAGES: PROJECTNAME: ----




**LEGEND:**

- RACER PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- BUILDING SCHEDULED FOR DEMOLITION
- MONITORING WELL
- DECOMMISSIONED/DESTROYED MONITORING WELL
- RECOVERY WELL
- RFI SOIL BORING LOCATION
- PROPOSED BORING LOCATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

0 50' 100'
GRAPHIC SCALE

3/29/13

RACER TRUST
BUICK CITY, FLINT, MICHIGAN
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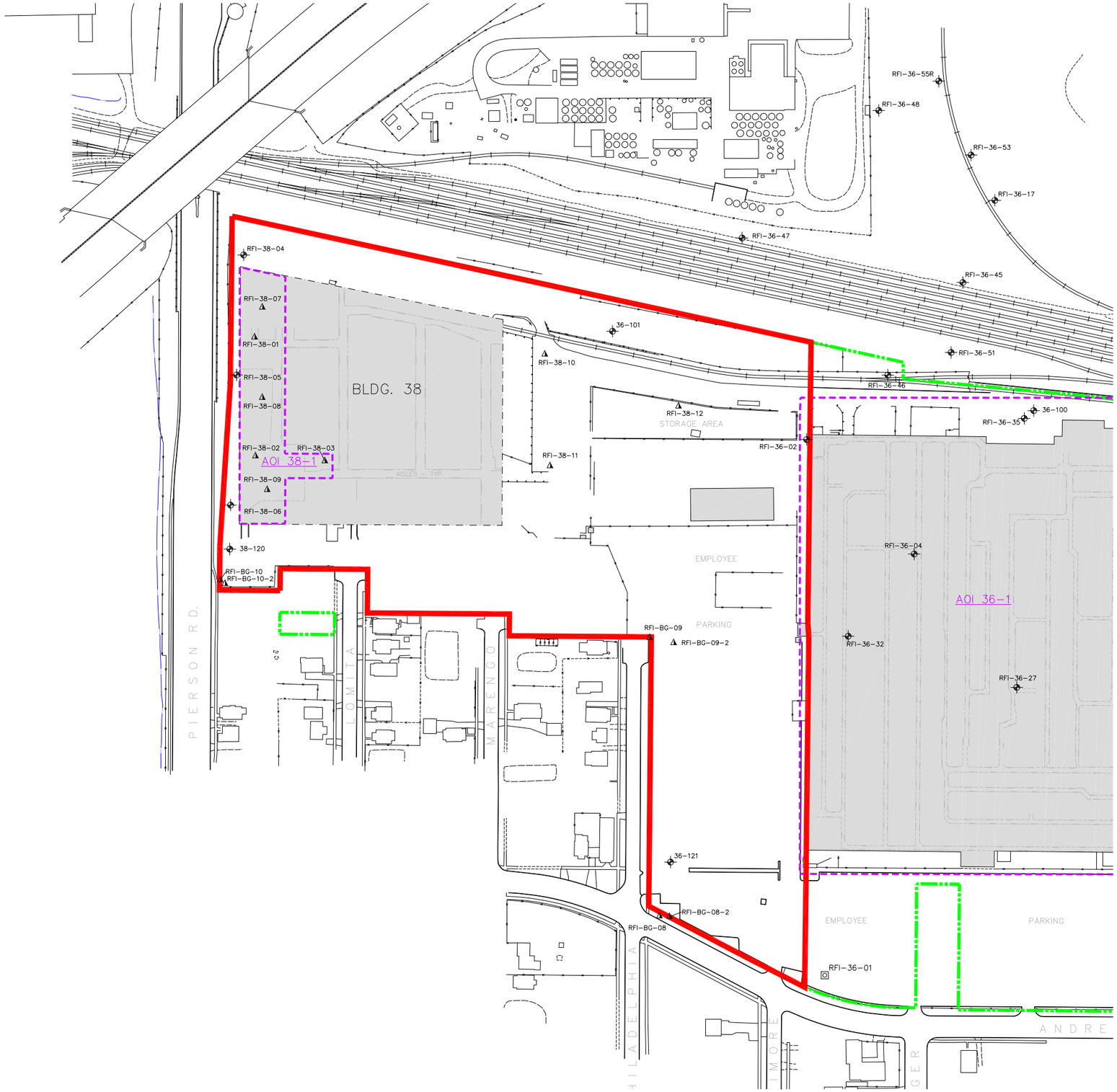
**WASTE MANAGEMENT UNIT (WMU) #3 INVESTIGATION**

ARCADIS

FIGURE
**13**

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS PM:(Reqd) LYR:(Opt)ON=*;OFF=*REF* |SHD=BUILDING, |HIST_SB
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00006\DWG\WMU-3\64410B01.DWG LAYOUT: 2 SAVED: 9/4/2012 5:10 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-TABLOID PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 9/4/2012 5:15 PM BY: STOWELL, GARY
XREFS: 64410X02 64410X01 IMAGES: PROJECTNAME: ---




**LEGEND:**

- MONITORING WELL
- RFI SOIL BORING LOCATION
- RFI SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION
- RACER PROPERTY BOUNDARY
- PROPERTY OWNED BY OTHERS
- APPROXIMATE AOI BOUNDARY
- DEMOLISHED BUILDING
- NORTHERN PARCEL

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

0 100' 200'
GRAPHIC SCALE

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BUICK CITY, FLINT, MICHIGAN
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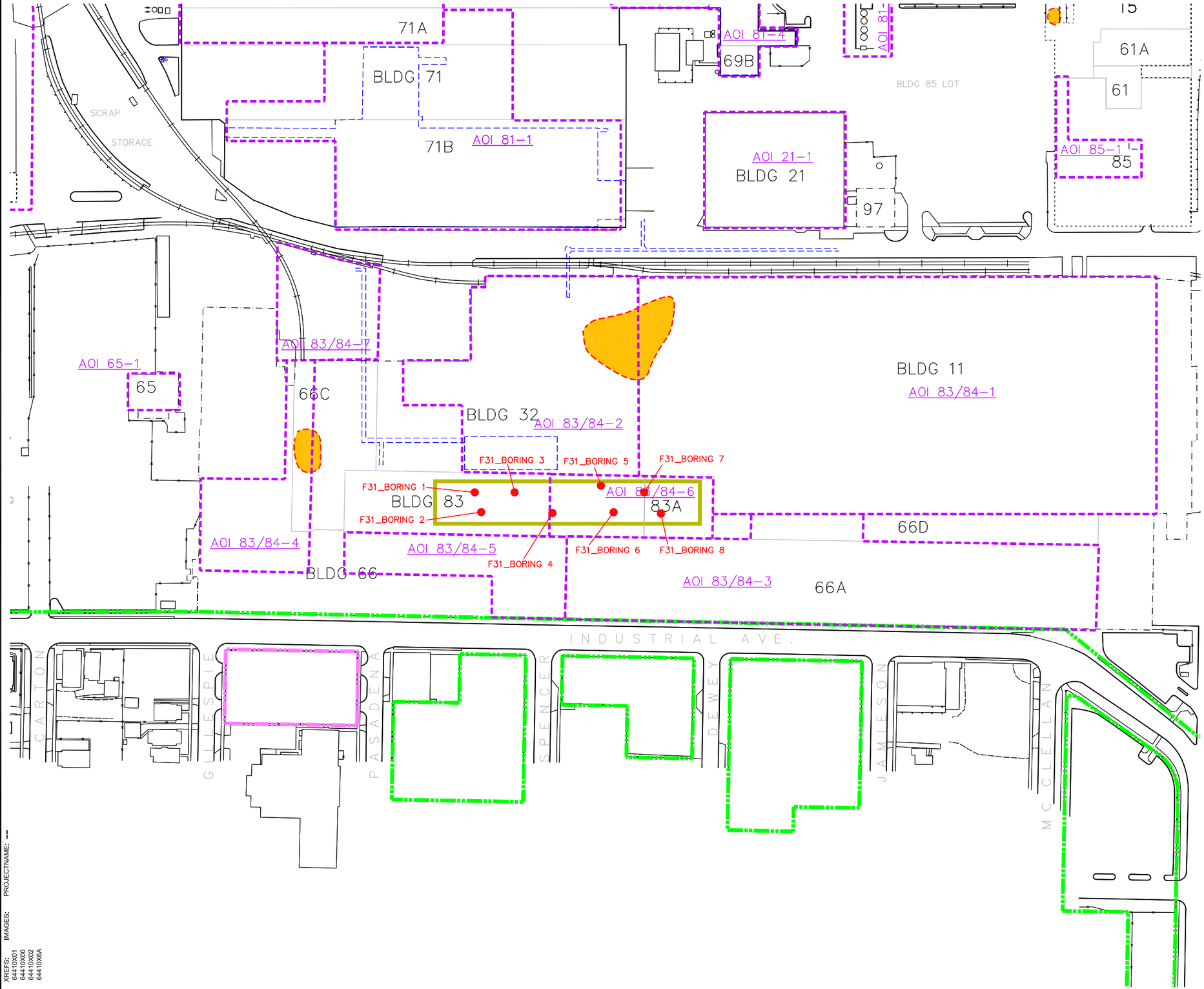
**NORTHERN PARCEL SOIL BORING AND MONITORING WELL SAMPLING LOCATIONS**

ARCADIS

FIGURE
**14**

CITY: SYRACUSE, NY DIV/GROUP: ENV/IM-DV DB: G. STOWELL, P. LISTER PM/TM: M. MAKI TR: R. PIONK LYR: ON=*;OFF=*REF*, |SHD-BUILDING, |HIST_SB
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\01101\DWG\NORTH PARCEL\64410G01.DWG LAYOUT: 1 SAVED: 11/30/2012 9:22 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 11/30/2012 9:22 AM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 64410X02 IMAGES: PROJECTNAME: ---




**LEGEND:**

- RACER PROPERTY BOUNDARY
- APPROXIMATE FORMER FACTORY 31 HEAT TREAT BASEMENT BOUNDARY
- SOIL BORING LOCATION

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

0 80' 160'
GRAPHIC SCALE

3/29/13

RACER TRUST
BUICK CITY, FLINT, MICHIGAN
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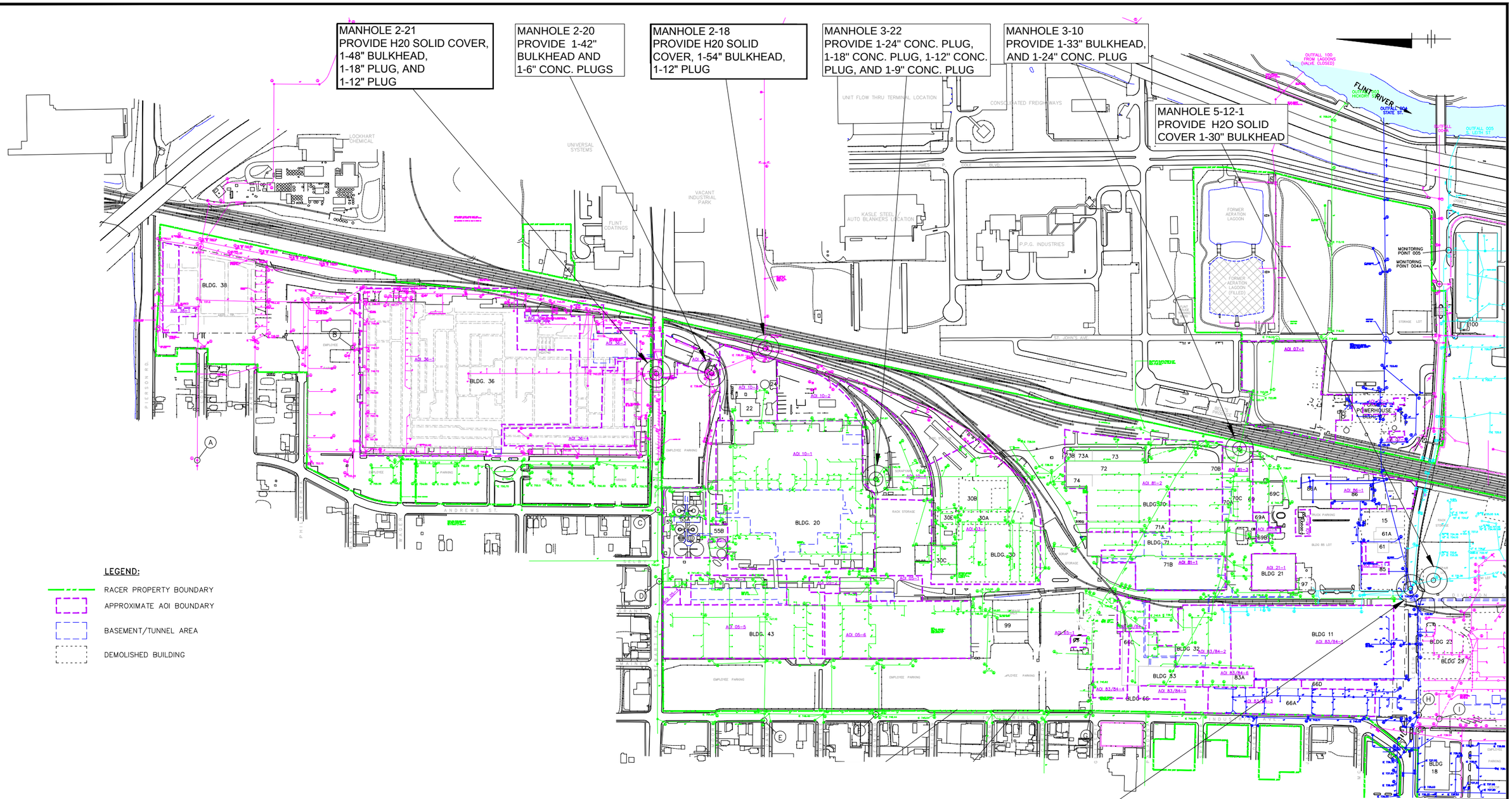
**FORMER FACTORY 31 HEAT TREAT BASEMENT**

ARCADIS

FIGURE
**15**

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LD: G. STOWELL L. FORAKER PM: M. MAKI LYR: ON=*;OFF=REF*, *IHST_SB*, *IRFI_SS_PIEZ, |HY_LAKE_POND-FILLED, |PROPERTY, |SHD-BUILDING, |NAPL_EVID, |NAPL_OBS, |NAPL_OBS-HIST, |LNAPL-SHD
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00004\DWG\FACT-31\64410B01.DWG LAYOUT: 2 SAVED: 11/19/2012 3:01 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 11/19/2012 3:02 PM BY: PETRIE, RICH
XREFS: 64410X01 64410X00 64410X02 64410X6A IMAGES: PROJECTNAME: ---




NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

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RACER TRUST
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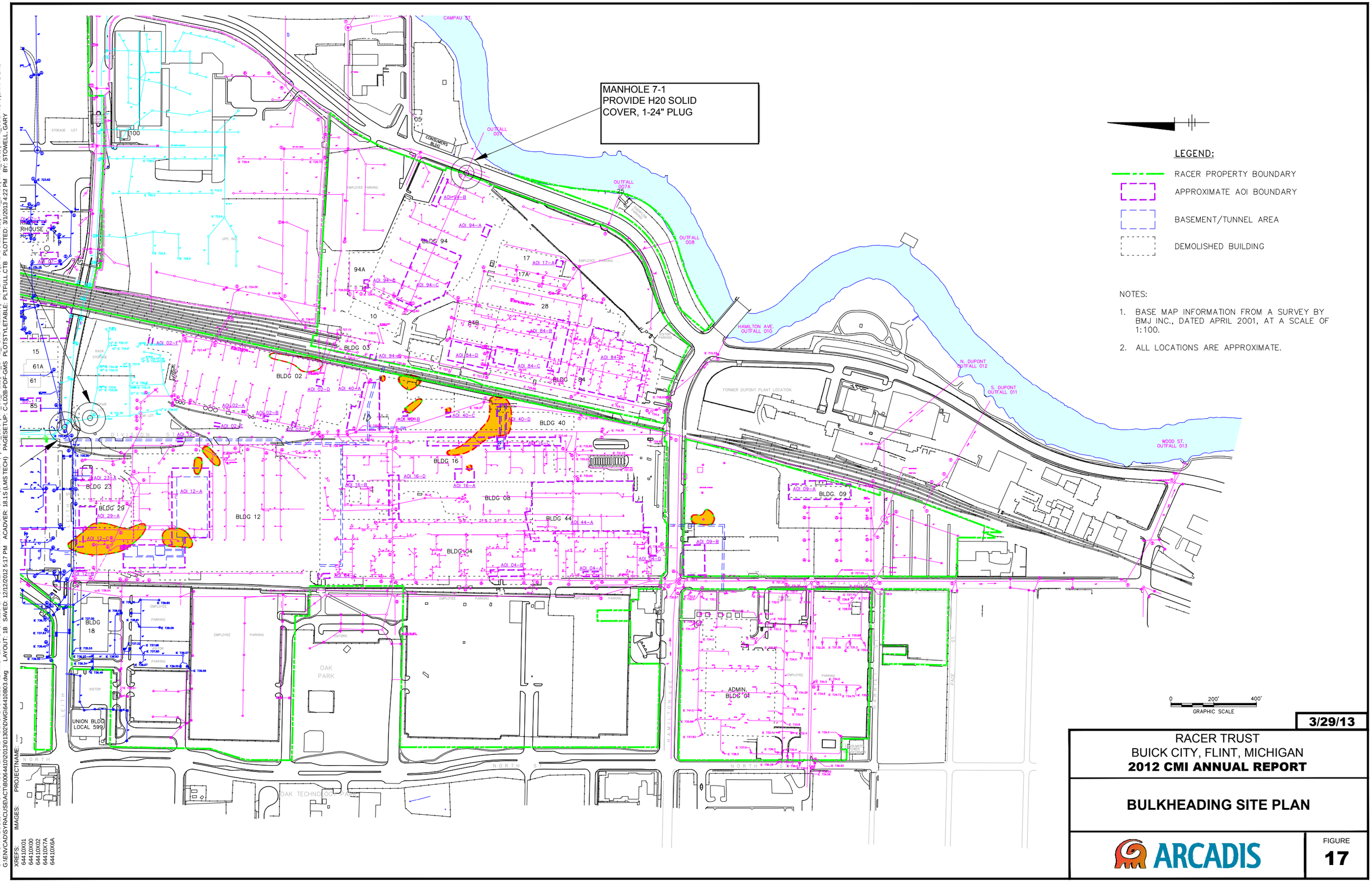
**BULKHEADING SITE PLAN**

ARCADIS

FIGURE
**16**

CITY: SYRACUSE, NY DIVGROUP: ENVCAD DB: G. STOWELL K.DAVIS LD: G. STOWELL L. FORAKER PM: M. MAKI LYR: ON=*;OFF=*REF*, *IHIST_SB*, *IRFI_SS_PIEZ, IHY_LAKE_POND-FILLED, IPROPERTY, ISHD-BUILDING, INAPL_EVID, INAPL_OBS, INAPL_OBS-HIST, ILNAPL-SHD
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\02\DWG\64410B02.DWG LAYOUT: 1A SAVED: 3/1/2013 4:19 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/1/2013 4:22 PM BY: STOWELL, GARY
XREFS: 64410X01 64410X00 64410X02 64410X7A IMAGES: PROJECTNAME: ----




CITY: SYRACUSE, NY DIV/GROUP: ENVCAD DB: G. STOWELL K.DAVIS LD: G. STOWELL L. FORAKER PM: M. MAKI LYR:ON=*;OFF=*REF*,*|HIST_SB*,*|RFI_SS_PIEZ,|HY_LAKE_POND-FILLED,|PROPERTY,|SHD-BUILDING,,|NAPL_EVID,|NAPL_OBS,|NAPL_OBS-HIST,|LNAPL-SHD
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\02\DWG\64410B03.dwg LAYOUT: 1B SAVED: 12/12/2012 5:17 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/1/2013 4:22 PM BY: STOWELL, GARY

XREFS: 64410X01 64410X00 64410X02 64410X7A 64410X6A
IMAGES:
PROJECTNAME: ----

ARCADIS

**Appendices**

(on attached CD)

ARCADIS

**Appendix A**

LIF Direct Sensing Report by Stock Drilling

Stock Drilling, Inc.

# UVOST LIF Boring Summary

## Racer Properties Buick City Flint, MI

Prepared for Arcadis

Prepared by Jonathan Wiley

Stock Drilling Inc.

P.O.Box 186

Ida, MI 48159

(734) 279-2059

www.stockdrilling.com

STOCK DRILLING
SAVE THE EARTH
Our Job is Boring!

# UVOST LIF Boring Summary

## Racer Properties Lansing, MI

**Index:**

**A: Project Summary**

**B: Dakota Technologies UVOST Log Reference**

**C: UVOST® LIF Logs**

STOCK DRILLING
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# Project Summary

**Thursday, November 1st, 2012**

We arrived onsite at 7:00 a.m. We started the day by completing the health and safety plan. We completed a total of six borings for the day starting with some onsite locations then moving offsite to complete all of those borings.

**Friday, November 2nd, 2012**

We arrived onsite at 7:15 a.m. We started the day by completing the health and safety plan. We completed a total of seven borings for the day. We encountered many hand auger refusals and completed all the proposed holes that were available.

## General Observations/Notes

**Breakdowns/Standbys:** Production was reasonable despite the hand auguring refusals and time moving to various locations.

**Safety Incidents/Stop work:** N/A

**Validation/Sampling:** N/A

**General Comments:** Overall the investigation went well. The response of the uvost was very good at the different locations. There were many refusals at less than five feet and also many subsurface layers of concrete at various depths. This was expected with the site history. The tooling held up well to the difficult conditions. All borings were backfilled with bentonite pellets and capped with concrete or existing surface. Decon of the probe was conducted between each boring. We maintained a three man crew to expedite progress. Included with this summary is a flash drive including all the files for the project.

## Calibration of the UVOST

Prior to conducting each log, two measurements (RE and Background) are recorded.

**Reference Emitter (RE):** The RE is a standard substance that is used to calibrate the UVOST instrument prior to every log. It serves two main purposes:

1) **Qualitatively examine the performance of the instrument -** RE needs to be the correct shape so we know all channels (filters, etc.) are intact and functioning. A bad or misshapen RE waveform indicates potential damage of the detection system optics.

2) **Quantitatively "calibrate" the instrument -** RE sets the proper signal intensity (by adjusting laser energy). An RE in the proper range keeps us in the optimum range of the fluorescence detector... not too low, not too high. The RE is a calibration of the UVOST system accomplished by measuring the response to a standardized amount of fluorescence, not a method of converting fluorescence to a known concentration. Basically all measurements are normalized to a known consistently fluorescing substance called the Reference Emitter or RE. A 100% RE reading means that a measured material has a fluorescence signal identical to RE. A 200% RE means a substance has a fluorescence signal twice that of RE, and so forth.

**RE range:**
RE area's typically fall between 11,000 and 13,000 pVs for UVOST (picovolt-seconds, a measure of waveform area). Precise laser energy level 'tuning' to achieve and exact amount of fluorescence is not needed because all fluorescence is reported as a percentage of the RE's fluorescence and reported as Signal (%RE).

**Background:**
The background is a measure of the optical quality (with a focus on cleanliness) of the setup. Sources of signal in the background include fiber optic and filter auto-fluorescence, mirror and window fluorescence, lint, fuel, debris, and scatter from worn windows. The background waveform has no mathematical impact on the data collected (i.e. it is not subtracted) and is taken only as a data quality measure and to assure the operator that there is no significant defects on the optics (mirror, window, fiber, etc).
**Background range:**

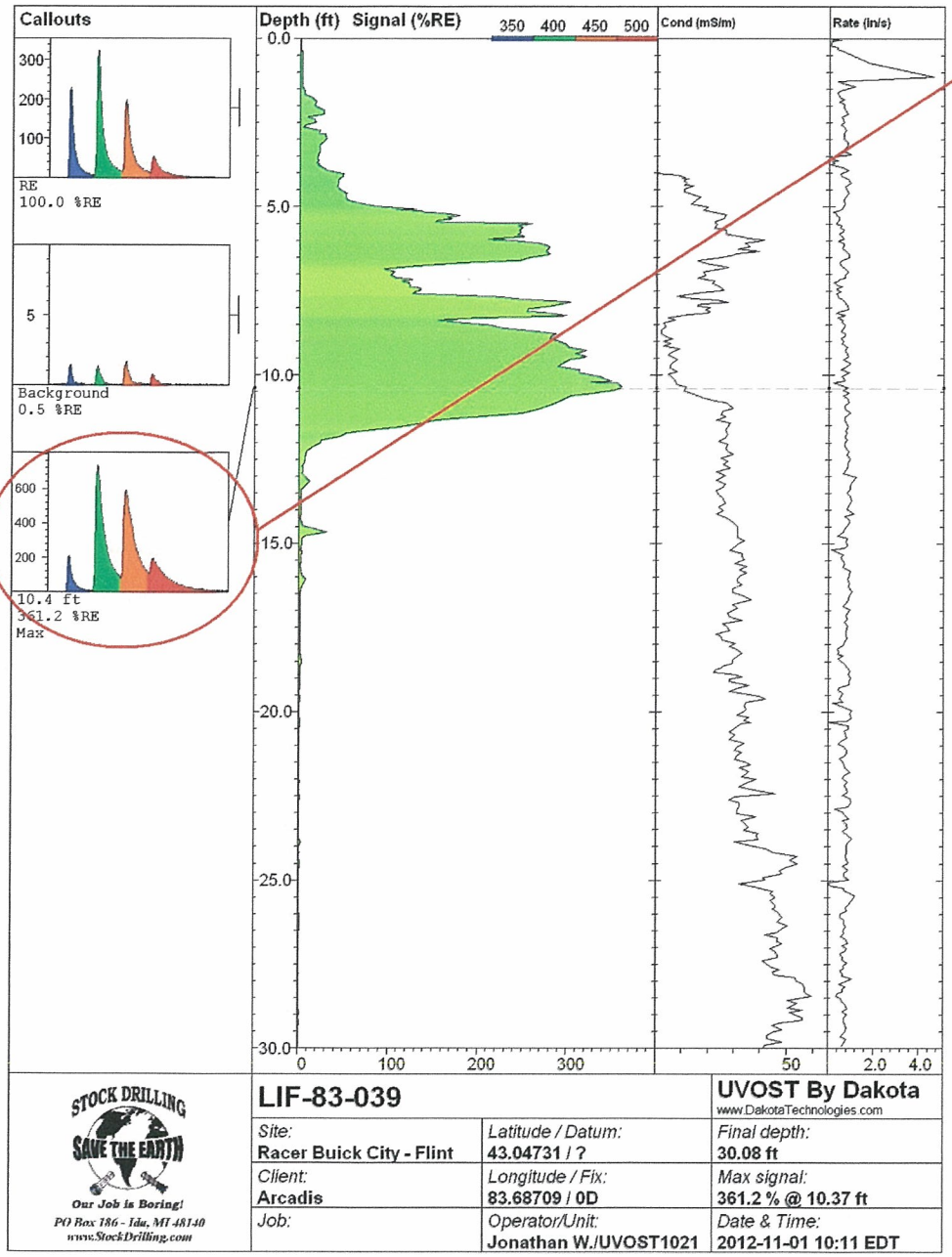
Background values can vary widely (in terms of relative percent difference) from 0.1% of the RE signal to 10%. However, there is no hard cut-off value and a balance must be struck between site needs and available time.

**False Positives / Interference**

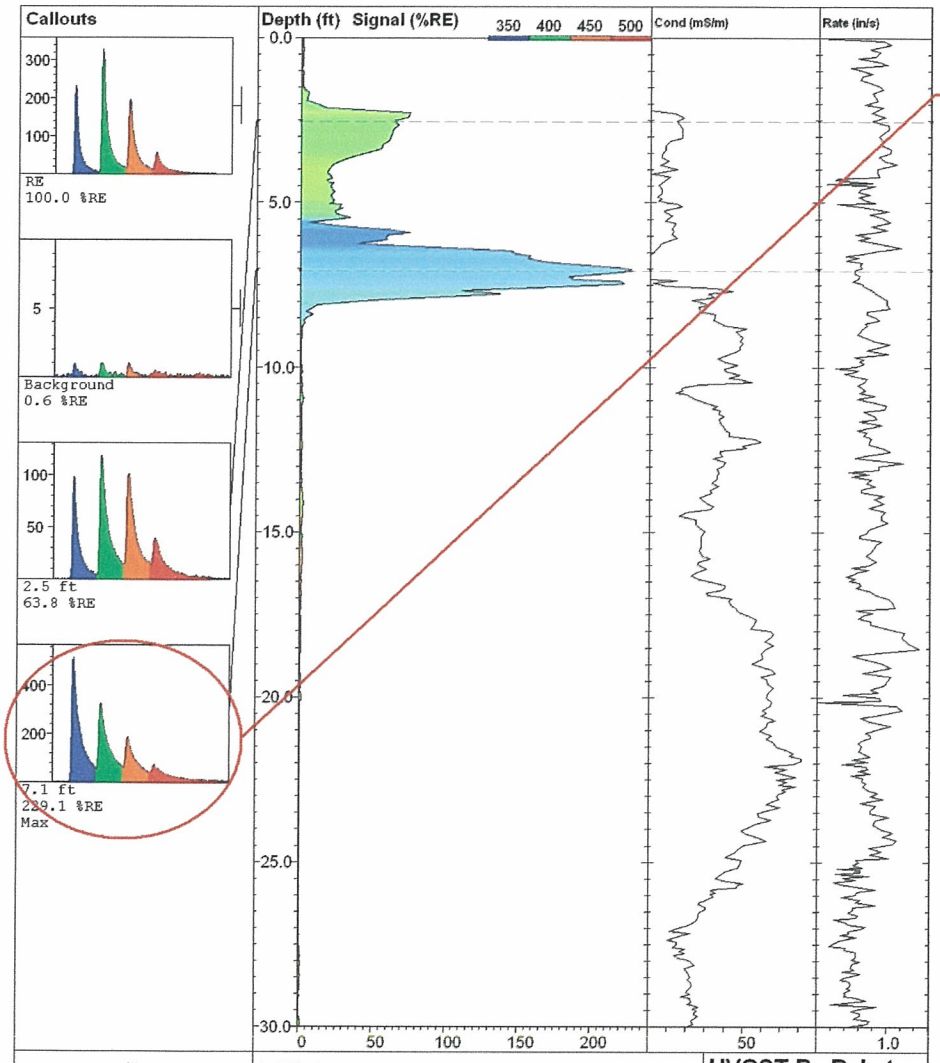
In some cases UVOST will respond to naturally fluorescent minerals, biogenic minerals (shells) and organic matter like peat. Most often this response shows a very different signature or waveform and is of relatively low response compared to LNAPL and DNAPL. A few of the borings had concrete dust at the beginning from coring which did fluoresce.

**Wave form discussion:**

Throughout the site we had good response with the UVOST. Here are some examples of two distinct wave forms found.




The waveform highlighted here showed elevated fluorescence. These green/yellow fluorescence waveforms are consistent with hydrocarbons such as oil but conformation soil samples for lab analysis would be recommended.




| | | |
|---|---|---|
| STOCK DRILLING SAVE THE EARTH — Our Job is Boring! PO Box 186 - Ida, MI 48140 www.StockDrilling.com | **LIF-83-040** | **UVOST By Dakota** www.DakotaTechnologies.com |
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04636 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68707 / 0D** | *Max signal:* **229.1 % @ 7.06 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 11:15 EDT** |

The waveform highlighted here showed elevated fluorescence. These Blue/green fluorescence waveforms are consistent with a type of fuel but conformation soil samples for lab analysis would be recommended.

# Dakota Technologies
# UVOST Log Reference

2008-12-12

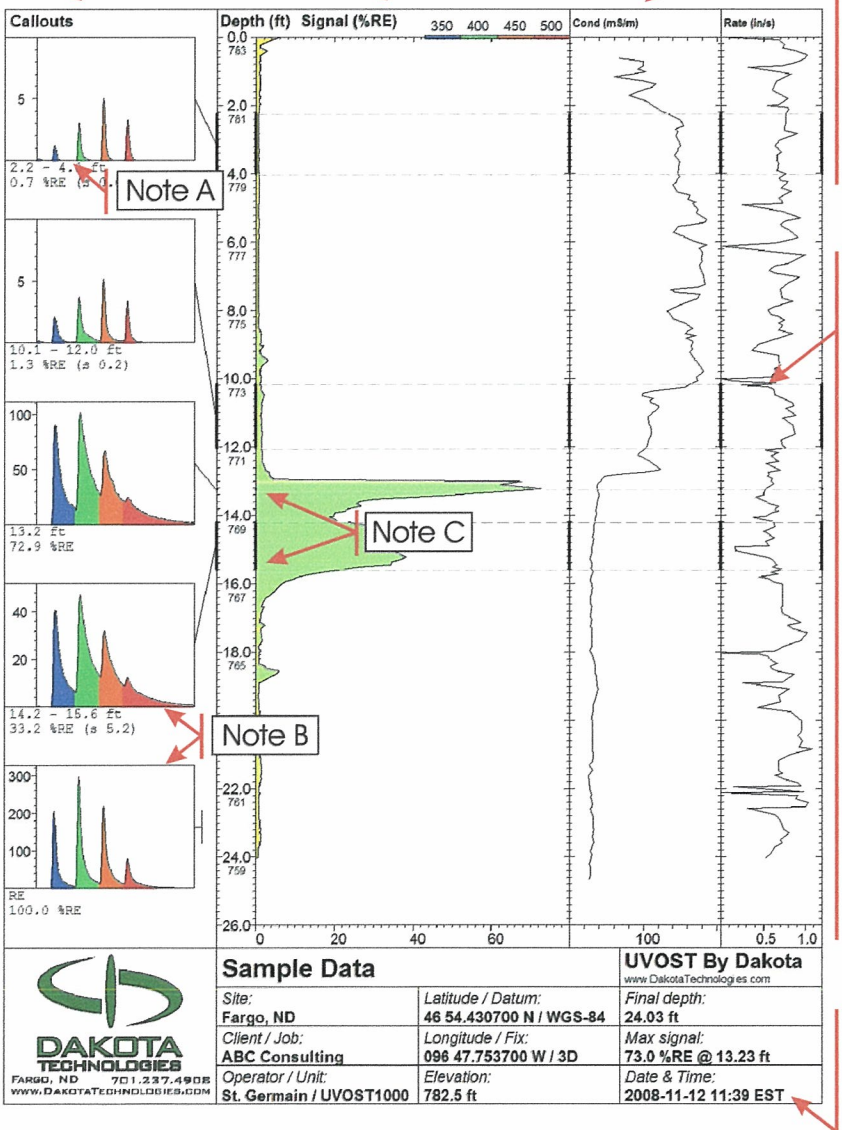
**Main Plot :**
Signal (total fluorescence) versus depth where signal is relative to the Reference Emitter (RE). The total area of the waveform is divided by the total area of the Reference Emitter yielding the %RE. This %RE scales with the NAPL fluorescence. The fill color is based on relative contribution of each channel's area to the total waveform area (see callout waveform). The channel-to-color relationship and corresponding wavelengths are given in the upper right corner of the main plot.

**Callouts :**
Waveforms from selected depths or depth ranges showing the multi-wavelength waveform for that depth.

The four peaks are due to fluorescence at four wavelengths and referred to as "channels". Each channel is assigned a color.

Various NAPLs will have a unique waveform "fingerprint" due to the relative amplitude of the four channels and/or broadening of one or more channels.

Basic waveform statistics and any operator notes are given below the callout.




**Conductivity Plot :**
The Electrical Conductivity (EC) of the soil can be logged simultaneously with the UVOST data. EC often provides insight into the stratigraphy.
Note the drop in EC from 10 - 13 ft, indicating a shift from consolidated to unconsolidated stratigraphy. This correlates with the observed NAPL distribution.

**Rate Plot :**
The rate of probe advancement. ~ 0.8in (2cm) per second is preferred.

A noticeable decrease in the rate of advancement may be indicative of difficult probing conditions (gravel, angular sands, etc.) such as that seen here at ~5 ft.

Notice that this log was terminated arbitrarily, not due to "refusal", which would have been indicated by a sudden rate drop at final depth.

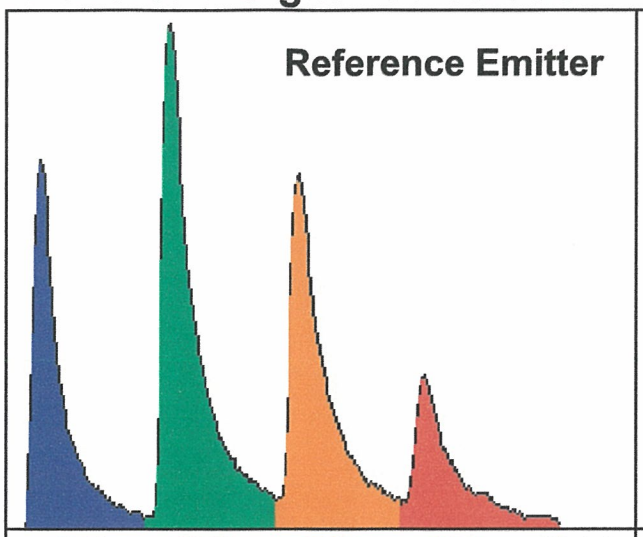
**Info Box :**
Contains pertinent log info including name and location.

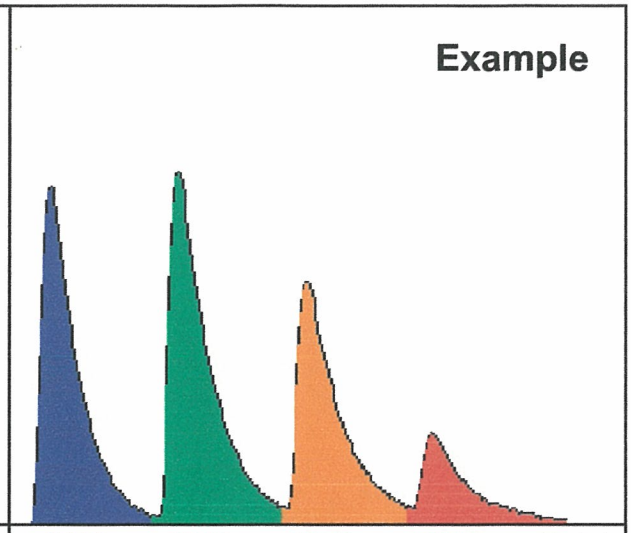
**Note A :**
Time is along the x axis. No scale is given, but it is a consistent 320ns wide.
The y axis is in mV and directly corresponds to the amount of light striking the photodetector.

**Note B :**
These two waveforms are clearly different. The first is weathered diesel from the log itself while the second is the Reference Emitter (a blend of NAPLs) always taken before each log for calibration.

**Note C :**
Callouts can be a single depth (see 3rd callout) or a range (see 4th callout). The range is noted on the depth axis by a bold line. When the callout is a range, the average and standard deviation in %RE is given below the callout.

## Waveform Signal Calculation



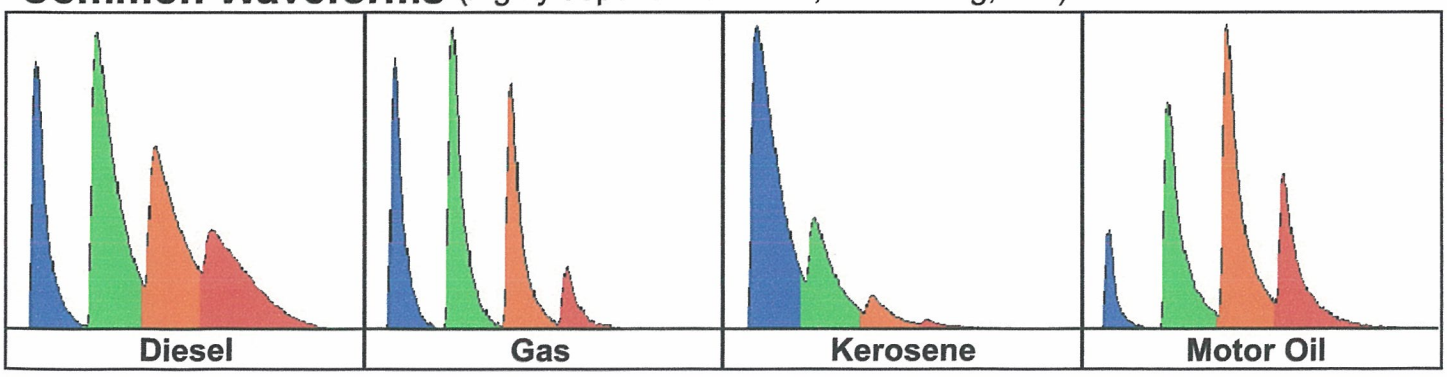



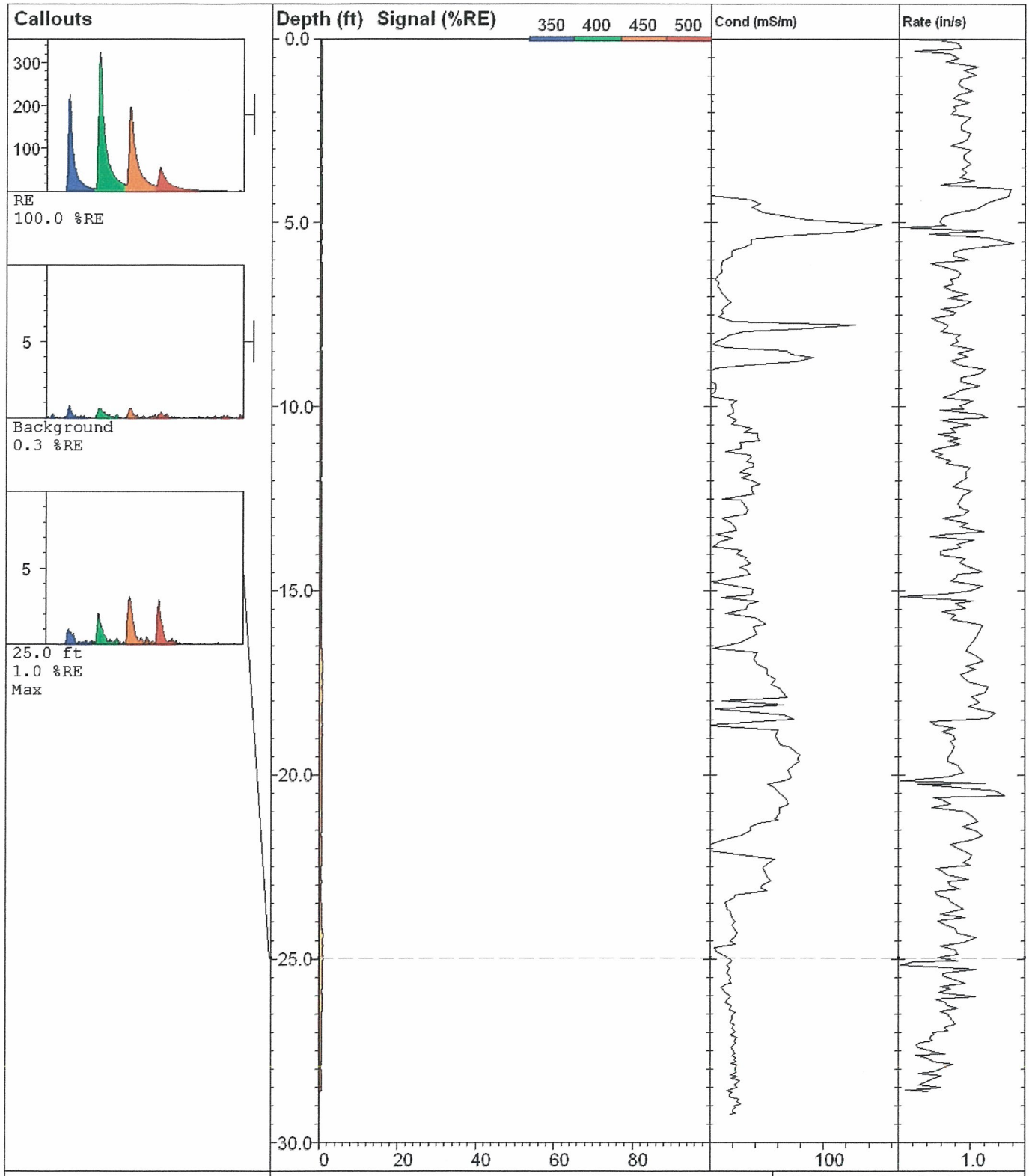

| CH1 | | CH2 | | CH3 | | CH4 | | Total | Channel | CH1 | | CH2 | | CH3 | | CH4 | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4820 | + | 8108 | + | 6249 | + | 2984 | = | **22161** | ***Area (pVs)*** | 4923 | + | 5743 | + | 4166 | + | 1735 | = | **16587** |
| 21.7 | | 36.6 | | 28.2 | | 13.5 | | **100%** | ***Percent RE*** | 22.3 | | 25.9 | | 18.8 | | 7.8 | | **75%** |

## Data Files

| | |
|---|---|
| ***.lif.raw.bin** | Raw data file. Header is ASCII format and contains information stored when the file was initially written (e.g. date, total depth, max signal, gps, etc., and any information entered by the operator). All raw waveforms are appended to the bottom of the file in a binary format. |
| ***.lif.plt** | Stores the plot scheme history (e.g. callout depths) for associated Raw file. Transfer along with the Raw file in order to recall previous plots. |
| ***.lif.jpg** | A jpg image of the OST log including the main signal vs. depth plot, callouts, information, etc. |
| ***.lif.dat.txt** | Data export of a single Raw file. ASCII tab delimited format. No string header is provided for the columns (to make importing into other programs easier). Each row is a unique depth reading. The columns are: Depth, Total Signal (%RE), Ch1%, Ch2%, Ch3%, Ch4%, Rate, Conductivity Depth, Conductivity Signal, Hammer Rate. Summing channels 1 to 4 yields the Total Signal. |
| ***.lif.sum.txt** | A summary file for a number of Raw files. ASCII tab delimited format. The file contains a string header. The summary includes one row for each Raw file and contains information for each file including: the file name, gps coordinates, max depth, max signal, and depth at which the max signal occured. |
| ***.lif.log.txt** | An activity log generated automatically located in the OST application directory in the 'log' subfolder. Each OST unit the computer operates will generate a separate log file per month. A log file contains much of the header information contained within each separate Raw file, including: date, total depth, max signal, etc. |

## Common Waveforms (highly dependent on soil, weathering, etc.)



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# LIF-83-043

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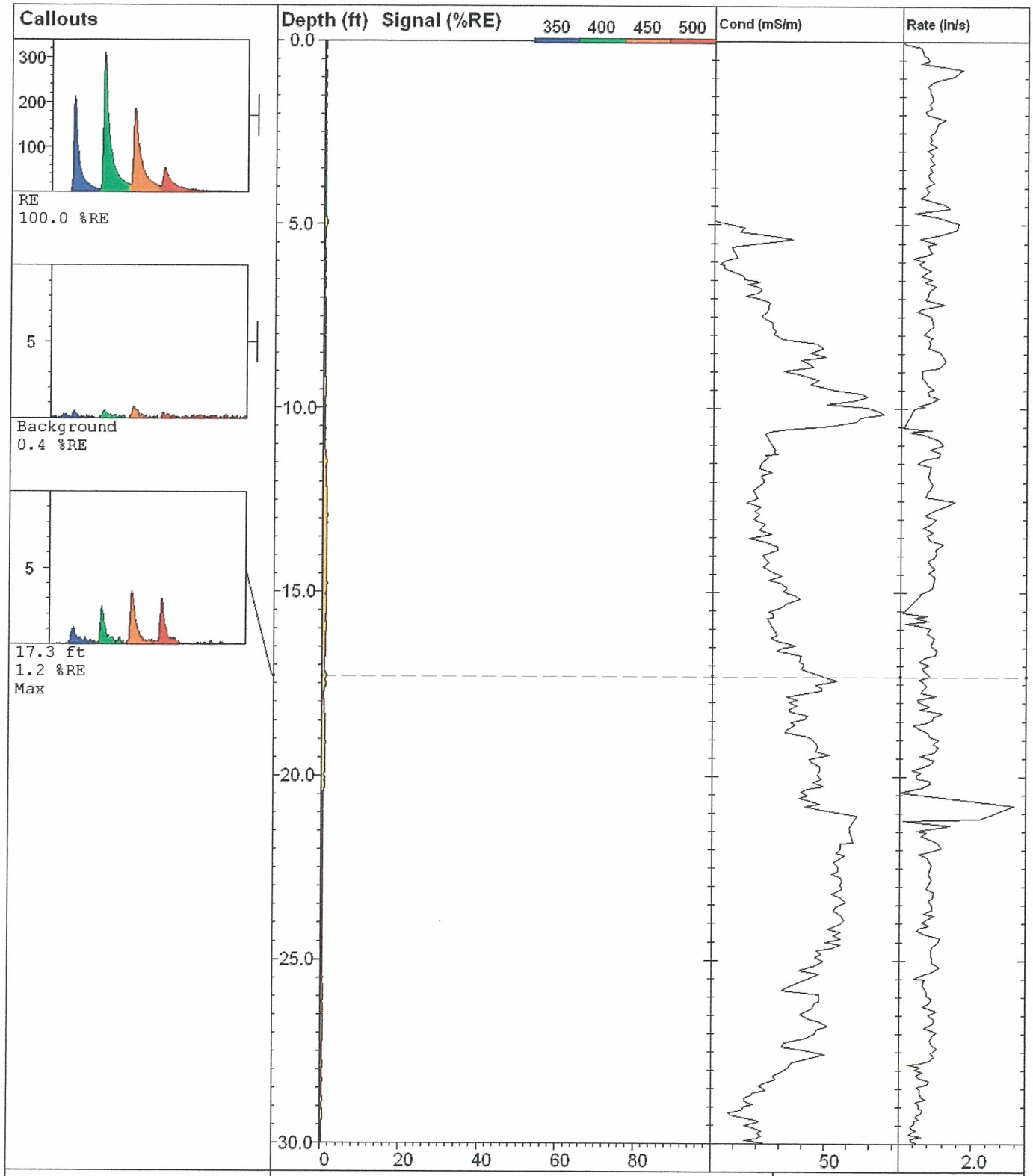
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04577 / ?** | *Final depth:* **28.61 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68756 / 0D** | *Max signal:* **1.0 % @ 24.97 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 15:40 EDT** |

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# LIF-83-042

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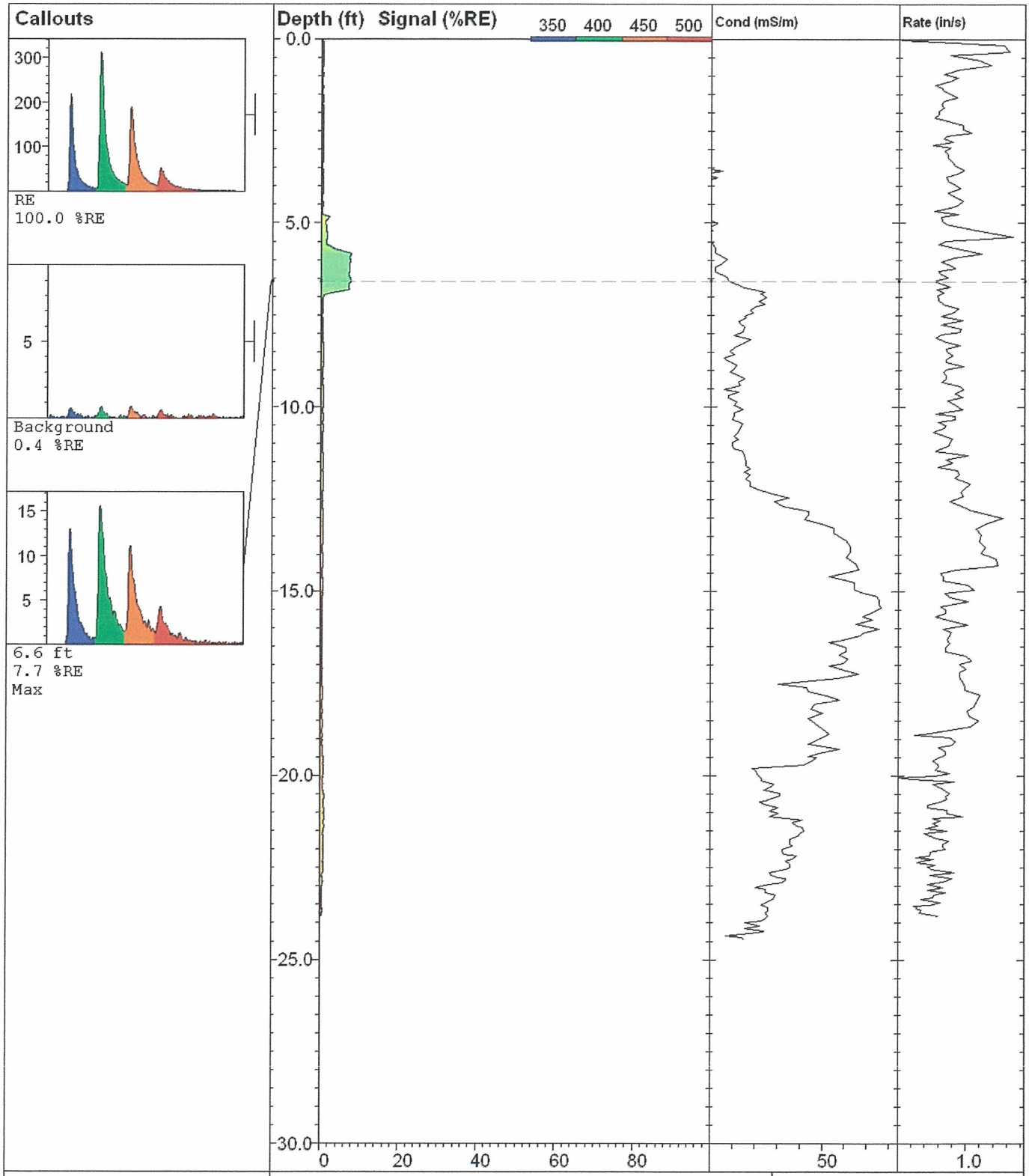
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04619 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68757 / 0D** | *Max signal:* **1.2 % @ 17.29 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 14:05 EDT** |

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# LIF-83-041

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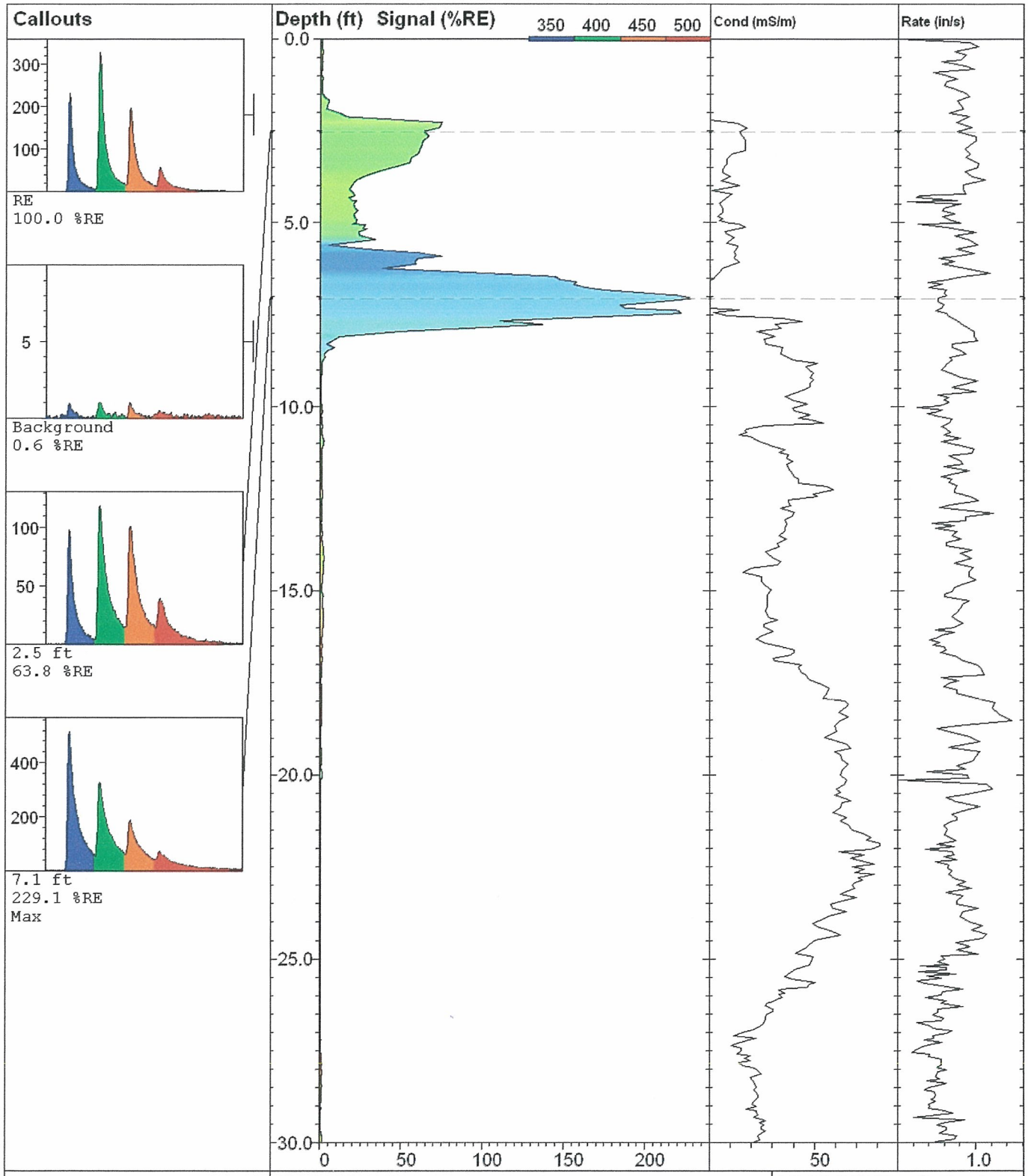
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04461 / ?** | *Final depth:* **23.82 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68645 / 0D** | *Max signal:* **7.7 % @ 6.58 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 12:08 EDT** |

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# LIF-83-040

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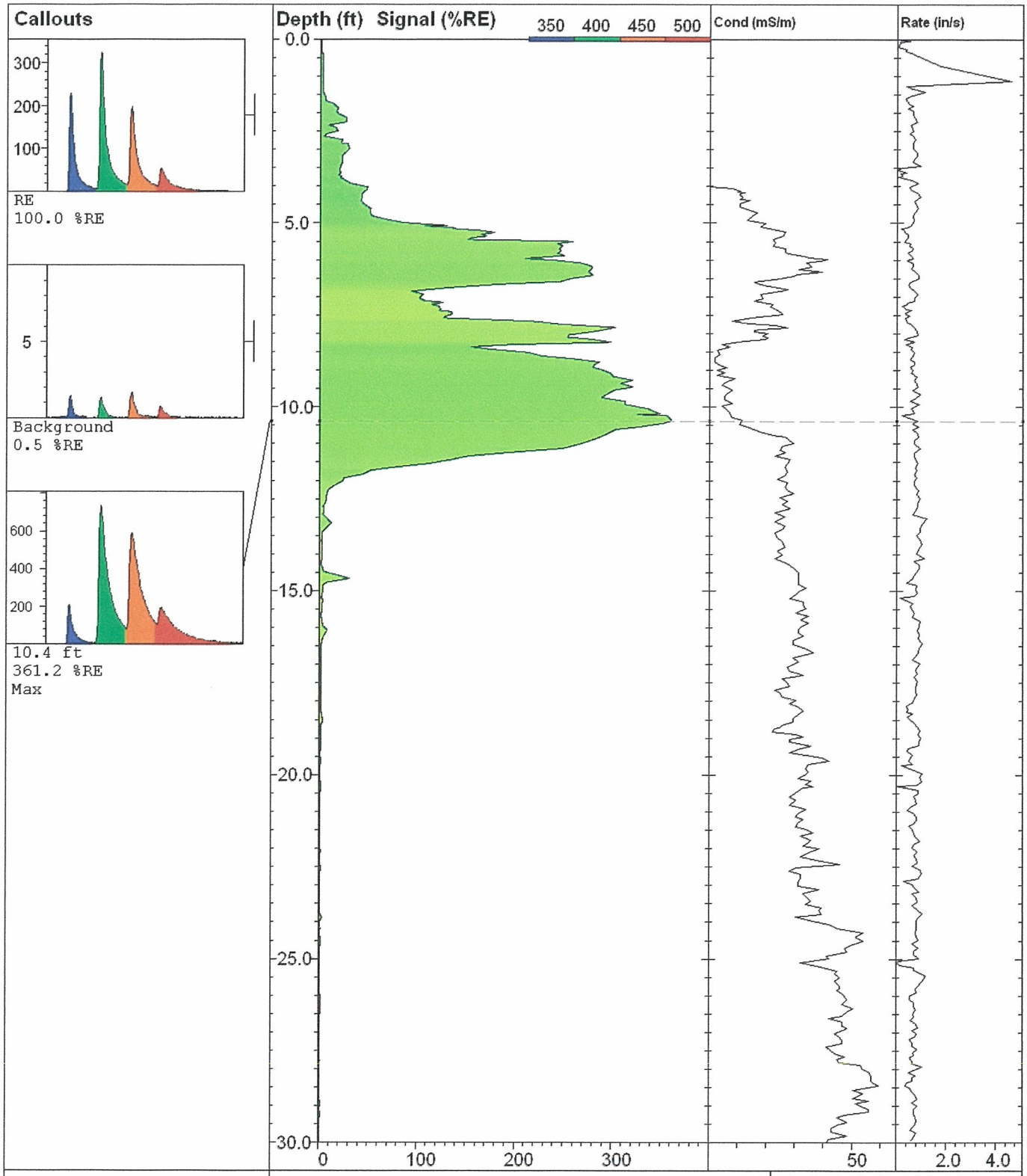
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04636 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68707 / 0D** | *Max signal:* **229.1 % @ 7.06 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 11:15 EDT** |

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# LIF-83-039

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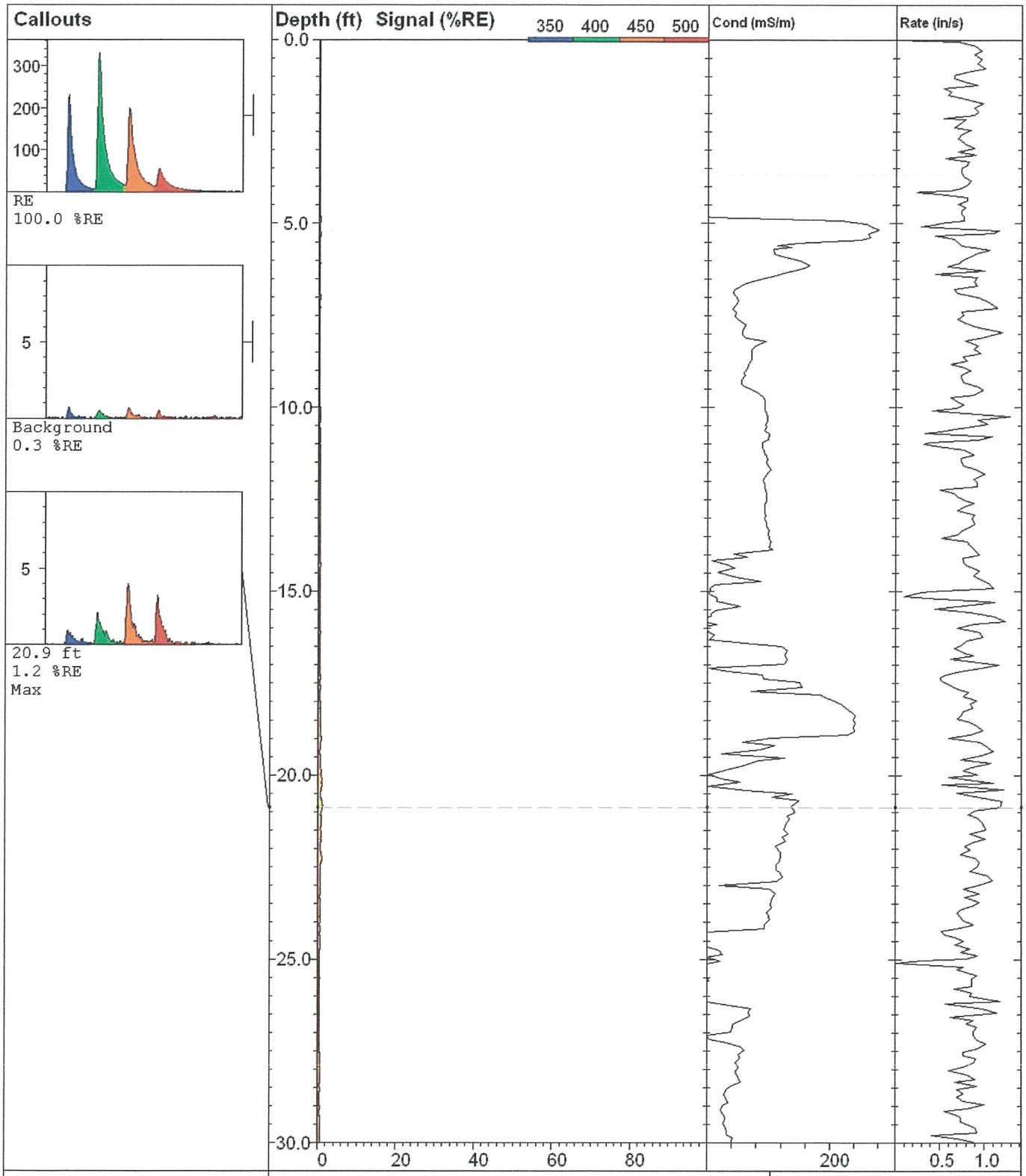
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04731 / ?** | *Final depth:* **30.08 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68709 / 0D** | *Max signal:* **361.2 % @ 10.37 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 10:11 EDT** |

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# LIF-05-019

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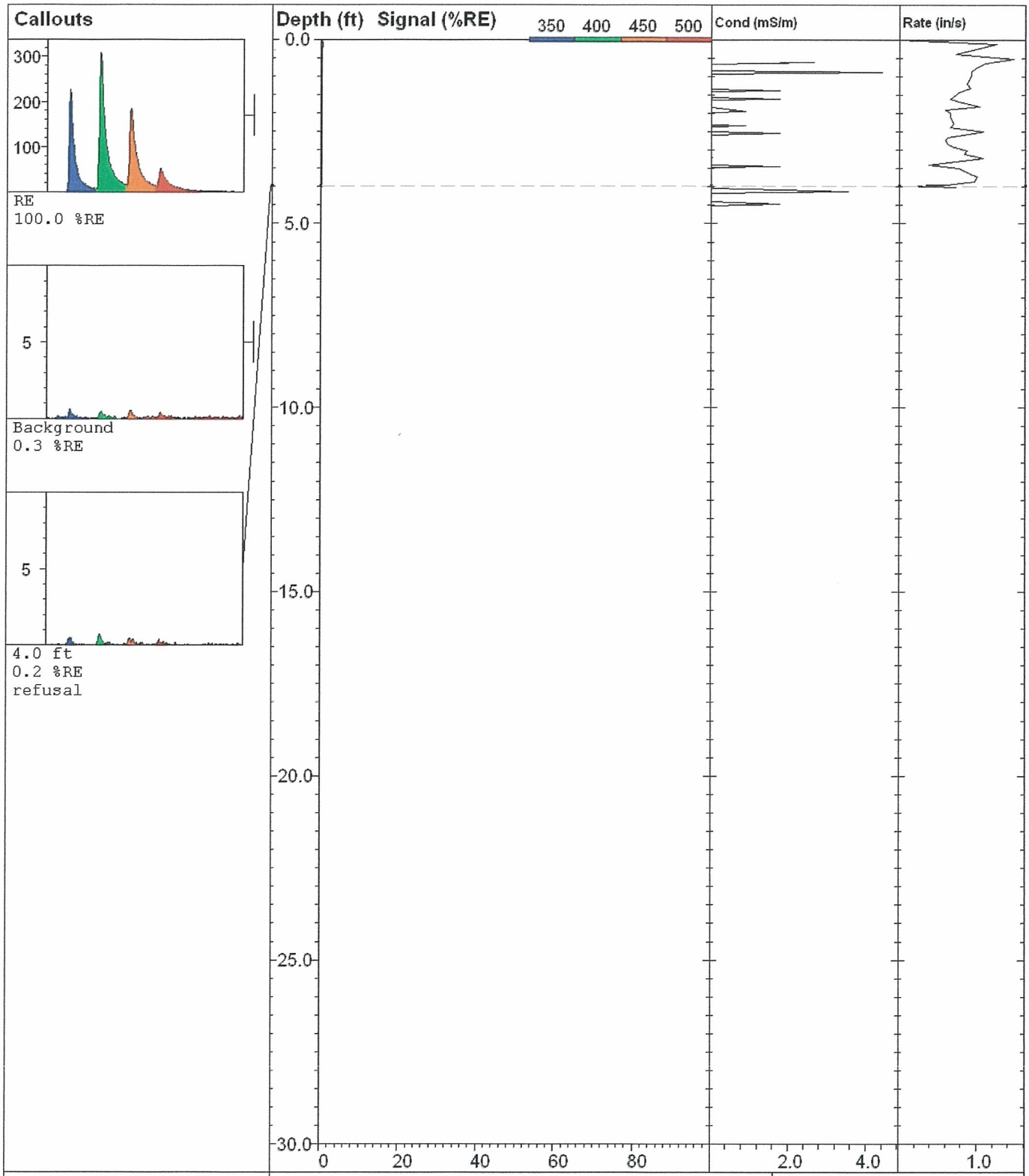
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.05128 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68653 / 0D** | *Max signal:* **1.2 % @ 20.86 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-01 16:38 EDT** |

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# LIF-16-029

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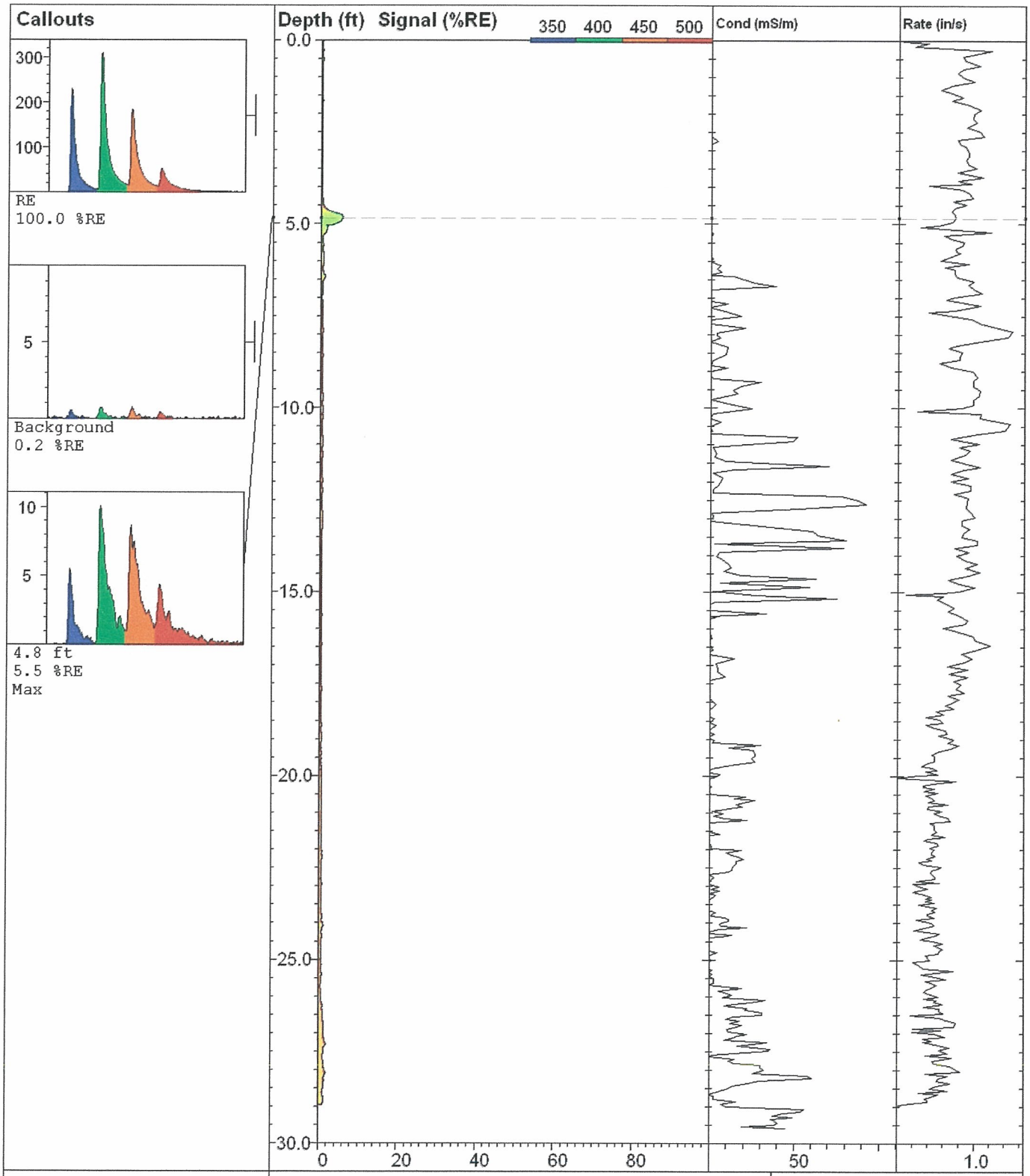
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.03743 / ?** | *Final depth:* **4.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68574 / 0D** | *Max signal:* **0.4 % @ 0.13 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 14:58 EDT** |

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# LIF-16-028

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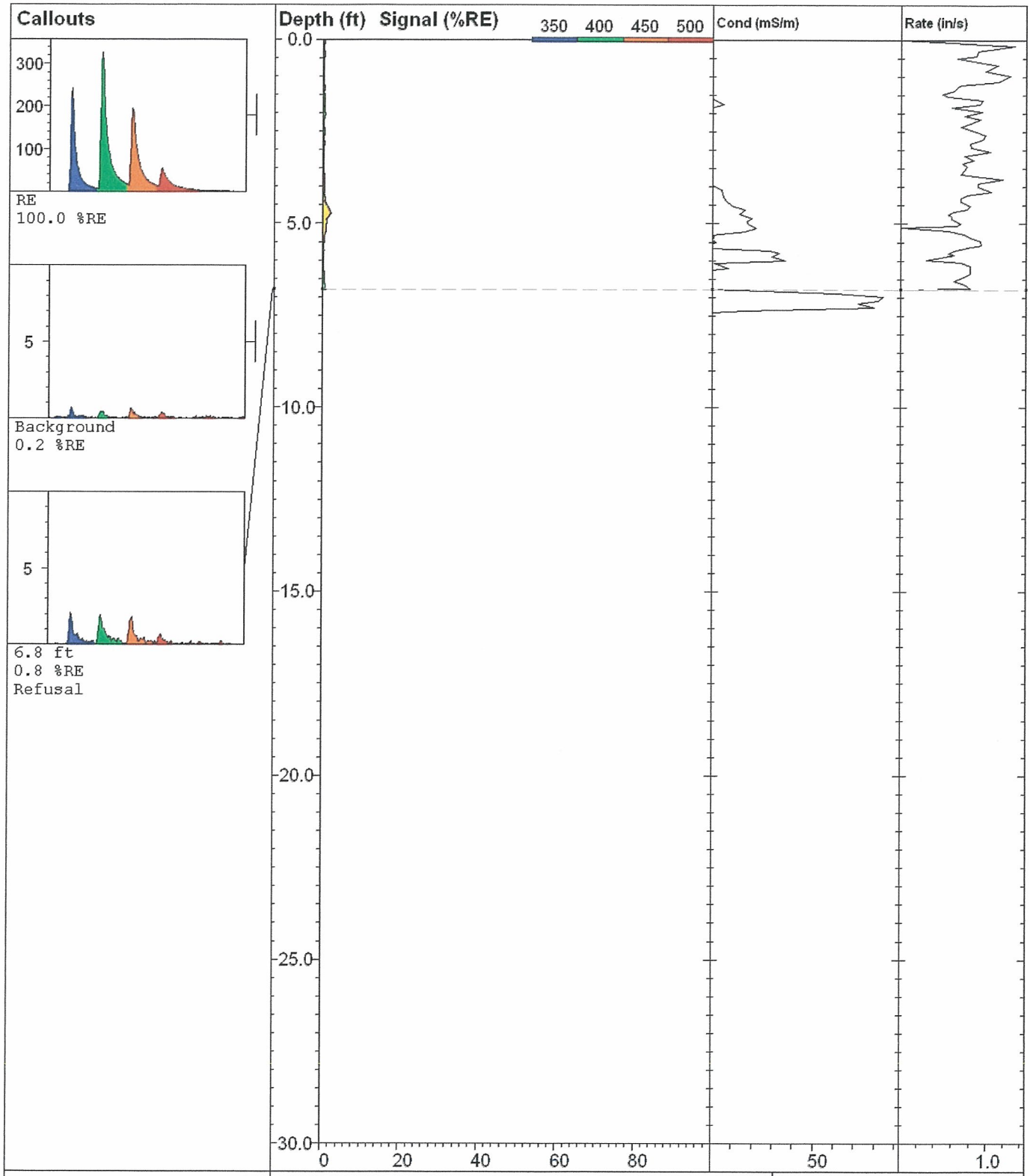
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.03651 / ?** | *Final depth:* **28.96 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.6841 / 0D** | *Max signal:* **5.5 % @ 4.83 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 14:13 EDT** |

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# LIF-10-028

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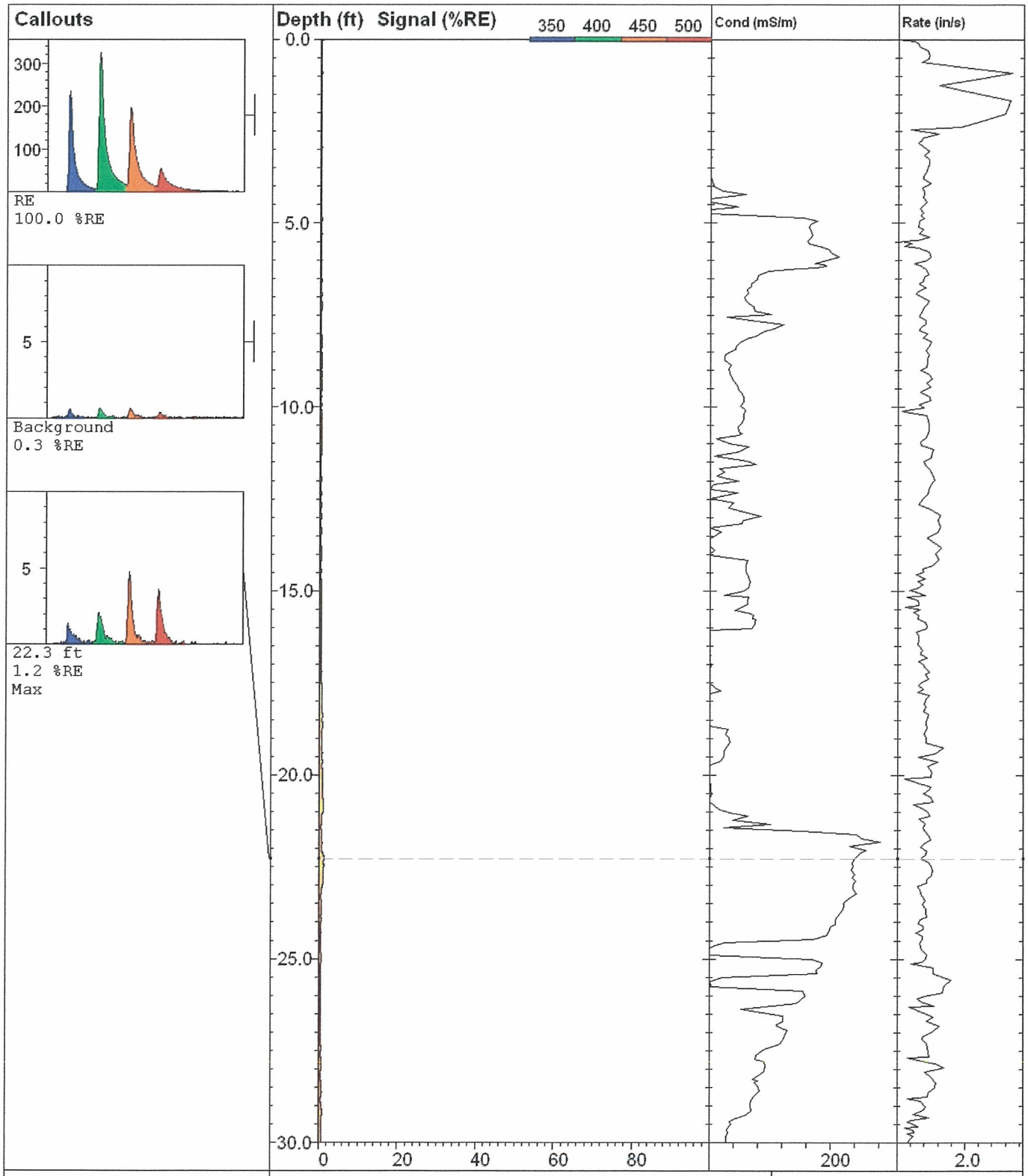
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.05169 / ?** | *Final depth:* **6.80 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68204 / 0D** | *Max signal:* **2.0 % @ 4.74 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 10:34 EDT** |

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# LIF-10-027

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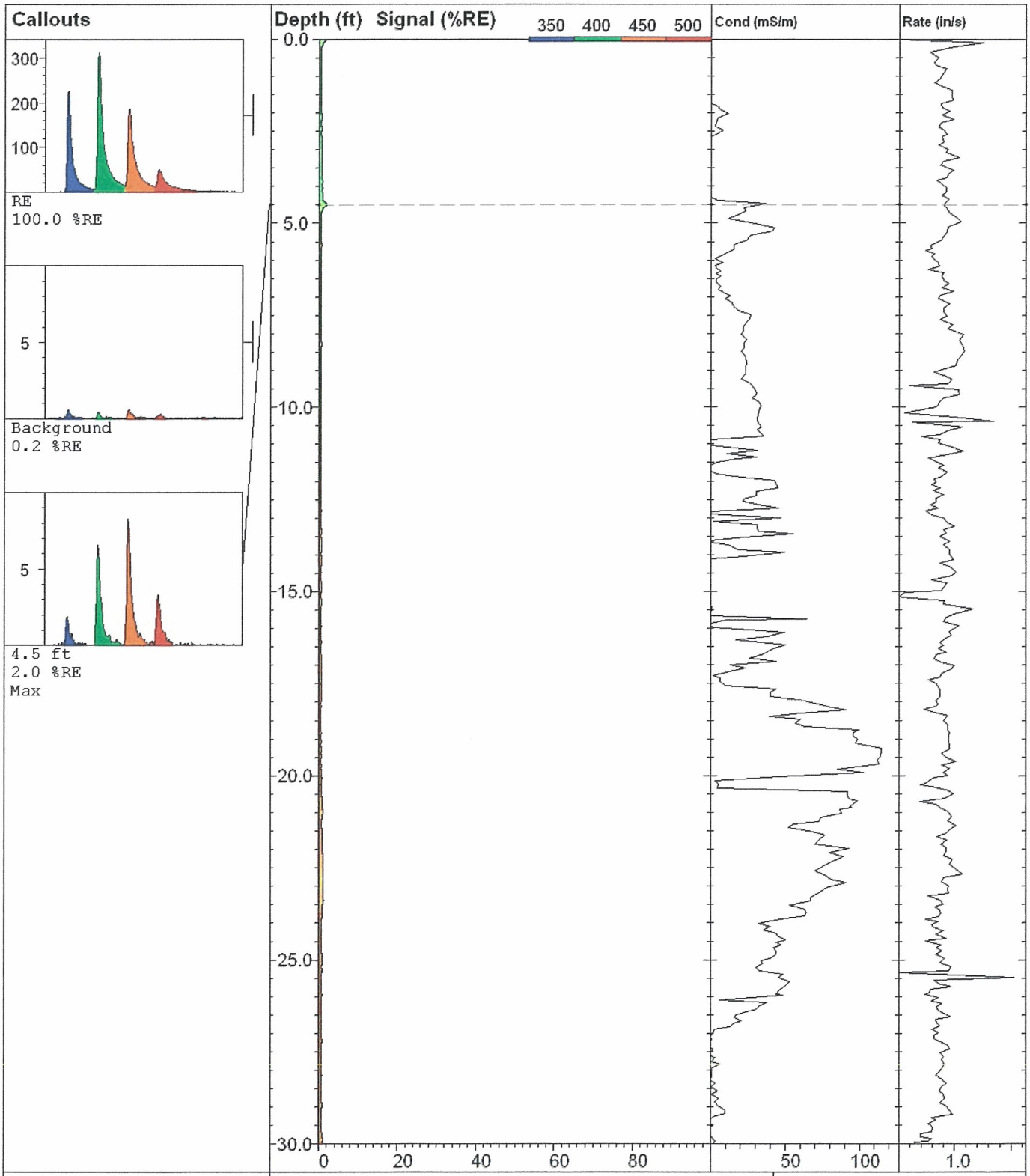
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.05176 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68140 / 0D** | *Max signal:* **1.2 % @ 22.27 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 09:50 EDT** |

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# LIF-05-020

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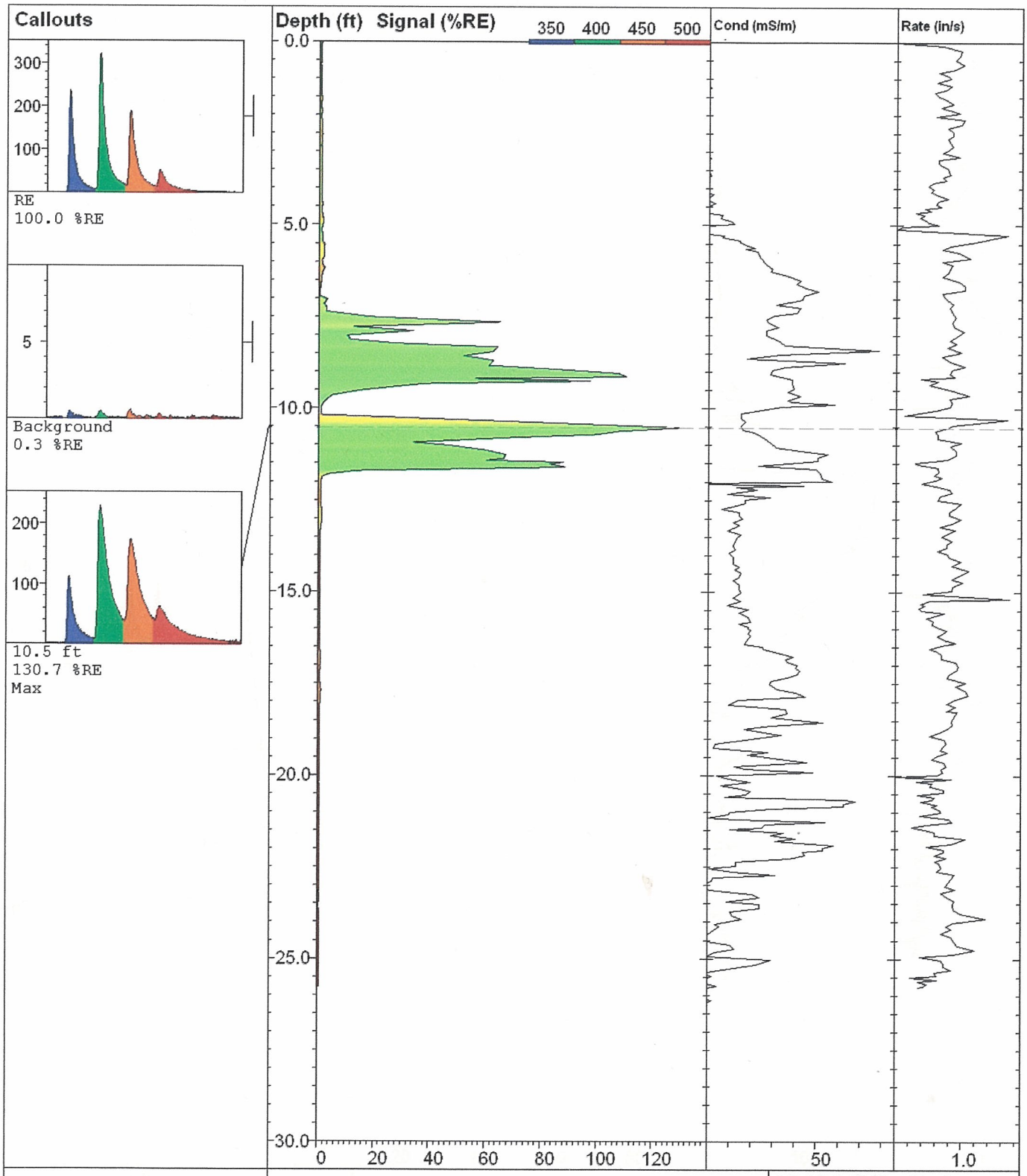
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.05076 / ?** | *Final depth:* **30.03 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68659 / 0D** | *Max signal:* **2.0 % @ 4.50 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 08:43 EDT** |

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# LIF-03-009

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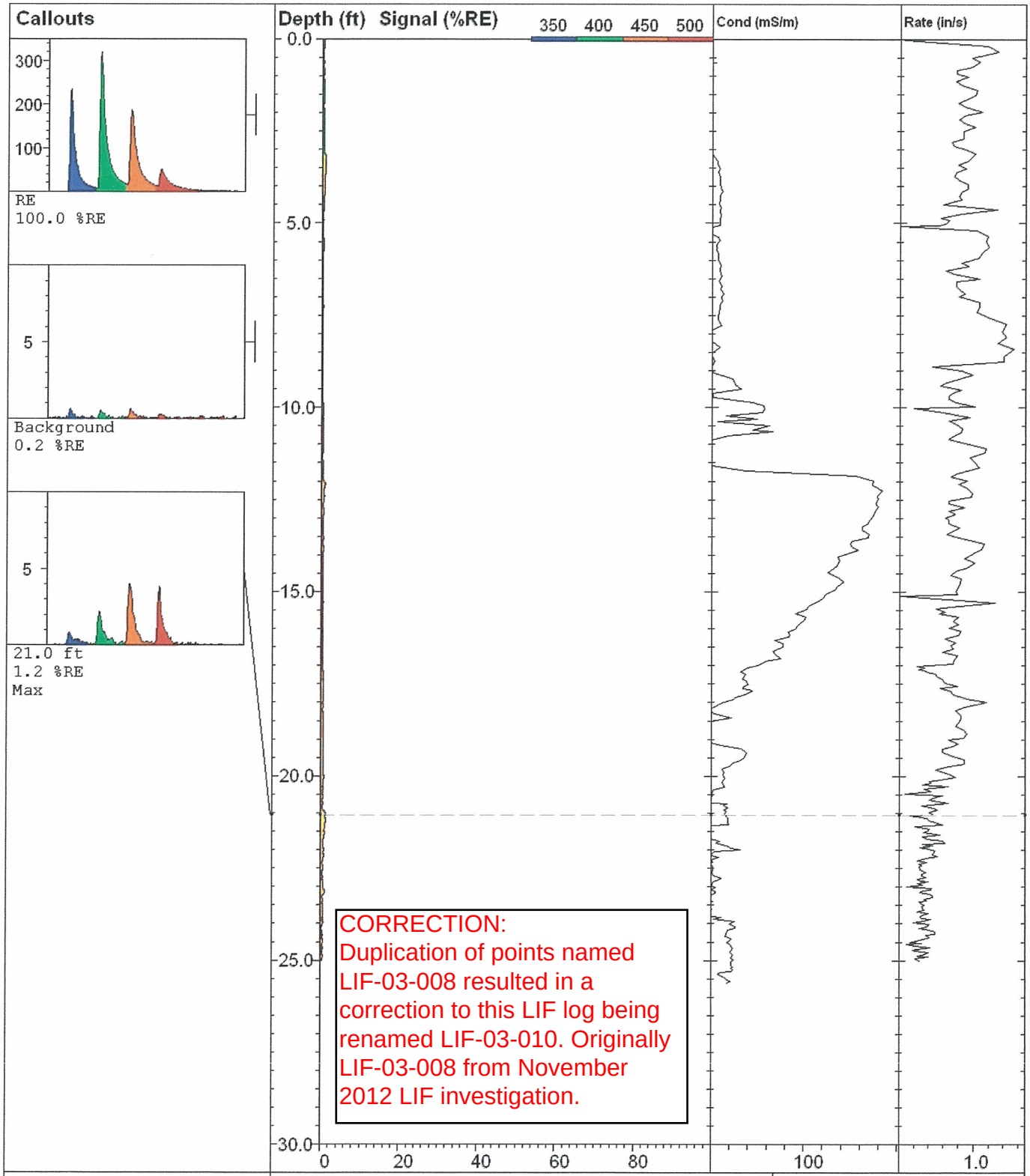
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04908 / ?** | *Final depth:* **25.79 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68198 / 0D** | *Max signal:* **130.7 % @ 10.52 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 12:55 EDT** |




CORRECTION:
Duplication of points named LIF-03-008 resulted in a correction to this LIF log being renamed LIF-03-010. Originally LIF-03-008 from November 2012 LIF investigation.

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| | | |
|---|---|---|
| **LIF-03-010** | | **UVOST By Dakota** www.DakotaTechnologies.com |
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.04908 / ?** | *Final depth:* **25.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.68198 / 0D** | *Max signal:* **1.2 % @ 21.05 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-11-02 11:23 EDT** |

Stock Drilling, Inc.

# UVOST LIF Boring Summary

## Racer Properties Buick City Flint, MI

Prepared for Arcadis

Prepared by Jonathan Wiley

Stock Drilling Inc.

P.O.Box 186

Ida, MI 48159

(734) 279-2059

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# UVOST LIF Boring Summary

## Racer Properties Buick City Flint, MI

**Index:**

**A: Project Summary**

**B: Dakota Technologies UVOST Log Reference**

**C: UVOST® LIF Logs**

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# Project Summary

**Tuesday, September 4, 2012**

8:30 – Onsite

8:30 – 9:30 Health and Safety/Work plan

9:30 – 12:00 Inclement Weather

12:00 – 12:45 Lunch

12:45 – 1:45 Downtime waiting on location of boring

1:45 – 2:45 Unload and set up of probe and LIF equipment

2:45 – Started boring LIF-CAL-1

3:15 – Push complete

3:25 – Out of hole

3:35 – Backfilled

3:35 – 5:00 Downtime waiting on location

5:00 – 5:30 Tear down equipment

5:30 - Offsite

**Wednesday, September 5, 2012**

8:00 – Onsite

8:00 – 8:30 Health and Safety

8:30 – 9:00 Unload and set up equipment

9:00 – Started boring LIF-36-052

9:15 – Push complete

9:25 – Out of hole

9:35 – Backfilled

9:35 – 9:50 moved to next location

9:50 – Started boring LIF-36-053

10:10 – Push complete

10:20 – Out of hole

10:20 – 10:35 Moved to next location

10:35 – Started boring LIF-36-054

10:50 – Push complete

11:00 – Out of hole

11:10 – Backfilled hole

11:10 – 11:40 Down waiting on next location

11:40 – Started boring LIF-36-055

11:50 – Push complete

11:55 – Backfilled hole

12:00 – started LIF-36-056

12:20 – Push complete

12:30 – Out of hole

12:45 – Backfilled hole

12:45 – 1:00 E-mailed completed logs to Steven

1:00 – 1:30 Lunch, e-mailed logs to Steven

1:30 – 1:50 Down waiting on next location

1:50 – Started LIF-36-057

2:05 – Push Complete

2:20 – Backfilled hole

2:20 – 3:20 Down waiting on next location

3:20 – Started hand clearing CSX location

3:35 – 4:35 Down waiting for location

4:35 – Moving to different site, want miss dig recalled unsure of location

4:35 – 5:00 Moved off tracks to new location

5:00 – Started boring LIF-36-058

5:20 – Push complete

5:30 – Backfilled hole

5:30 – 6:30 Packed up and drummed soils

6:45 - Offsite

**Thursday, September 6, 2012**

7:45 – Onsite

8:00 – 8:30 Health and safety

8:30 – 8:50 Unload equipment

8:50 – Started boring LIF-CAL-2

9:20 – Push complete

9:30 – Out of hole

9:35 – Backfilled hole

9:35 – 9:55 Changed all files on previous boring, given wrong boring name

10:00 – Started boring LIF-10-017

10:15 – Push complete

10:20 – Out of hole

10:30 – Backfilled hole

10:40 – Started boring LIF-10-018

10:55 – Push Complete

11:05 – Out of hole

11:10 – Backfilled hole

11:15 – Started boring LIF-10-019

11:26 – String pot went out

11:35 - Fixed string pot and restarted

11:50 – Push complete

12:00 – Out of hole

12:10 – Backfilled hole

12:10 – 12:30 Moved to next location

12:30 – 1:15 Lunch, e-mailed logs to Steven

1:25 – Started boring LIF-10-020

1:35 – Lost depth mid hole

2:00 – Restarted

2:20 – Push complete

2:30 – Out of hole

2:35 – Backfilled hole

2:40 – Started boring LIF-10-021

3:00 – Push complete

3:10 – Out of hole

3:20 – Backfilled hole

3:30 – Started boring LIF-10-022

3:50 – Push complete

4:00 – Out of hole

4:05 – Backfilled hole

4:10 – Started boring LIF-10-023

4:30 – Push complete

4:40 – Out of hole

4:45 – Backfilled hole

5:00 – Started boring LIF-10-024

5:15 – Push complete

5:25 – Out of hole

5:30 – Backfilled hole

5:30 – 6:00 Loaded up

6:00 – 7:15 moved to CSX property to plan where to get access and what supplies needed to cross tracks.

7:15 - Offsite

**Friday, September 7, 2012**

7:45 – Onsite

7:45 – 8:15 Health and safety

8:15 – Unload equipment

9:00 – Started boring LIF-10-025

9:30 – Push complete

9:40 – Out of hole

9:45 – Backfilled hole

9:50 – Started boring LIF-10-026 lost E.C. last hole

10:13 – Started push

10:37 – Push complete @ 26.15' refusal

10:46 – Out of hole

10:55 – Backfilled hole

11:00 – Moved to next location

11:20 – Started boring LIF-36-059

11:35 – Push complete

11:45 – Out of hole

11:50 – Backfilled hole

12:00 – Started LIF-36-060

12:15 – Push complete

12:25 – Out of hole

12:35 – Backfilled hole

12:35 – 12:45 Health and Safety Audit results and discussion

12:45 – Started Boring LIF-36-061

1:00 – Push complete

1:10 – Out of hole

1:15 – Backfilled hole

1:20 – E-mailed logs to Steven

1:30 – Started boring LIF-36-062

1:50 – Push complete

2:00 – Out of hole

2:05 – Backfilled hole

2:15 – Started boring LIF-03-004

2:35 – Push complete

2:40 – Backfilled hole

2:45 – Started boring LIF-03-005

3:05 – Push complete @28.2' refusal

3:10 – Out of hole

3:20 – Backfilled hole

3:25 – Started boring LIF-03-006

3:40 – Push complete

3:45 – Off hole

3:50 – Backfilled hole

3:50 – 4:20 Loaded up

4:30 - Offsite

**Monday, September 10, 2012**

8:15 – Onsite

8:15 – 9:00 Health and safety

9:00 – 10:30 Unload, strung rods and set up new trunk line

10:30 – 11:10 Mob on tracks to get to location on CSX property

11:10 – Started boring LIF-36-063

11:30 – Started push

11:45 – Push complete

11:55 – Out of hole

12:00 – Backfilled hole

12:00 – 3:30 Tool kat got a flat tire on tracks. Waiting for new tire to move to next location

3:30 – 4:00 Moved to next location on tracks

4:00 – Started boring LIF-36-064

4:25 – Push complete

4:35 – Out of hole

4:40 – Backfilled hole

4:40 – 5:20 Crossed tracks to move to next location

5:20 – Started boring LIF-86-006

5:50 – Push complete

6:00 – Out of hole

6:05 – Backfilled hole

6:20 – Started boring LIF-86-007

6:40 – Push complete

6:50 – Out of hole

7:00 – Backfilled hole

7:00 – 7:45 Moved off tracks and loaded up

7:45 – Off site

**Tuesday, September 11, 2012**

7:30 – Onsite

7:30 – 8:15 Health and safety

8:15 – 8:45 unload and move onto CXS property

8:45 – 9:45 Hand clear locations

9:45 – Started boring LIF-02-029

10:05 – Push complete

10:15 – Out of hole

10:20 – Backfilled hole

10:20 -11:00 Moved across tracks to next location and hand cleared

11:00 – Started boring LIF-02-030

11:15 – Push complete

11:25 – Backfilled hole

11:25 -11:45 Moved off tracks to next section

11:45 – 12:15 Hand cleared next location refusal @ 4'

12:30 – 1:15 Lunch, e-mailed logs to Steven

1:20 – Started boring LIF-05-001

1:50 – Push complete

1:55 – Out of hole and backfilled

2:00 – Started boring LIF-05-002

2:20 – Push complete

2:30 – Out of hole and backfilled

2:35 – Started boring LIF-05-003

2:50 – Push complete

2:55 – Out of hole and backfilled

3:00 – Started boring LIF-05-004

3:15 – Push complete

3:25 – Out of hole

3:30 – Backfilled hole

3:35 – Started boring LIF-05-005

3:50 – Push complete

3:55 – Out of hole

4:00 – Backfilled hole

4:05 – Started boring LIF-05-006

4:17 – Push complete

4:25 – Out of hole and backfilled

4:30 – Started boring LIF-05-007

4:45 – Push complete

4:50 – Out of hole and backfilled

4:55 – Started boring LIF-05-008

5:15 – Push complete

5:25 – Out of hole

5:30 – Backfilled hole

5:30 – 6:00 Loaded up

6:00 – Off site

**Wednesday, September 12, 2012**

8:00 – Onsite

8:00 – 8:45 Health and safety

8:45 – 9:15 Unload and change tire on enclosed trailer

9:15 – Started boring LIF-05-009

9:35 – Push complete

9:45 – Out of hole

9:50 – Backfilled hole

10:00 – Started boring LIF-05-010

10:15 – Push complete

10:25 - Out of hole

10:35 – Backfilled hole

10:45 – Started boring LIF-05-011 sampled first 5' with macro

10:55 – Started push

11:08 – Push complete

11:15 – Out of hole

11:20 – Backfilled hole

11:25 – Started boring LIF-05-012 sampled first 5' with macro

11:35 – Started push

11:46 – Push complete

11:55 – Backfilled hole

12:00 -12:45 Lunch, e-mailed logs to Steven

12:45 – Started boring LIF-05-013 sampled first 5' with macro

12:55 – Started push

1:05 – Push complete

1:15 – Out of hole

1:20 – Backfilled hole

1:25 – Started boring LIF-05-014

1:30 –Refusal @ 12.15'

1:15 – 2:15 Waiting on phone call for next location

2:15 – Started boring LIF-81-012

2:30 – Push complete

2:40 – Out of hole

2:45 – Backfilled hole

2:55 – Started boring LIF-81-013

3:15 – Push complete

3:20 – Out of hole

3:25 – Backfilled hole

3:30 – Started boring LIF-81-014

3:45 – Push complete

3:55 – Out of hole

4:00 – Backfilled

4:05 – Started boring LIF-81-015

4:20 – Push complete

4:30 – Out of hole

4:35 – Backfilled hole

4:40 – Started boring LIF-81-016

5:00 – Push complete

5:10 – Out of hole

5:15 – Backfilled hole

5:20 – Started boring LIF-81-017

5:35 – Push complete

5:45 – Out of hole

5:50 – Backfilled hole

5:50 – 6:30 Load up

6:30 – Off site

**Thursday, September 13, 2012**

7:45 – Onsite

7:45 – 8:45 Health and safety and encounter with a stray dog

8:45 – Unload and set up

9:05 – Started boring LIF-83-020

9:25 – Push complete

9:35 – Out of hole

9:40 – Backfilled hole

9:45 – Started boring LIF-83-021

10:00 – Push complete refusal @23.36'

10:10 – Out of hole

10:20 – Backfilled hole

10:40 – Started boring LIF-83-022

10:55 – Push complete

11:05 – Out of hole

11:10 – Backfilled hole

11:20 – Started boring LIF-83-023

11:25 – Refusal @ 5.94'

11:35 – Out of hole and back filled

11:40 – Started boring LIF-83-024

12:00 – Push complete

12:10 – Out of hole

12:15 – Backfilled hole

12:30 – 1:30 Lunch, e-mailed logs to Steven

1:30 – Started boring LIF-83-025

1:50 – Push complete

2:00 – Out of hole

2:05 – Started boring LIF-83-026

2:12 – Refusal @ 6.86'

2:25 – Out of hole and backfilled

2:30 – Started boring LIF-83-027

2:35 – Refusal @ 9.78'

2:45 – Out of hole and backfilled

2:50 – Started boring LIF-83-028

3:10 – Push complete

3:20 – Out of hole

3:25 – Backfilled hole

3:30 – Started boring LIF-83-029

3:40 – Refusal @ 13.5'

3:50 – Out of hole and backfilled

3:55 – Started boring LIF-83-030

4:10 – Push complete

4:20 – Out of hole

4:25 – Backfilled hole

4:25 -4:50 Moved to next location

4:50 – Started boring LIF-83-031

5:10 – Push complete

5:20 – Out of hole

5:25 – Backfilled hole

5:30 – 6:00 Loading up

6:15 – Off site

**Friday, September 14, 2012**

8:00 – Onsite

8:00 – 8:45 Health and safety

9:45 – Started boring LIF-83-032

10:10 – Push complete

10:20 – Out of hole

10:25 – Backfilled hole

10:25 – 11:10 Hand clearing next location refusal @ 4'

11:10 – 11:25 Moved to new location and hand cleared

11:30 – Started boring LIF-86-008

11:45 – Push complete refusal @ 22.59'

11:55 – Out of hole

12:00 – Backfilled hole

12:00 – 12:45 Lunch, e-mailed logs to Steven

12:45 – 1:45 Down time waiting for Christine on phone dealing with location and coring issues

1:45 – Started boring LIF-86-009

1:50 – Push started

2:10 – Push complete

2:20 – Out of hole

2:25 – Backfilled hole

2:25 – 3:15 Hand clearing next location hit a storm drain

3:15 – 3:25 Hand clearing next location refusal @ 2'

3:30 – Cleaning up and loading up

4:30 – Off site

**Monday, September 17, 2012**

8:00 – Onsite

8:00 – 8:45 Health and safety

9:00 -10:00 Unload and set up

10:10 – Started boring LIF-40-030

10:20 – Started push

10:35 – Push complete

10:45 – Out of hole

10:50 – Backfilled hole

10:55 – Started boring LIF-40-031

11:10 – Push complete

11:15 – Out of hole

11:20 – Backfilled hole

11:25 – 11:55 Hand clearing next location

11:55 – Started boring LIF-16-025

12:20 – Push complete

12:30 – Out of hole

12:35 – Backfilled hole

12:45 – 1:15 Lunch and e-mail logs to Steven

1:20 – 2:20 Down time waiting on location and number

2:20 – Started boring LIF-16-026

2:30 – Refusal @ 5.44'

2:35 – Out of hole

2:40 – Backfilled hole

2:45 – Started boring LIF-CAL-5

2:55 – Refusal @15.51'

3:00 – Out of hole

3:05 – Backfilled hole

3:10 – 3:40 Lost E.C. last hole repaired

3:50 – Started boring LIF-16-027

4:05 – Push complete

4:15 – Out of hole

4:20 – Backfilled hole

4:30 – 4:45 Hand cleared CSX boring refusal @ 3'

4:45 – 5:00 Moved to section 5, RE broke while moving

5:00 – 5:45 Clean up and load

6:00 – Offsite

**Tuesday, September 18, 2012**

7:45 – Onsite

7:45 – 8:30 Health and safety

8:30 – 9:15 Unload and set up

9:15 – 10:00 Set up new RE and adjust SPOK

10:00 – Started boring LIF-05-015

10:18 – Push complete

10:30 – Out of hole

10:35 – Backfilled hole

10:40 – Started boring LIF-05-016

11:00 – Push complete

11:10 – Out of hole and backfilled

11:15 – Started boring LIF-05-017

11:30 – Push complete lost E.C.

11:40 – Out of hole

11:45 – Backfilled hole

11:45 – 12:45 Fixed E.C.

12:45 – 1:00 Waiting on hand clearing

1:15 – 2:00 Lunch and e-mail logs to Steven

2:00 – Started boring LIF-05-018

2:15 – Push Complete

2:30 – Off hole and backfilled

2:30 – 3:00 Waiting on hand clearing

3:00 – Started boring LIF-03-007

3:25 – Push complete

3:35 – Out of hole

3:40 – Backfilled hole

3:45 – Started boring LIF-83-033

4:10 – Push complete

4:20 – Out of hole and backfilled

4:25 – Started boring LIF-83-034

4:45 – Push complete

4:55 – Off hole

5:00 – 5:30 Waiting for a hand cleared location

5:30 – 6:00 Dead battery on probe had to replace

6:00 – 6:45 Clean and load up

6:45 – Offsite

**Monday, September 17, 2012**

7:45 – Onsite

7:45 – 8:15 Health and safety

8:15 – 9:00 Unload and set up

9:00 – Started boring LIF-83-035

9:25 – Push complete

9:35 – Out of hole and backfilled

9:40 – Started boring LIF-83-036

10:00 – Rod dampener over heated

10:10 – Push complete

10:20 – Out of hole

10:25 – Backfilled hole

10:25 -10:40 Waiting for location and hand clearing

10:40 – Started boring LIF-83-037

11:00 – Push complete

11:10 – Out of hole

11:20 – Backfilled hole

11:20 – 11:50 Repaired E.C.

11:55 – Started boring LIF-83-038

12:10 – refusal @ 25.94'

12:20 – Out of hole

12:30 – Backfilled hole

12:30 – 1:15 Lunch and E-mail logs to Steven

1:15 – 1:35 Down time waiting for location

1:35 – Started boring LIF-03-008

1:55 – Push complete lost E.C.

2:05 – Out of hole

2:10 – Backfilled hole

2:00 – 3:45 Waiting for a hand cleared location but refusal on remaining locations

3:45 -4:45 Clean and load up

4:45 - Offsite

# General Observations/Notes

**Breakdowns/Standbys:** Production was reasonable despite the hand auguring refusals and down time waiting for verification on locations. We had only one restring of the rods due to loss of EC. We had a string pot replacement due to a loss of depth. We also had a spoc replacement and mirror replacement due to the tough conditions. We also lost a little time due to moving around instead of concentrating on one area. The CXS borings were a challenge with having to cross tracks and limited access points.

**Safety Incidents/Stop work:** A wild dog was in the area one morning attempting to get at us through the fence. We called security and he took care of the situation.

**Validation/Sampling:** Sampled first five feet of three holes with a macro.

**General Comments:** Overall the investigation went well. The response of the uvost was very good at the different locations. There were many refusals at less than five feet and also many subsurface layers of concrete at various depths. This was expected with the site history. The tooling held up well to the difficult conditions. All borings were backfilled with bentonite pellets and capped with concrete or existing surface. Decon of the probe was conducted between each boring. We maintained a three man crew to expedite progress. Included with this summary is a flash drive including all the files for the project. We had two core machines on site to speed up step out progress.

# Calibration of the UVOST

Prior to conducting each log, two measurements (RE and Background) are recorded.

**Reference Emitter (RE):** The RE is a standard substance that is used to calibrate the UVOST instrument prior to every log. It serves two main purposes:

1) **Qualitatively examine the performance of the instrument -** RE needs to be the correct shape so we know all channels (filters, etc.) are intact and functioning. A bad or misshapen RE waveform indicates potential damage of the detection system optics.

2) **Quantitatively "calibrate" the instrument -** RE sets the proper signal intensity (by adjusting laser energy). An RE in the proper range keeps us in the optimum range of the fluorescence detector... not too low, not too high. The RE is a calibration of the UVOST system accomplished by measuring the response to a standardized amount of fluorescence, not a method of

converting fluorescence to a known concentration. Basically all measurements are normalized to a known consistently fluorescing substance called the Reference Emitter or RE. A 100% RE reading means that a measured material has a fluorescence signal identical to RE. A 200% RE means a substance has a fluorescence signal twice that of RE, and so forth.

**RE range:**
RE area's typically fall between 11,000 and 13,000 pVs for UVOST (picovolt-seconds, a measure of waveform area). Precise laser energy level 'tuning' to achieve and exact amount of fluorescence is not needed because all fluorescence is reported as a percentage of the RE's fluorescence and reported as Signal (%RE).

**Background:**
The background is a measure of the optical quality (with a focus on cleanliness) of the setup. Sources of signal in the background include fiber optic and filter auto-fluorescence, mirror and window fluorescence, lint, fuel, debris, and scatter from worn windows. The background waveform has no mathematical impact on the data collected (i.e. it is not subtracted) and is taken only as a data quality measure and to assure the operator that there is no significant defects on the optics (mirror, window, fiber, etc).
**Background range:**

Background values can vary widely (in terms of relative percent difference) from 0.1% of the RE signal to 10%. However, there is no hard cut-off value and a balance must be struck between site needs and available time.

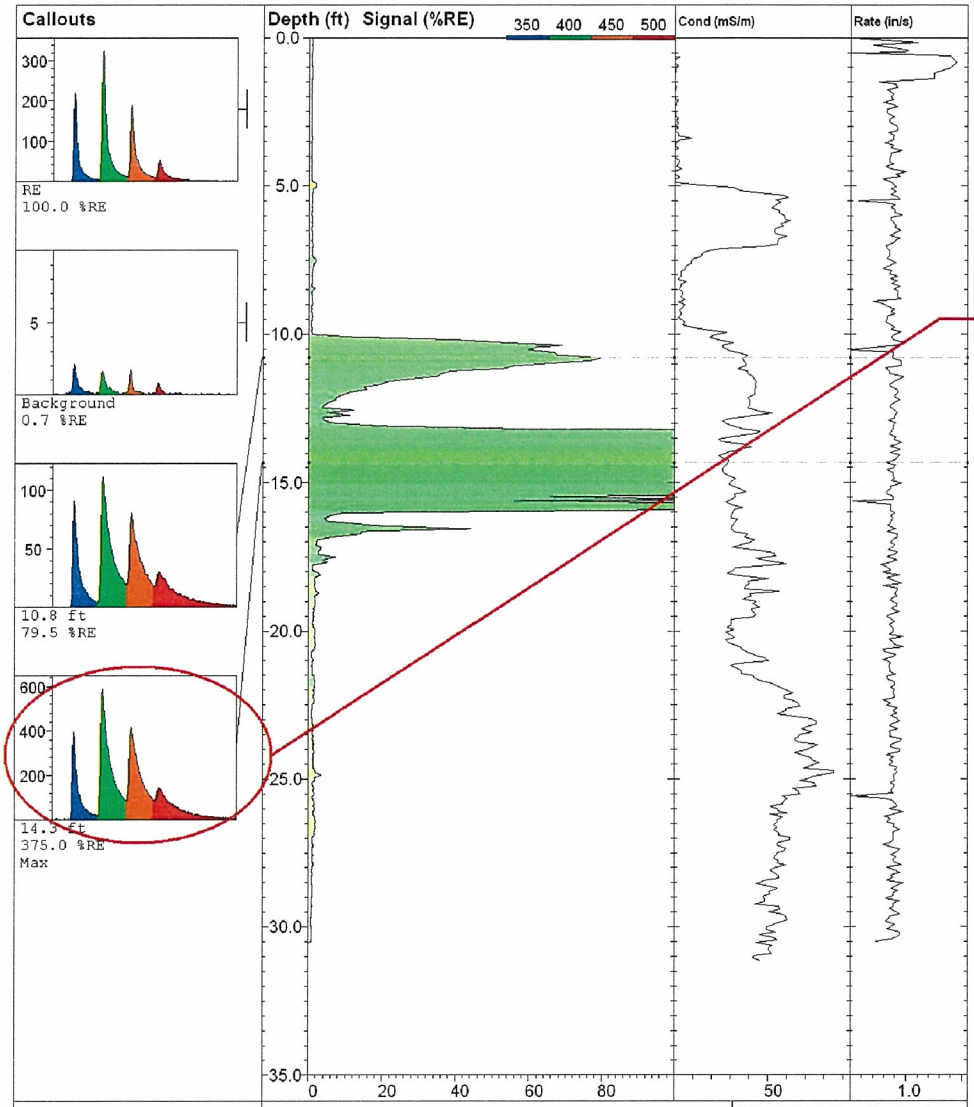
**False Positives / Interference**

In some cases UVOST will respond to naturally fluorescent minerals, biogenic minerals (shells) and organic matter like peat. Most often this response shows a very different signature or waveform and is of relatively low response compared to LNAPL and DNAPL. A few of the borings had concrete dust at the beginning from coring which did fluoresce.

**Wave form discussion:**

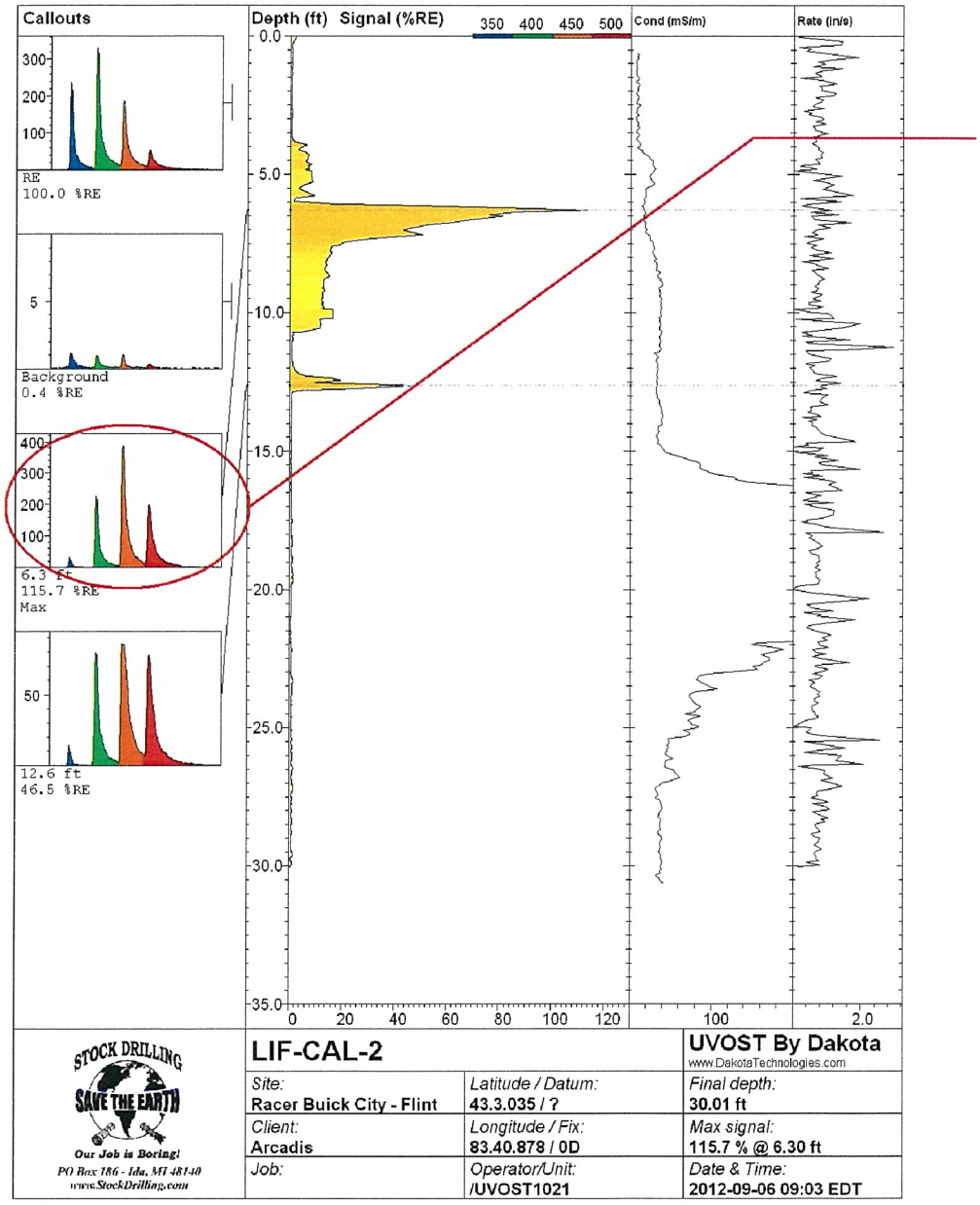
Throughout the site we had good response with the UVOST. Here are some examples of two distinct wave forms found.

The wave form highlighted here showed elevated fluorescence. These green/yellow fluorescence waveforms are consistent with hydrocarbons such as diesel.




| | | |
|---|---|---|
| STOCK DRILLING SAVE THE EARTH Our Job is Boring! PO Box 186 - Ida, MT 48140 www.StockDrilling.com | **LIF-CAL-1** | **UVOST By Dakota** www.DakotaTechnologies.com |
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.372 / ?** | *Final depth:* **30.51 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.837 / 0D** | *Max signal:* **624.4 % @ 14.24 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-04 15:57 EDT** |

The waveform highlighted here showed elevated fluorescence. These green/yellow fluorescence waveforms are consistent with hydrocarbons such as diesel but conformation soil samples for lab analysis would be recommended.




The waveform highlighted here showed elevated fluorescence. These yellow/orange fluorescence waveforms are consistent with a type of oil but conformation soil samples for lab analysis would be recommended.

# Racer Buick City Flint ,MI LIF Log Summary Stock Drilling Inc.

| File | Date/Time | Latitude | Longitude | Final Depth | Max Signal | Max Signal RE | Area | Background Area |
|---|---|---|---|---|---|---|---|---|
| LIF-CAL-1 | 9/4/12 3:57 PM | 43.3.372 | 83.40.837 | 30.511 | 624.4361 | 14.241 | 8529.57 | 63.72 |
| LIF-CAL-2 | 9/6/12 9:03 AM | 43.3.035 | 83.40.878 | 30.014 | 115.6615 | 6.3 | 9032.85 | 39.13 |
| LIF-36-052 | 9/5/12 8:59 AM | 43.3.478 | 83.40.890 | 29.945 | 215.1874 | 16.576 | 9177.87 | 52.49 |
| LIF-36-053 | 9/5/12 9:51 AM | 43.3.464 | 83.40.932 | 30.029 | 291.0771 | 9.081 | 8733.23 | 56.41 |
| LIF-36-054 | 9/5/12 10:35 AM | 43.3.501 | 83.40.847 | 29.997 | 6.543789 | 4.583 | 8713.81 | 47.06 |
| LIF-36-055 | 9/5/12 11:29 AM | 43.3.328 | 83.40.868 | 30.001 | 46.97664 | 3.116 | 8102.8 | 30.2 |
| LIF-36-056 | 9/5/12 12:06 PM | 43.3.308 | 83.40.842 | 29.866 | 12.41446 | 4.507 | 8527.97 | 39.71 |
| LIF-36-057 | 9/5/12 1:50 PM | 43.3.423 | 83.40.962 | 29.991 | 230.7043 | 13.863 | 8558.37 | 33.54 |
| LIF-36-058 | 9/5/12 5:05 PM | 43.3.271 | 83.40.838 | 30.02 | 13.33339 | 4.844 | 8570.45 | 23.92 |
| LIF-10-017 | 9/6/12 10:00 AM | 43.3.064 | 83.40.904 | 29.427 | 6.245903 | 4.975 | 8180.24 | 44.14 |
| LIF-10-018 | 9/6/12 10:36 AM | 43.3.077 | 83.40.926 | 29.238 | 206.9312 | 17.09 | 8018.28 | 33.03 |
| LIF-10-019 | 9/6/12 11:36 AM | 43.3.086 | 83.40.975 | 29.789 | 195.7088 | 12.543 | 8220 | 27.74 |
| LIF-10-020 | 9/6/12 2:02 PM | 43.3.067 | 83.40.981 | 29.548 | 8.601605 | 11.135 | 8022.81 | 26.55 |
| LIF-10-021 | 9/6/12 2:45 PM | 43.3.118 | 83.40.973 | 30.069 | 11.24971 | 5.558 | 8237.55 | 25.46 |
| LIF-10-022 | 9/6/12 3:33 PM | 43.3.096 | 83.40.949 | 30 | 27.28018 | 8.548 | 8308.43 | 27.76 |
| LIF-10-023 | 9/6/12 4:15 PM | 43.3.078 | 83.41.009 | 30.053 | 7.240182 | 0.355 | 8029.65 | 30.09 |
| LIF-10-024 | 9/6/12 5:01 PM | 43.3.030 | 83.41.960 | 31.125 | 15.18643 | 6.771 | 8115.46 | 23.5 |
| LIF-36-062 | 9/7/12 1:35 PM | 43.3.253 | 83.40.816 | 30.023 | 13.40479 | 0.062 | 8228.04 | 20.9 |
| LIF-03-004 | 9/7/12 2:19 PM | 43.2.943 | 83.40.951 | 28.538 | 113.0917 | 12.294 | 8674.49 | 22.6 |
| LIF-03-005 | 9/7/12 2:59 PM | 43.2.955 | 83.40.990 | 28.196 | 28.1082 | 13.835 | 8090.47 | 23.29 |
| LIF-03-006 | 9/7/12 3:28 PM | 43.2.922 | 83.40.993 | 30.002 | 30.8448 | 12.138 | 8000.31 | 30.24 |
| LIF-10-025 | 9/7/12 9:15 AM | 43.2.990 | 83.40.955 | 29.206 | 3.499688 | 4.711 | 8311.33 | 33.82 |
| LIF-10-026 | 9/7/12 10:12 AM | 43.2.970 | 83.40.933 | 26.151 | 32.99667 | 4.809 | 8660.24 | 28.82 |
| LIF-36-059 | 9/7/12 11:21 AM | 43.3.424 | 83.40.987 | 30.101 | 13.48031 | 1.299 | 9400.75 | 29.56 |
| LIF-36-060 | 9/7/12 11:58 AM | 43.3.474 | 83.40.955 | 30.024 | 2.23492 | 21.235 | 8284.42 | 25.64 |
| LIF-36-061 | 9/7/12 12:45 PM | 43.3.503 | 83.40.890 | 30.013 | 3.121189 | 0.078 | 8448.27 | 20.63 |
| LIF-86-007 | 9/10/12 6:24 PM | 43.2.599 | 83.40.949 | 30.031 | 1.459239 | 0.482 | 8009.43 | 30.09 |
| LIF-36-063 | 9/10/12 11:32 AM | 43.3.336 | 83.40.750 | 30.039 | 14.35482 | 0.094 | 8573.11 | 31.58 |
| LIF-36-064 | 9/10/12 4:10 PM | 43.3.269 | 83.40.758 | 30.128 | 9.597025 | 0.123 | 8253.13 | 22.3 |
| LIF-86-006 | 9/10/12 5:25 PM | 43.2.627 | 83.40.941 | 30.125 | 2.726659 | 18.955 | 8456.63 | 22.76 |
| LIF-05-008 | 9/11/12 4:58 PM | 43.3.128 | 83.41.124 | 30.409 | 20.5441 | 0.006 | 8671.77 | 43.78 |
| LIF-02-029 | 9/11/12 9:45 AM | 43.2.405 | 83.40.982 | 30.064 | 25.81745 | 1.562 | 9087.9 | 37.92 |
| LIF-02-030 | 9/11/12 10:54 AM | 43.2.426 | 83.40.979 | 30.094 | 3.064178 | 16.305 | 9043.16 | 35.13 |
| LIF-05-001 | 9/11/12 1:34 PM | 43.3.021 | 83.41.137 | 30.179 | 115.9293 | 15.721 | 8507.07 | 35.3 |
| LIF-05-002 | 9/11/12 2:09 PM | 43.2.995 | 83.41.109 | 30.253 | 10.6272 | 8.761 | 8595.06 | 39.32 |
| LIF-05-003 | 9/11/12 2:37 PM | 43.3.047 | 83.41.135 | 30.152 | 203.6788 | 13.506 | 8146.64 | 43.43 |
| LIF-05-004 | 9/11/12 3:06 PM | 43.3.088 | 83.41.127 | 30.227 | 118.7248 | 7.543 | 8501.46 | 41.54 |
| LIF-05-005 | 9/11/12 3:37 PM | 43.3.105 | 83.41.097 | 30.326 | 4.492881 | 0.006 | 8633.44 | 38.56 |
| LIF-05-006 | 9/11/12 4:06 PM | 43.3.122 | 83.41.103 | 30.316 | 1.35528 | 0.004 | 8800.85 | 37.83 |
| LIF-05-007 | 9/11/12 4:31 PM | 43.3.124 | 83.41.132 | 30.339 | 262.1087 | 6.685 | 8817.67 | 27.33 |
| LIF-81-017 | 9/12/12 5:17 PM | 43.2.742 | 83.40.942 | 30.035 | 46.79811 | 4.663 | 8186.68 | 44.03 |
| LIF-05-009 | 9/12/12 9:25 AM | 43.3.121 | 83.41.082 | 30.53 | 2.429639 | 0.086 | 9136.98 | 44.53 |
| LIF-05-010 | 9/12/12 10:04 AM | 43.3.085 | 83.41.082 | 30.035 | 2.043511 | 0.06 | 8733.89 | 43.03 |
| LIF-05-011 | 9/12/12 10:56 AM | 43.3.068 | 83.41.090 | 30.027 | 157.397 | 9.883 | 8594.1 | 31.37 |
| LIF-05-012 | 9/12/12 11:34 AM | 43.3.036 | 83.41.089 | 29.998 | 85.36108 | 7.652 | 8412.84 | 51.9 |
| LIF-05-013 | 9/12/12 12:54 PM | 43.3.027 | 83.41.098 | 30.056 | 195.2888 | 11.238 | 8255.17 | 37.59 |
| LIF-05-014 | 9/12/12 1:27 PM | 43.3.045 | 83.41.102 | 12.149 | 34.86459 | 6.745 | 8599.78 | 40.82 |
| LIF-81-012 | 9/12/12 2:17 PM | 43.2.869 | 83.40.945 | 30.031 | 8.924115 | 5.54 | 8450.21 | 43.57 |
| LIF-81-013 | 9/12/12 2:56 PM | 43.2.900 | 83.40.928 | 26.757 | 17.21966 | 6.714 | 8611.56 | 32.79 |
| LIF-81-014 | 9/12/12 3:36 PM | 43.2.844 | 83.40.942 | 30.033 | 10.58862 | 4.343 | 8784.85 | 39.35 |
| LIF-81-015 | 9/12/12 4:10 PM | 43.2.759 | 83.40.963 | 30.037 | 7.435493 | 13.859 | 8347.41 | 44.49 |
| LIF-81-016 | 9/12/12 4:45 PM | 43.2.734 | 83.40.995 | 30.08 | 3.980539 | 0.788 | 8792.93 | 44.42 |
| LIF-83-031 | 9/13/12 4:54 PM | 43.2.845 | 83.41.175 | 30.055 | 25.21808 | 6.677 | 8596.16 | 50.94 |
| LIF-83-020 | 9/13/12 9:03 AM | 43.2.704 | 83.41.169 | 26.753 | 173.3518 | 6.166 | 9489.56 | 45.43 |
| LIF-83-021 | 9/13/12 9:46 AM | 43.2.675 | 83.41.167 | 23.362 | 81.37961 | 5.912 | 9274.52 | 50.55 |
| LIF-83-022 | 9/13/12 10:48 AM | 43.2.678 | 83.41.117 | 30.041 | 142.285 | 11.032 | 8391.9 | 46.85 |
| LIF-83-023 | 9/13/12 11:24 AM | 43.2.645 | 83.41.125 | 5.94 | 43.97179 | 5.934 | 8370.8 | 39.43 |
| LIF-83-024 | 9/13/12 11:44 AM | 43.2.608 | 83.41.145 | 27.172 | 276.1162 | 9.565 | 8481.97 | 52.91 |
| LIF-83-025 | 9/13/12 1:40 PM | 43.2.644 | 83.41.182 | 22.835 | 3.965581 | 4.766 | 9220.41 | 43.84 |
| LIF-83-026 | 9/13/12 2:09 PM | 43.2.784 | 83.41.116 | 6.856 | 5.596211 | 0 | 8993.91 | 52.96 |
| LIF-83-027 | 9/13/12 2:31 PM | 43.2.783 | 83.41.138 | 9.779 | 2.075597 | 0.006 | 8844.92 | 50.52 |
| LIF-83-028 | 9/13/12 2:57 PM | 43.2.744 | 83.41.173 | 27.413 | 346.017 | 4.399 | 8308.91 | 50.28 |
| LIF-83-029 | 9/13/12 3:33 PM | 43.2.831 | 83.41.103 | 13.5 | 7.344858 | 5.195 | 8913.03 | 51.37 |
| LIF-83-030 | 9/13/12 4:21 PM | 43.2.852 | 83.41.126 | 30.006 | 4.223869 | 0.01 | 9049.11 | 50.19 |
| LIF-86-009 | 9/14/12 1:53 PM | 43.2.590 | 83.40.994 | 30.017 | 2.554672 | 0.103 | 8545.04 | 54.01 |
| LIF-83-032 | 9/14/12 9:54 AM | 43.2.868 | 83.41.191 | 30.074 | 2.44166 | 1.609 | 9233.97 | 69.07 |
| LIF-86-008 | 9/14/12 11:31 AM | 43.2.590 | 83.40.994 | 22.593 | 1.55873 | 0.008 | 9291.88 | 46.28 |
| LIF-CAL-5 | 9/17/12 2:47 PM | 43.2.245 | 83.41.073 | 15.513 | 113.7646 | 15.513 | 8522.99 | 48.34 |
| LIF-16-025 | 9/17/12 12:04 PM | 43.2.232 | 83.41.038 | 30.042 | 2.567687 | 0.033 | 9044.68 | 49 |
| LIF-16-026 | 9/17/12 2:23 PM | 43.2.230 | 83.41.113 | 5.437 | 24.49529 | 3.697 | 9703.47 | 60.03 |
| LIF-16-027 | 9/17/12 3:46 PM | 43.2.226 | 83.41.064 | 30.021 | 225.7014 | 10.362 | 8787.2 | 66.37 |
| LIF-40-030 | 9/17/12 10:21 AM | 43.2.371 | 83.41.073 | 30.018 | 26.43297 | 25.457 | 9592.87 | 56.53 |
| LIF-40-031 | 9/17/12 10:54 AM | 43.2.357 | 83.41.066 | 30.017 | 59.33418 | 14.688 | 9225.39 | 50.85 |
| LIF-83-034 | 9/18/12 4:29 PM | 43.3.840 | 83.41.216 | 30.066 | 328.1552 | 8.684 | 9389.13 | 19.33 |
| LIF-03-007 | 9/18/12 3:02 PM | 43.3.947 | 83.41.034 | 29.656 | 175.3427 | 9.709 | 9908.74 | 15.15 |
| LIF-05-015 | 9/18/12 10:02 AM | 43.3.044 | 83.41.055 | 29.655 | 7.996995 | 4.212 | 11209.52 | 35.39 |
| LIF-05-016 | 9/18/12 10:42 AM | 43.3.053 | 83.41.055 | 30.043 | 245.8852 | 13.138 | 9422.07 | 18.31 |
| LIF-05-017 | 9/18/12 11:16 AM | 43.3.136 | 83.41.152 | 30.02 | 11.43082 | 0.002 | 10761.03 | 21.28 |
| LIF-05-018 | 9/18/12 1:57 PM | 43.3.014 | 83.41.179 | 29.971 | 1.333704 | 24.36 | 10126.57 | 21.33 |
| LIF-83-033 | 9/18/12 3:53 PM | 43.3.947 | 83.41.034 | 30.005 | 266.8553 | 7.523 | 9645.9 | 16.02 |
| LIF-83-038 | 9/19/12 11:56 AM | 43.2.666 | 83.41.059 | 25.941 | 1.181982 | 23.638 | 10177.95 | 23.48 |
| LIF-03-008 | 9/19/12 1:38 PM | 43.2.666 | 83.41.059 | 30.039 | 2.239202 | 29.98 | 11045.25 | 31.32 |
| LIF-83-035 | 9/19/12 9:08 AM | 43.2.594 | 83.41.108 | 30.007 | 321.0303 | 6.54 | 9834.04 | 24.46 |
| LIF-83-036 | 9/19/12 9:45 AM | 43.2.577 | 83.41.139 | 29.582 | 12.06715 | 0.008 | 10116.49 | 36.65 |
| LIF-83-037 | 9/19/12 10:44 AM | 43.2.708 | 83.41.070 | 30.009 | 0.91789 | 23.849 | 9903.86 | 17.34 |
| Total Footage | | | | 2366.765 | | | | |

# Dakota Technologies
# UVOST Log Reference

2008-12-12

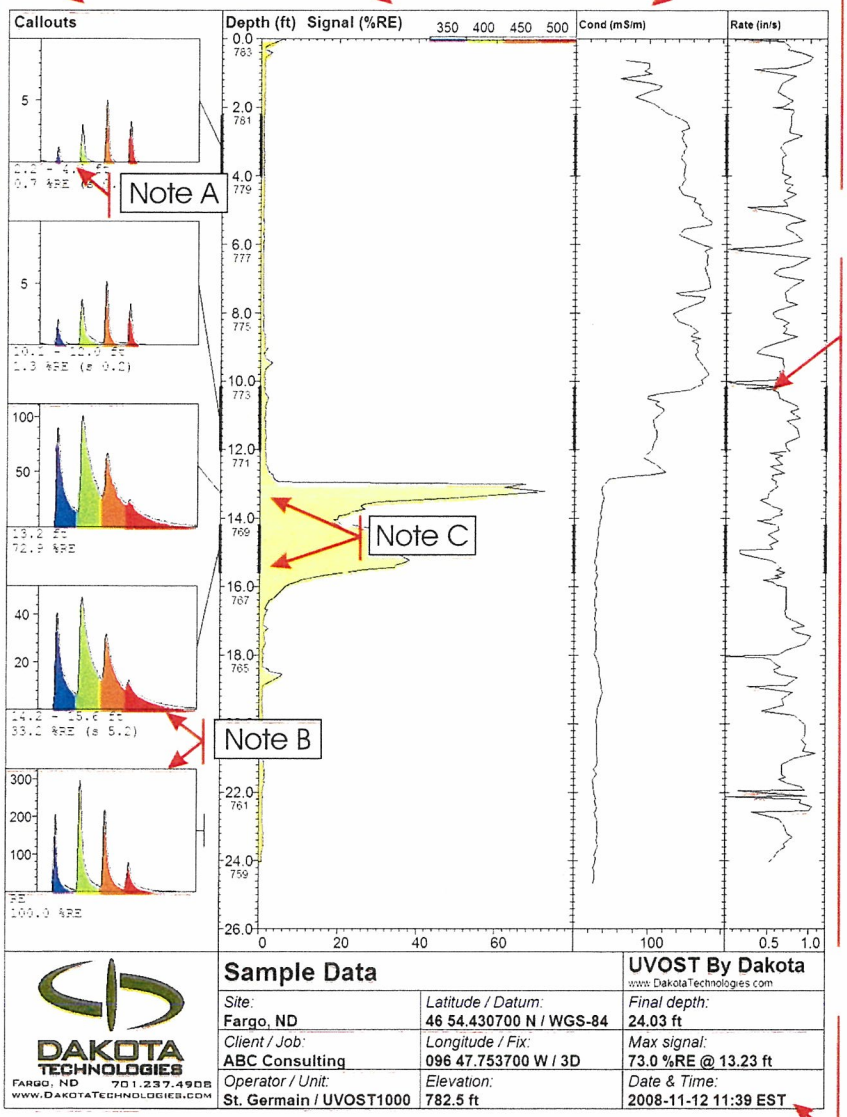
**Main Plot :**
Signal (total fluorescence) versus depth where signal is relative to the Reference Emitter (RE). The total area of the waveform is divided by the total area of the Reference Emitter yielding the %RE. This %RE scales with the NAPL fluorescence. The fill color is based on relative contribution of each channel's area to the total waveform area (see callout waveform). The channel-to-color relationship and corresponding wavelengths are given in the upper right corner of the main plot.

**Callouts :**
Waveforms from selected depths or depth ranges showing the multi-wavelength waveform for that depth.

The four peaks are due to fluorescence at four wavelengths and referred to as "channels". Each channel is assigned a color.

Various NAPLs will have a unique waveform "fingerprint" due to the relative amplitude of the four channels and/or broadening of one or more channels.

Basic waveform statistics and any operator notes are given below the callout.




**Conductivity Plot :**
The Electrical Conductivity (EC) of the soil can be logged simultaneously with the UVOST data. EC often provides insight into the stratigraphy.
Note the drop in EC from 10 - 13 ft, indicating a shift from consolidated to unconsolidated stratigraphy. This correlates with the observed NAPL distribution.

**Rate Plot :**
The rate of probe advancement. ~ 0.8in (2cm) per second is preferred.

A noticeable decrease in the rate of advancement may be indicative of difficult probing conditions (gravel, angular sands, etc.) such as that seen here at ~5 ft.

Notice that this log was terminated arbitrarily, not due to "refusal", which would have been indicated by a sudden rate drop at final depth.

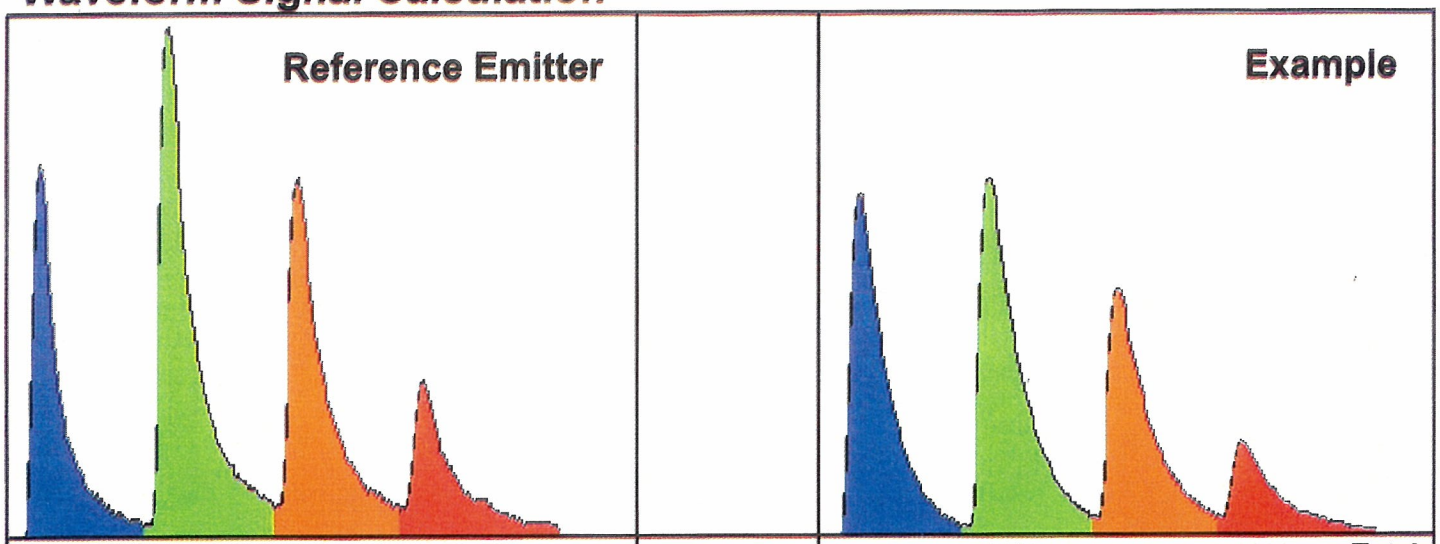
**Info Box :**
Contains pertinent log info including name and location.

**Note A :**
Time is along the x axis. No scale is given, but it is a consistent 320ns wide.
The y axis is in mV and directly corresponds to the amount of light striking the photodetector.

**Note B :**
These two waveforms are clearly different. The first is weathered diesel from the log itself while the second is the Reference Emitter (a blend of NAPLs) always taken before each log for calibration.

**Note C :**
Callouts can be a single depth (see 3rd callout) or a range (see 4th callout). The range is noted on the depth axis by a bold line. When the callout is a range, the average and standard deviation in %RE is given below the callout.

## Waveform Signal Calculation

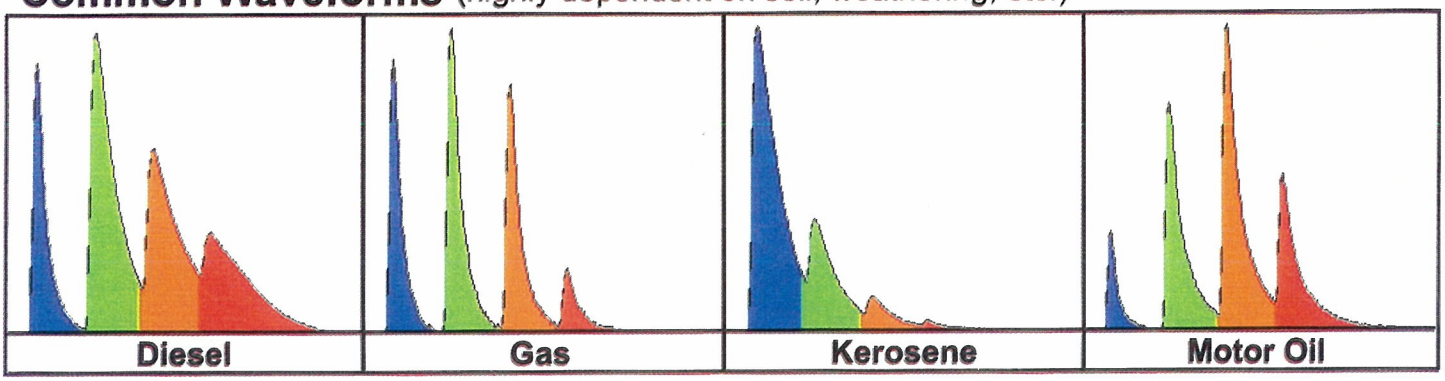


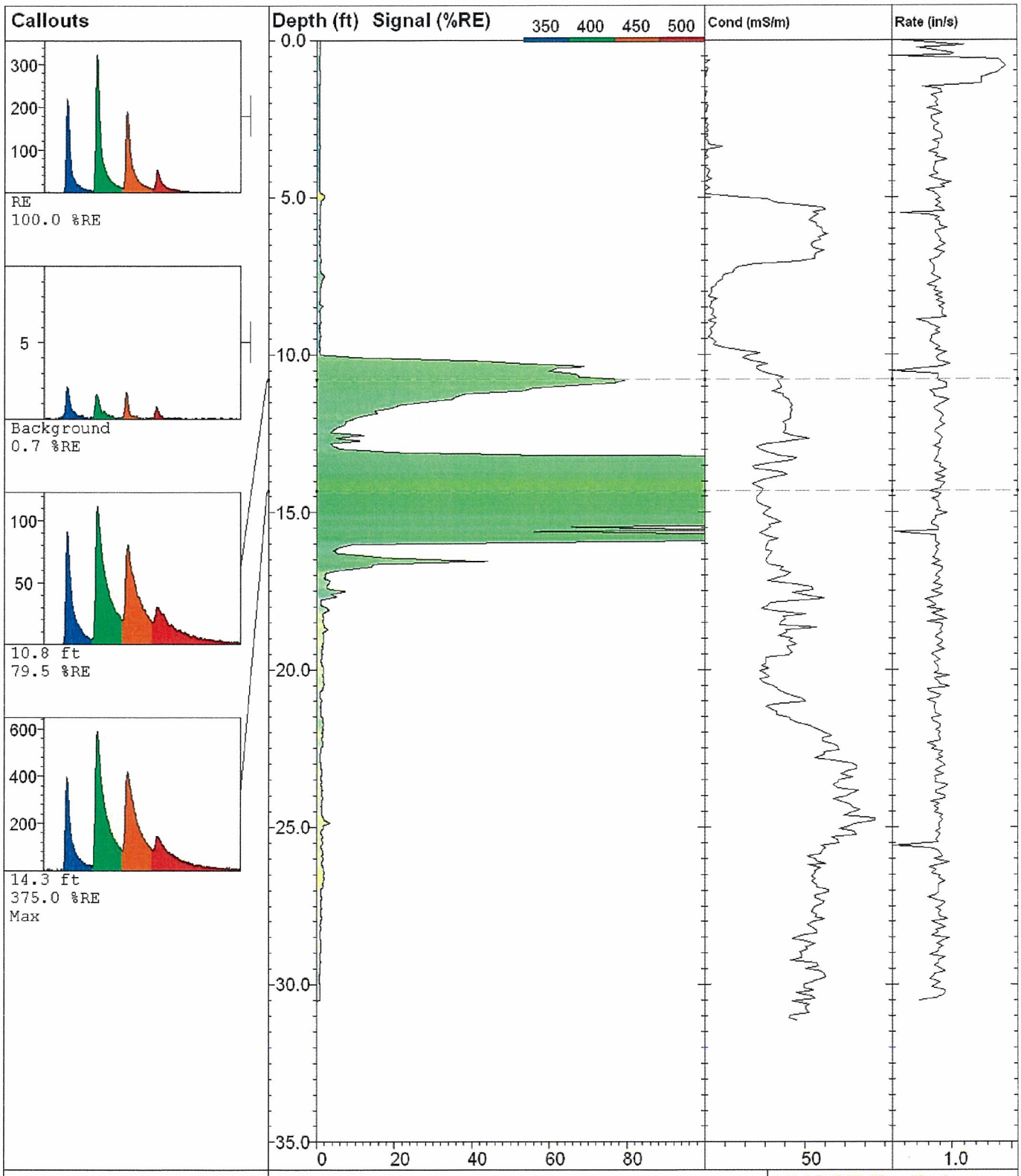

| CH1 | | CH2 | | CH3 | | CH4 | | Total | Channel | CH1 | | CH2 | | CH3 | | CH4 | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4820 | + | 8108 | + | 6249 | + | 2984 | = | 22161 | *Area (pVs)* | 4923 | + | 5743 | + | 4166 | + | 1735 | = | 16587 |
| 21.7 | | 36.6 | | 28.2 | | 13.5 | | 100% | *Percent RE* | 22.3 | | 25.9 | | 18.8 | | 7.8 | | 75% |

## Data Files

| | |
|---|---|
| ***.lif.raw.bin** | Raw data file. Header is ASCII format and contains information stored when the file was initially written (e.g. date, total depth, max signal, gps, etc., and any information entered by the operator). All raw waveforms are appended to the bottom of the file in a binary format. |
| ***.lif.plt** | Stores the plot scheme history (e.g. callout depths) for associated Raw file. Transfer along with the Raw file in order to recall previous plots. |
| ***.lif.jpg** | A jpg image of the OST log including the main signal vs. depth plot, callouts, information, etc. |
| ***.lif.dat.txt** | Data export of a single Raw file. ASCII tab delimited format. No string header is provided for the columns (to make importing into other programs easier). Each row is a unique depth reading. The columns are: Depth, Total Signal (%RE), Ch1%, Ch2%, Ch3%, Ch4%, Rate, Conductivity Depth, Conductivity Signal, Hammer Depth, Hammer Rate. Summing channels 1 to 4 yields the Total Signal. |
| ***.lif.sum.txt** | A summary file for a number of Raw files. ASCII tab delimited format. The file contains a string header. The summary includes one row for each Raw file and contains information for each file including: the file name, gps coordinates, max depth, max signal, and depth at which the max signal occured. |
| ***.lif.log.txt** | An activity log generated automatically located in the OST application directory in the 'log' subfolder. Each OST unit the computer operates will generate a separate log file per month. A log file contains much of the header information contained within each separate Raw file, including: date, total depth, max signal, etc. |

## Common Waveforms (highly dependent on soil, weathering, etc.)






| | | |
|---|---|---|
| **LIF-CAL-1** | | **UVOST By Dakota** www.DakotaTechnologies.com |
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.372 / ?** | *Final depth:* **30.51 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.837 / 0D** | *Max signal:* **624.4 % @ 14.24 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-04 15:57 EDT** |

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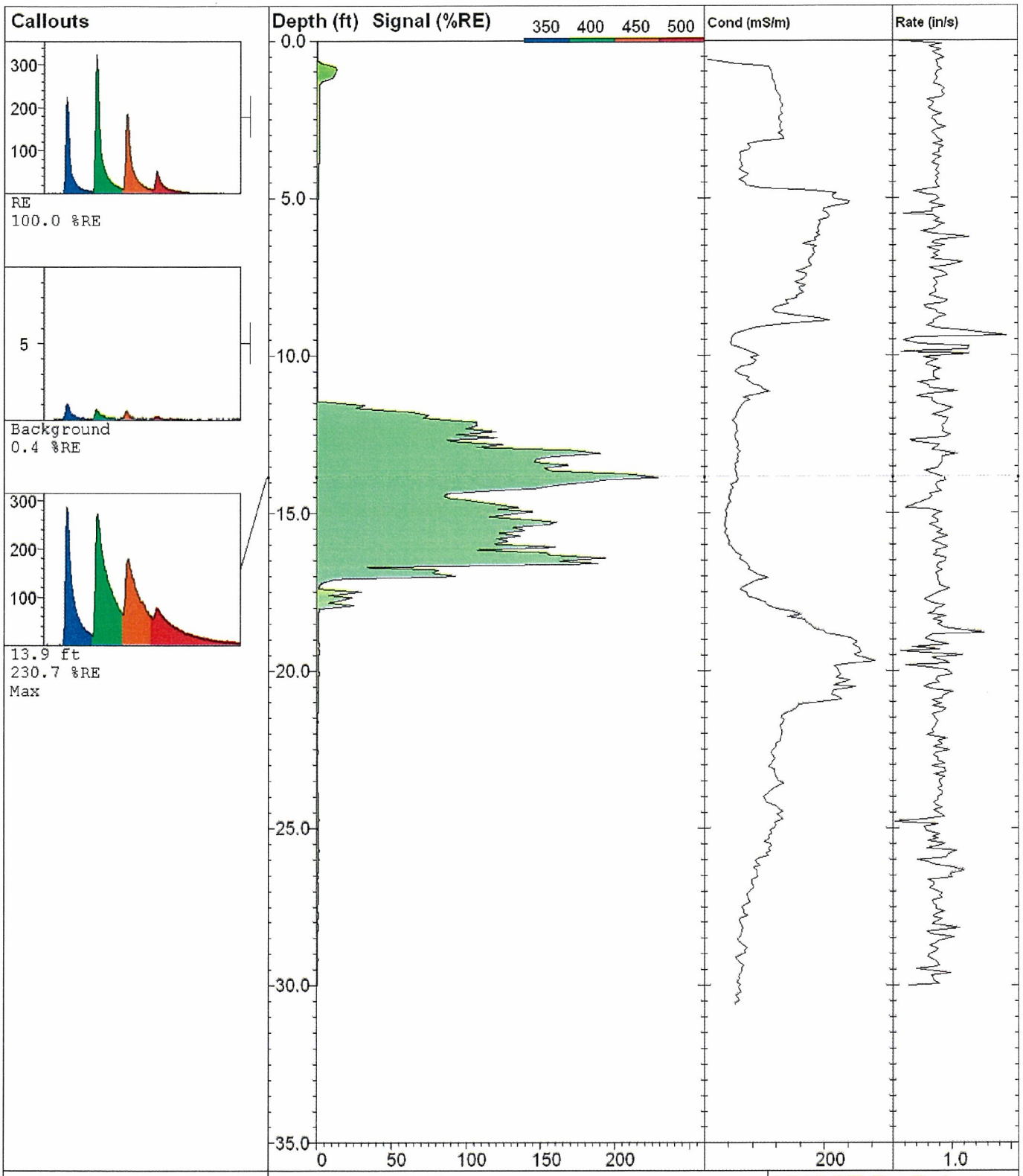


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# LIF-36-057

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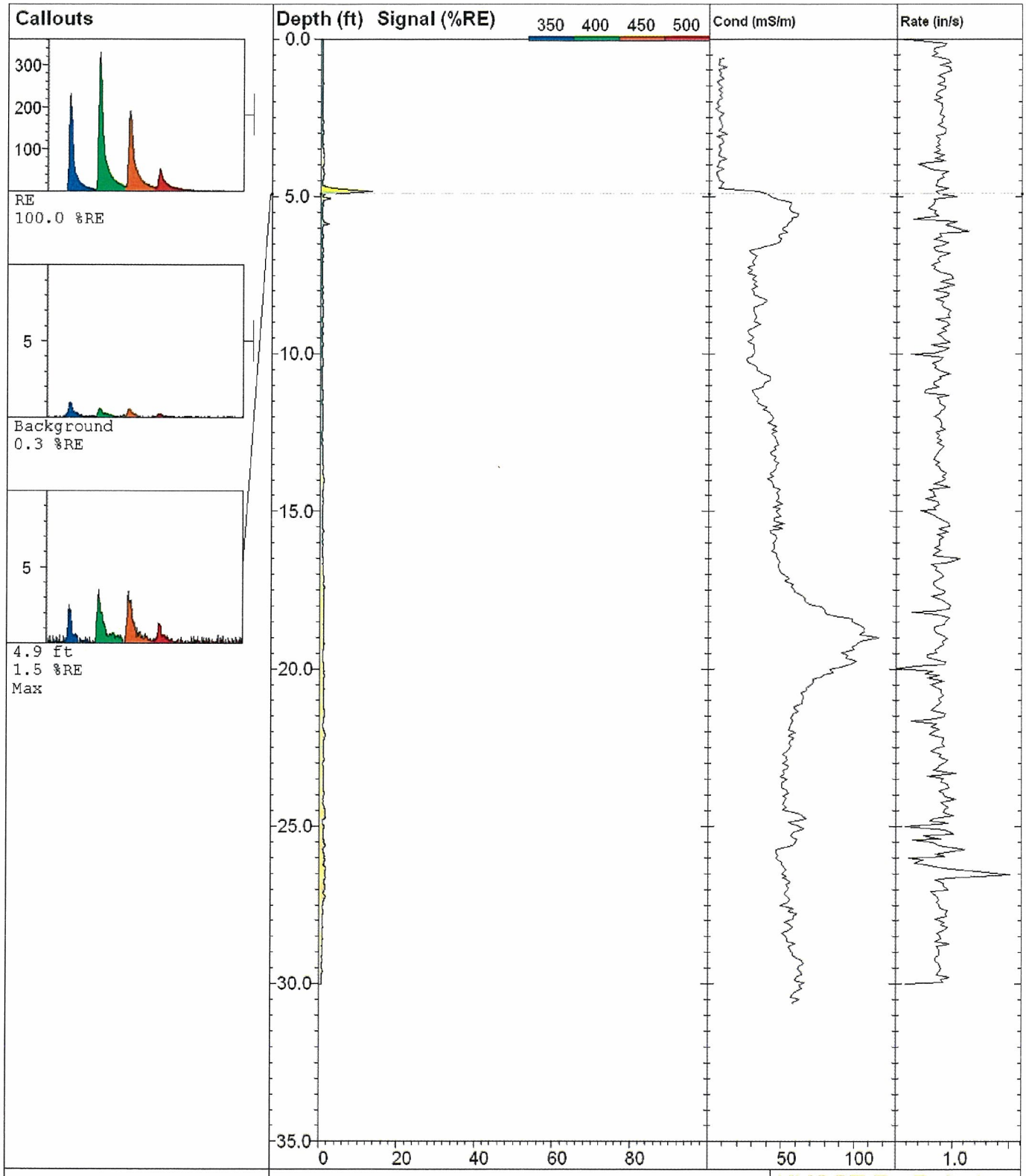
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.423 / ?** | *Final depth:* **29.99 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.962 / 0D** | *Max signal:* **230.7 % @ 13.86 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-05 13:50 EDT** |

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# LIF-36-058

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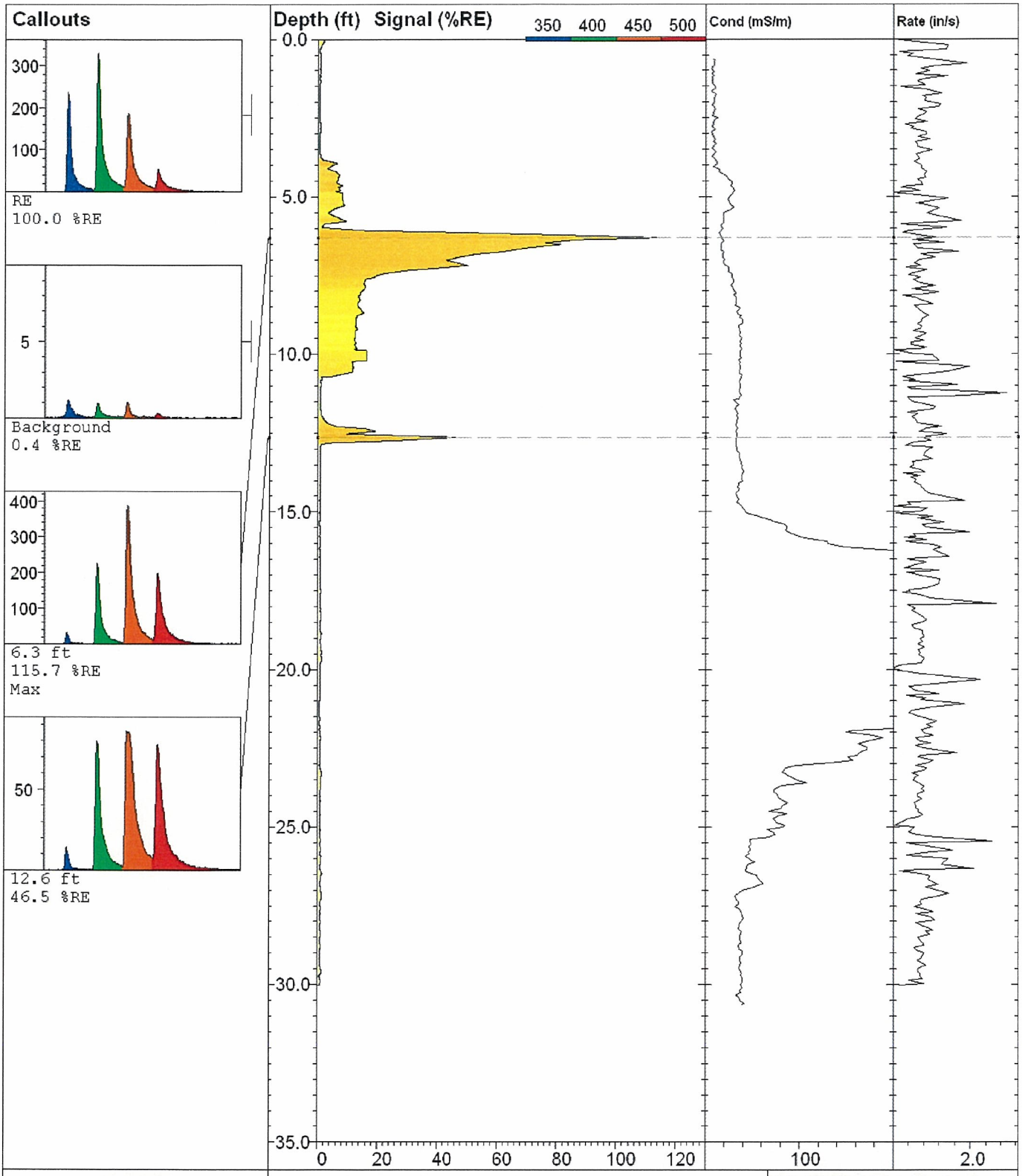
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.271 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.838 / 0D** | *Max signal:* **13.3 % @ 4.84 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-05 17:05 EDT** |

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# LIF-CAL-2

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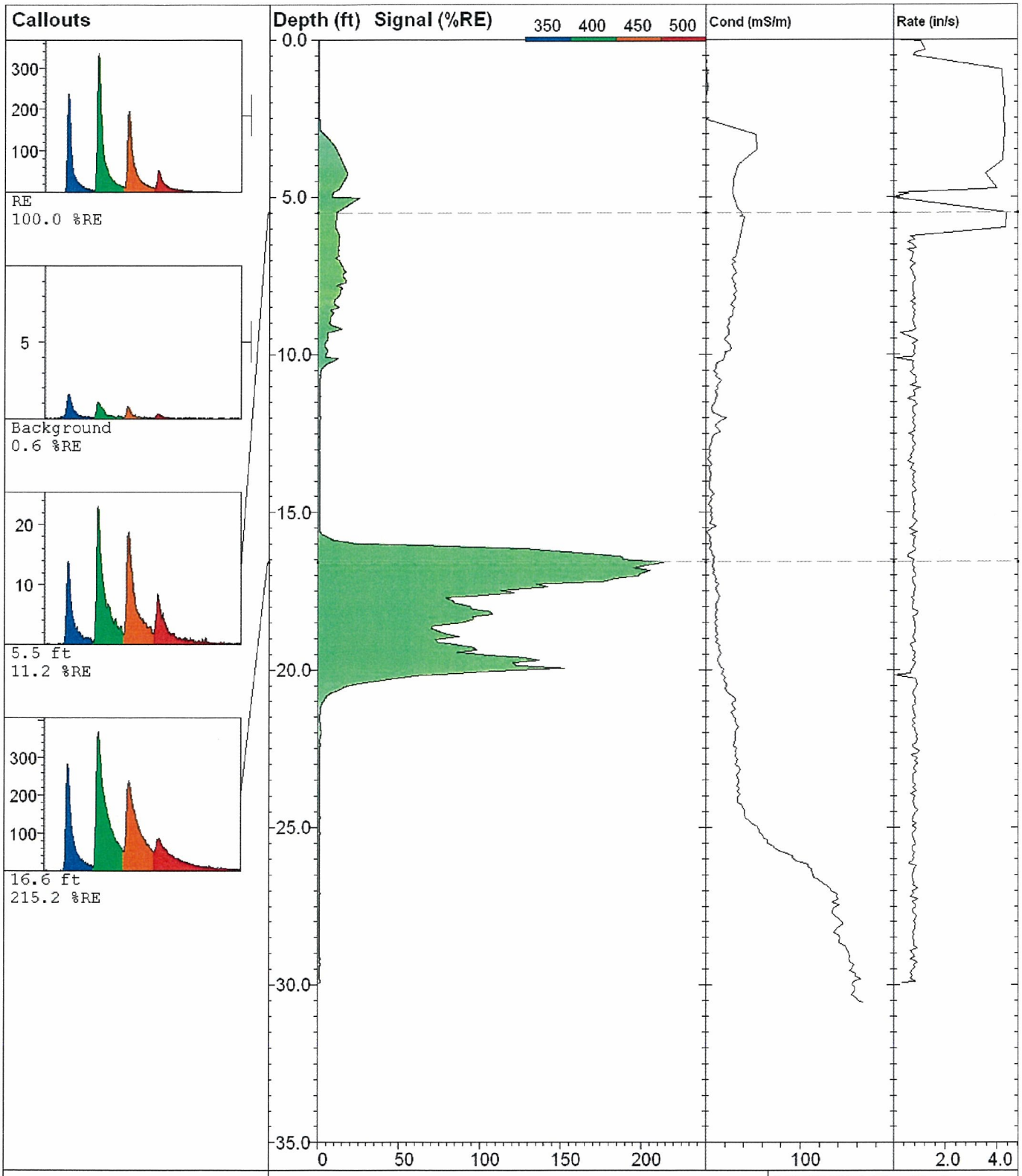
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.035 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.878 / 0D** | *Max signal:* **115.7 % @ 6.30 ft** |
| *Job:* | *Operator/Unit:* **/UVOST1021** | *Date & Time:* **2012-09-06 09:03 EDT** |

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# LIF-36-052

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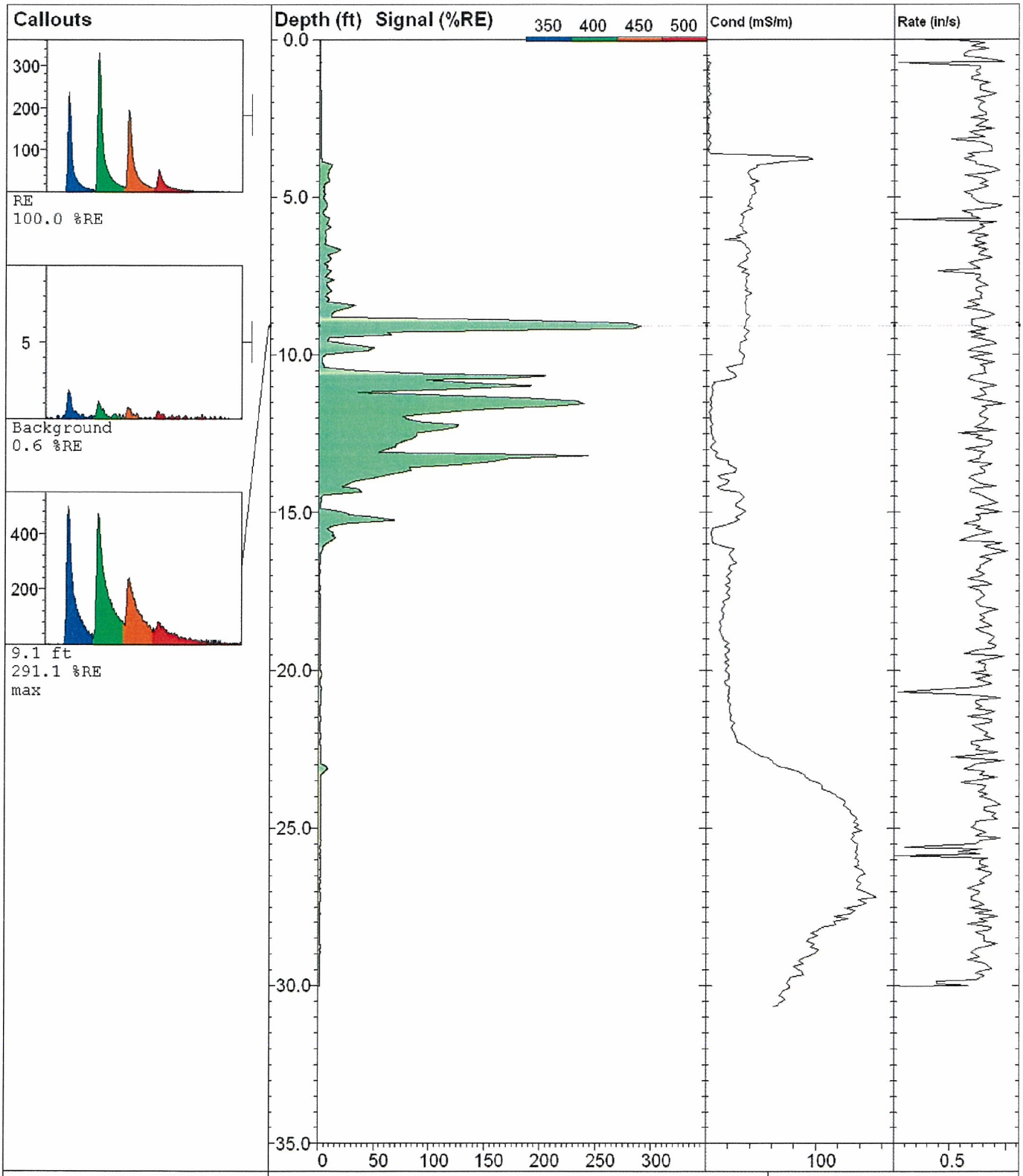
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.478 / ?** | *Final depth:* **29.95 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.890 / 0D** | *Max signal:* **215.2 % @ 16.58 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-05 08:59 EDT** |

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# LIF-36-053

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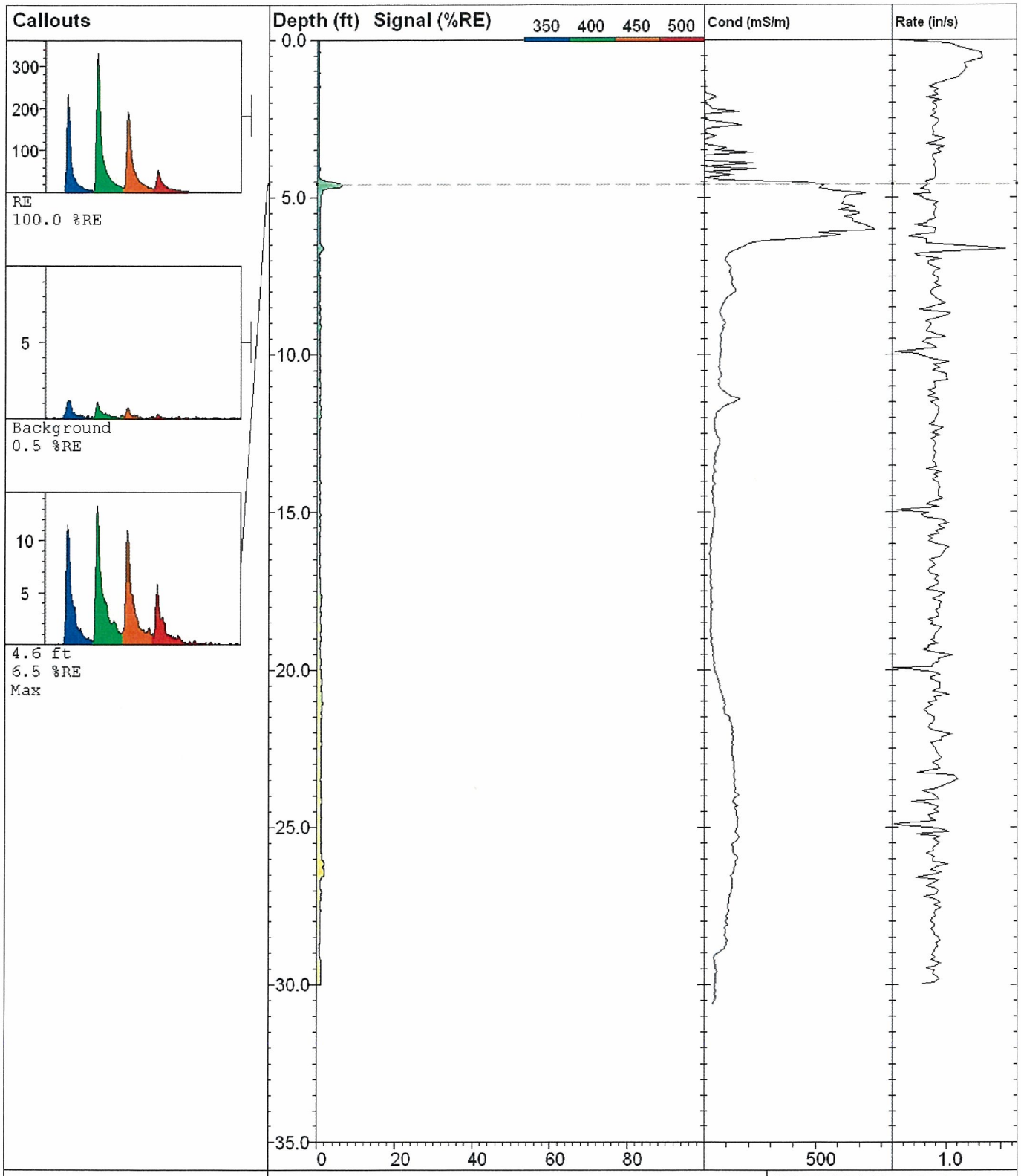
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.464 / ?** | *Final depth:* **30.03 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.932 / 0D** | *Max signal:* **291.1 % @ 9.08 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-05 09:51 EDT** |

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# LIF-36-054

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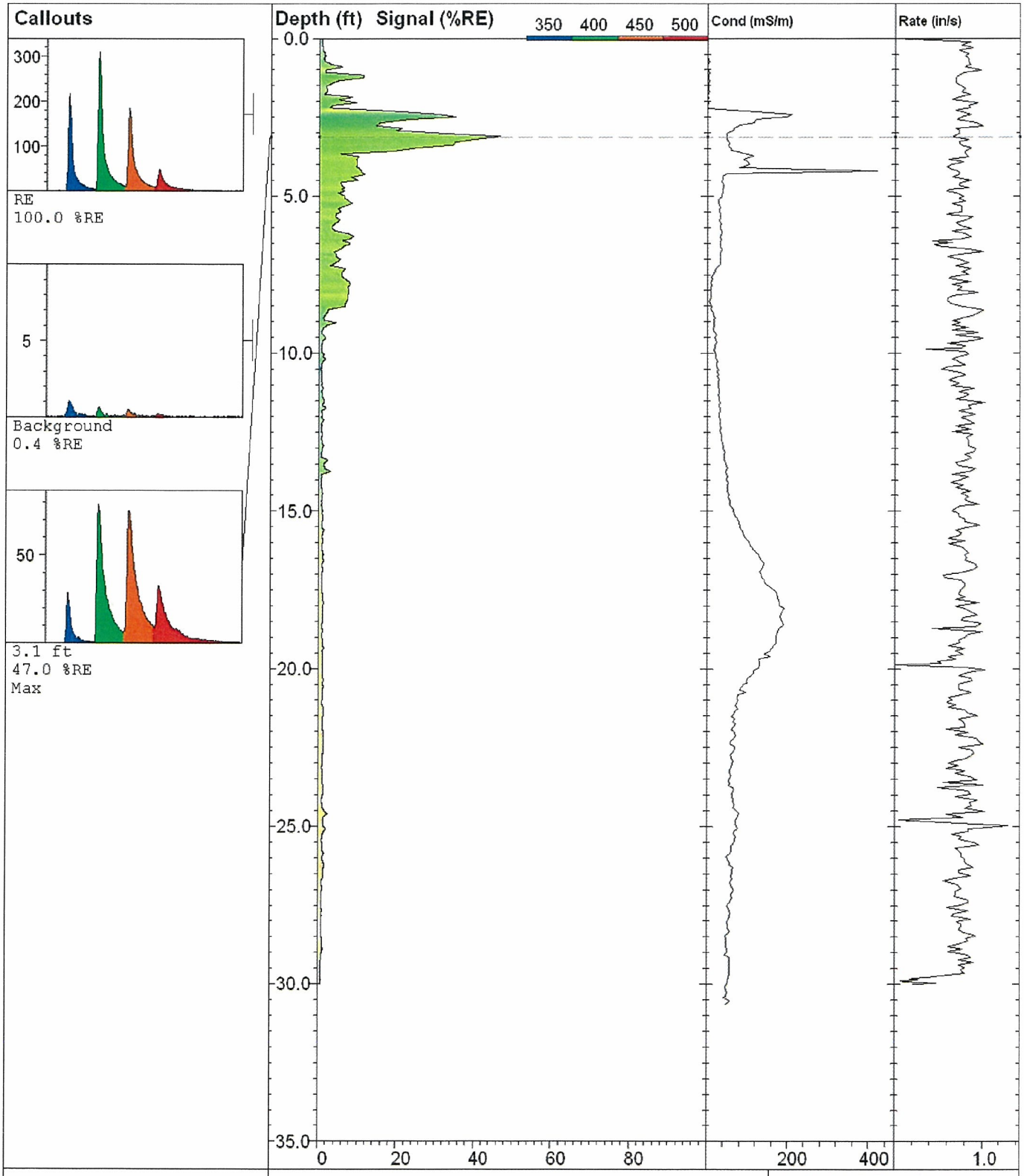
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.501 / ?** | *Final depth:* **30.00 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.847 / 0D** | *Max signal:* **6.5 % @ 4.58 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-05 10:35 EDT** |




| | | |
|---|---|---|
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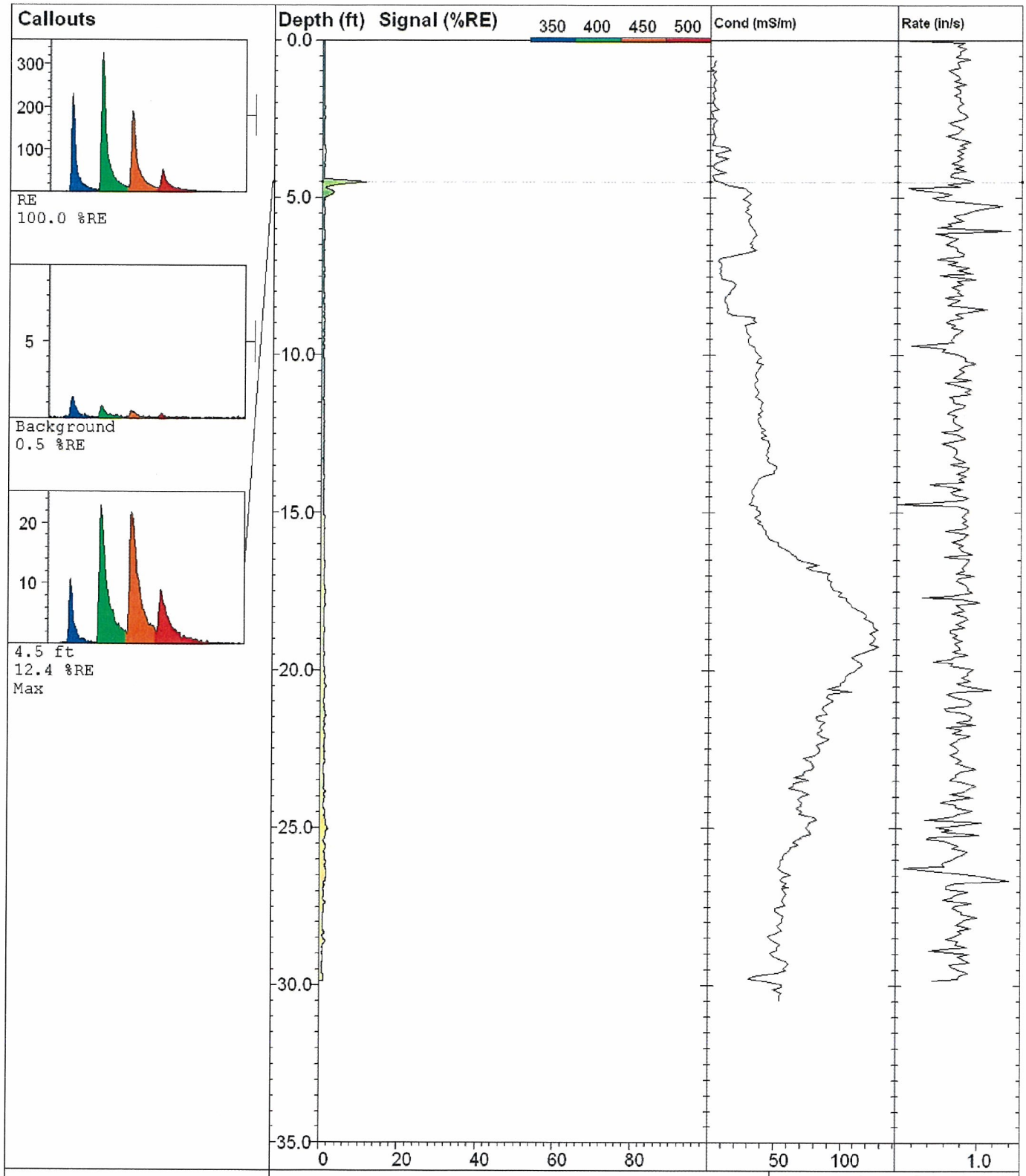
| | *Site:*<br>**Racer Buick City - Flint** | *Latitude / Datum:*<br>**43.3.328 / ?** | *Final depth:*<br>**30.00 ft** |
| | *Client:*<br>**Arcadis** | *Longitude / Fix:*<br>**83.40.868 / 0D** | *Max signal:*<br>**47.0 % @ 3.12 ft** |
| | *Job:* | *Operator/Unit:*<br>**Jonathan W./UVOST1021** | *Date & Time:*<br>**2012-09-05 11:29 EDT** |

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# LIF-36-056

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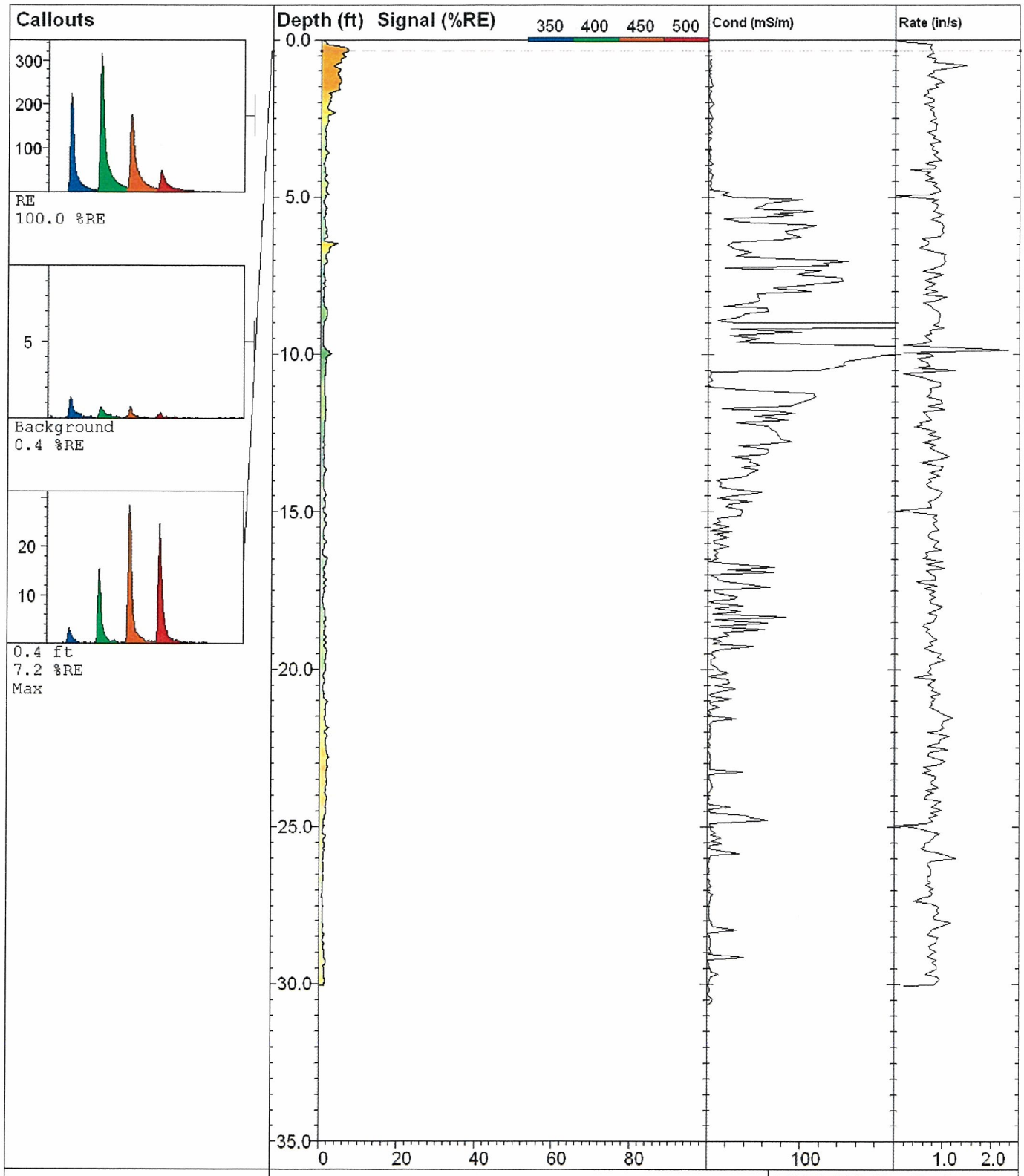
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.308 / ?** | *Final depth:* **29.87 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.842 / 0D** | *Max signal:* **12.4 % @ 4.51 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-05 12:06 EDT** |

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# LIF-10-023

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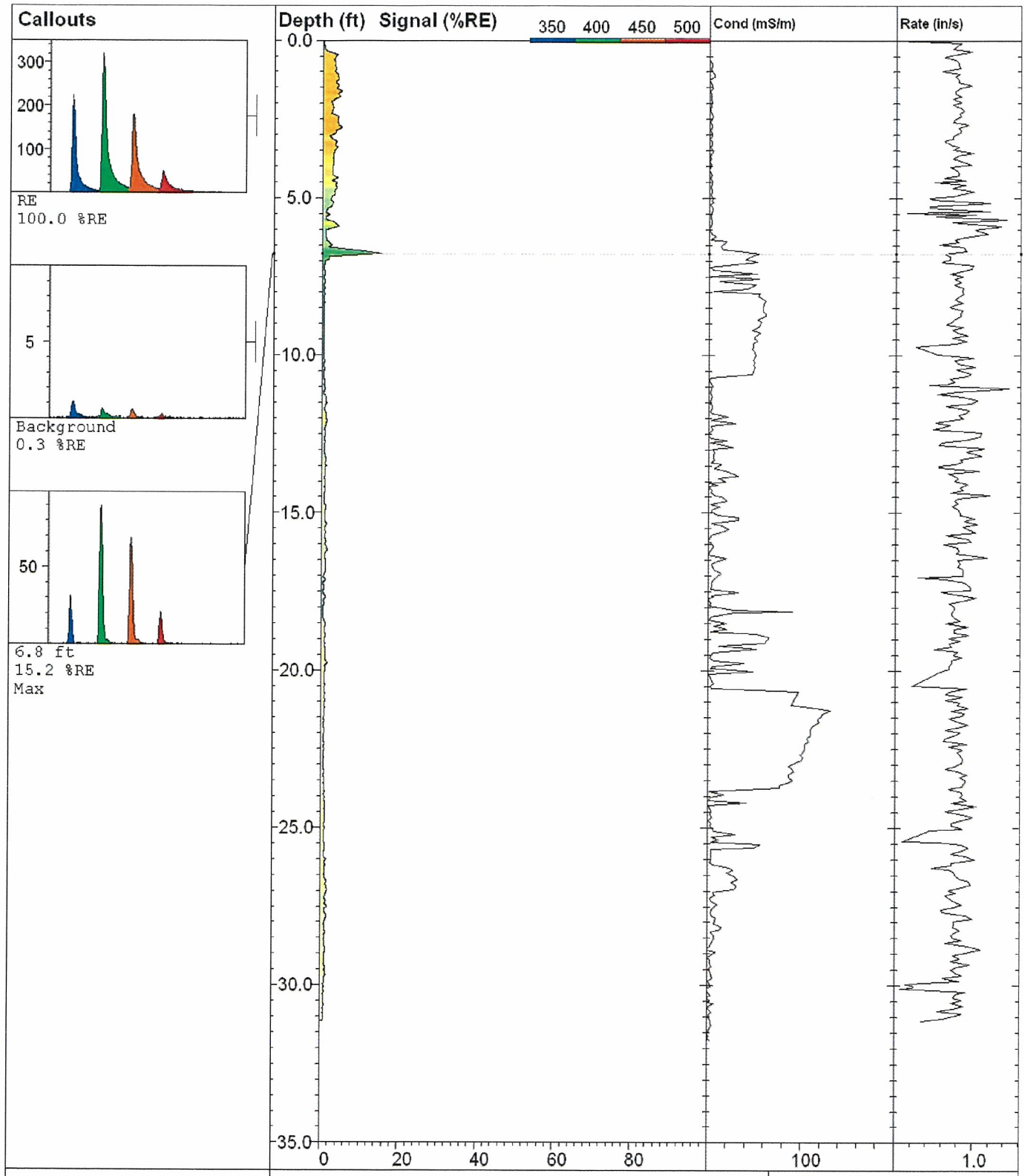
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.078 / ?** | *Final depth:* **30.05 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.009 / 0D** | *Max signal:* **7.2 % @ 0.36 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 16:15 EDT** |

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# LIF-10-024

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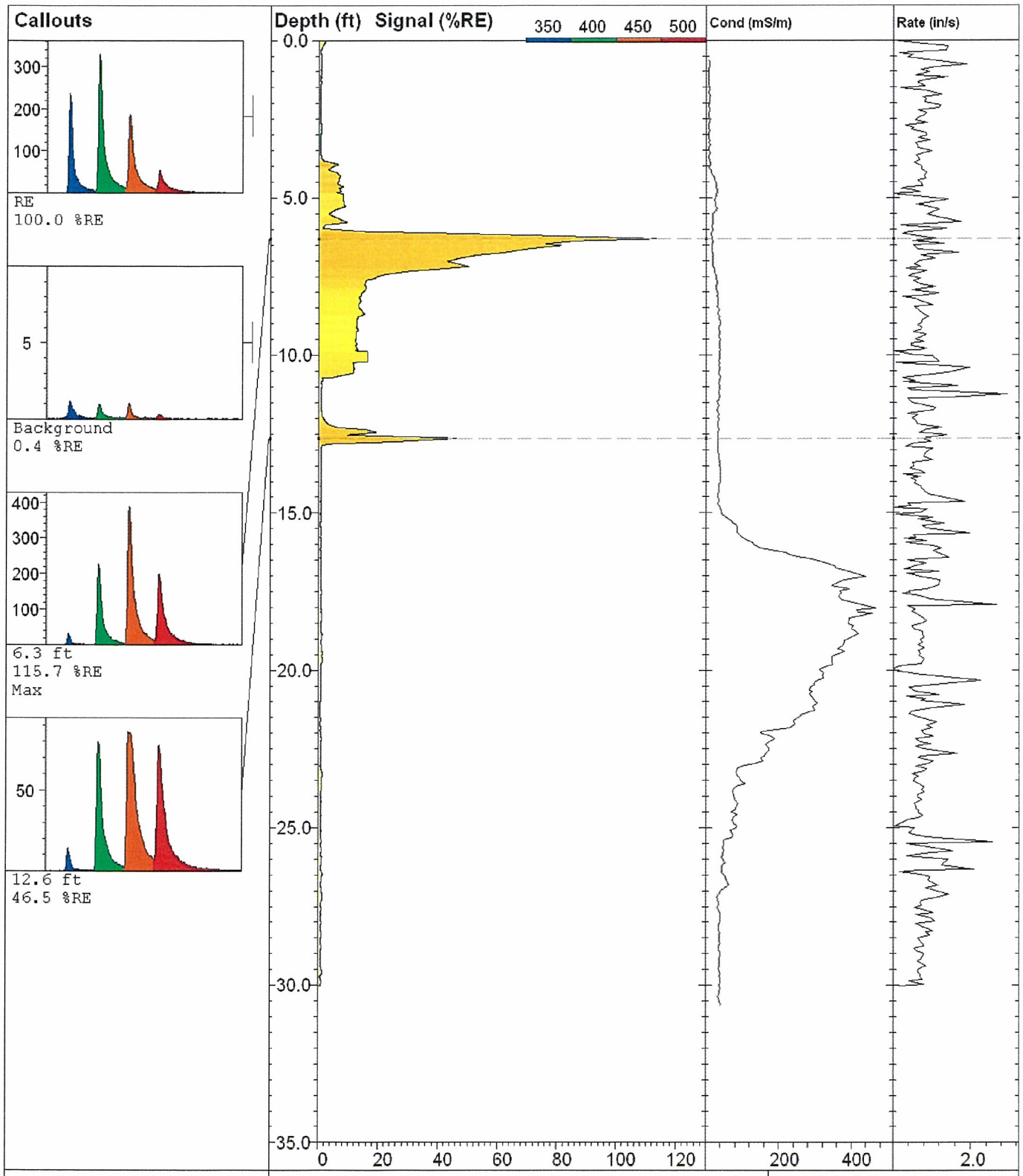
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.030 / ?** | *Final depth:* **31.13 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.960 / 0D** | *Max signal:* **15.2 % @ 6.77 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 17:01 EDT** |

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# LIF-36-059

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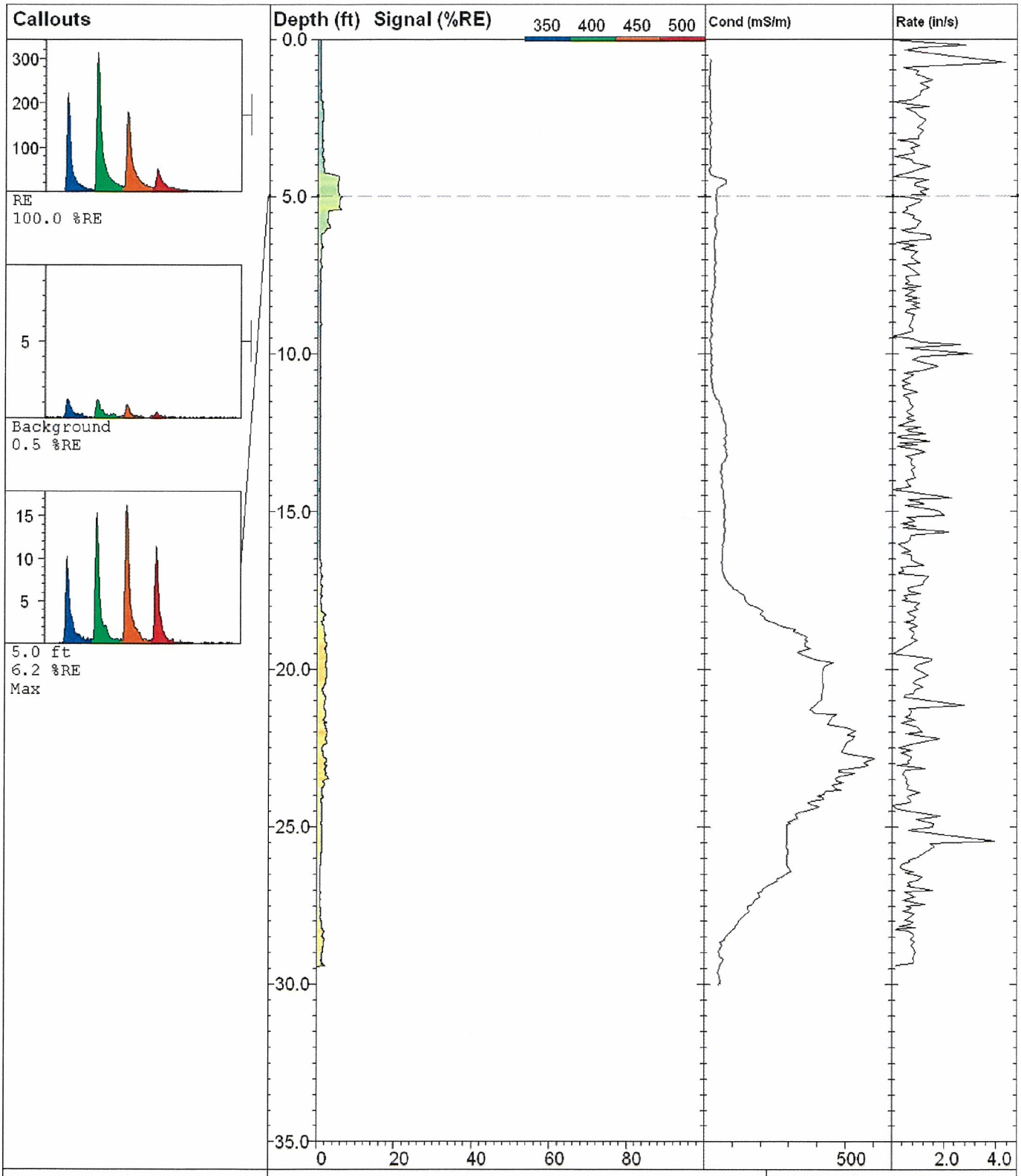
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.035 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.878 / 0D** | *Max signal:* **115.7 % @ 6.30 ft** |
| *Job:* | *Operator/Unit:* **/UVOST1021** | *Date & Time:* **2012-09-06 09:03 EDT** |

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# LIF-10-017

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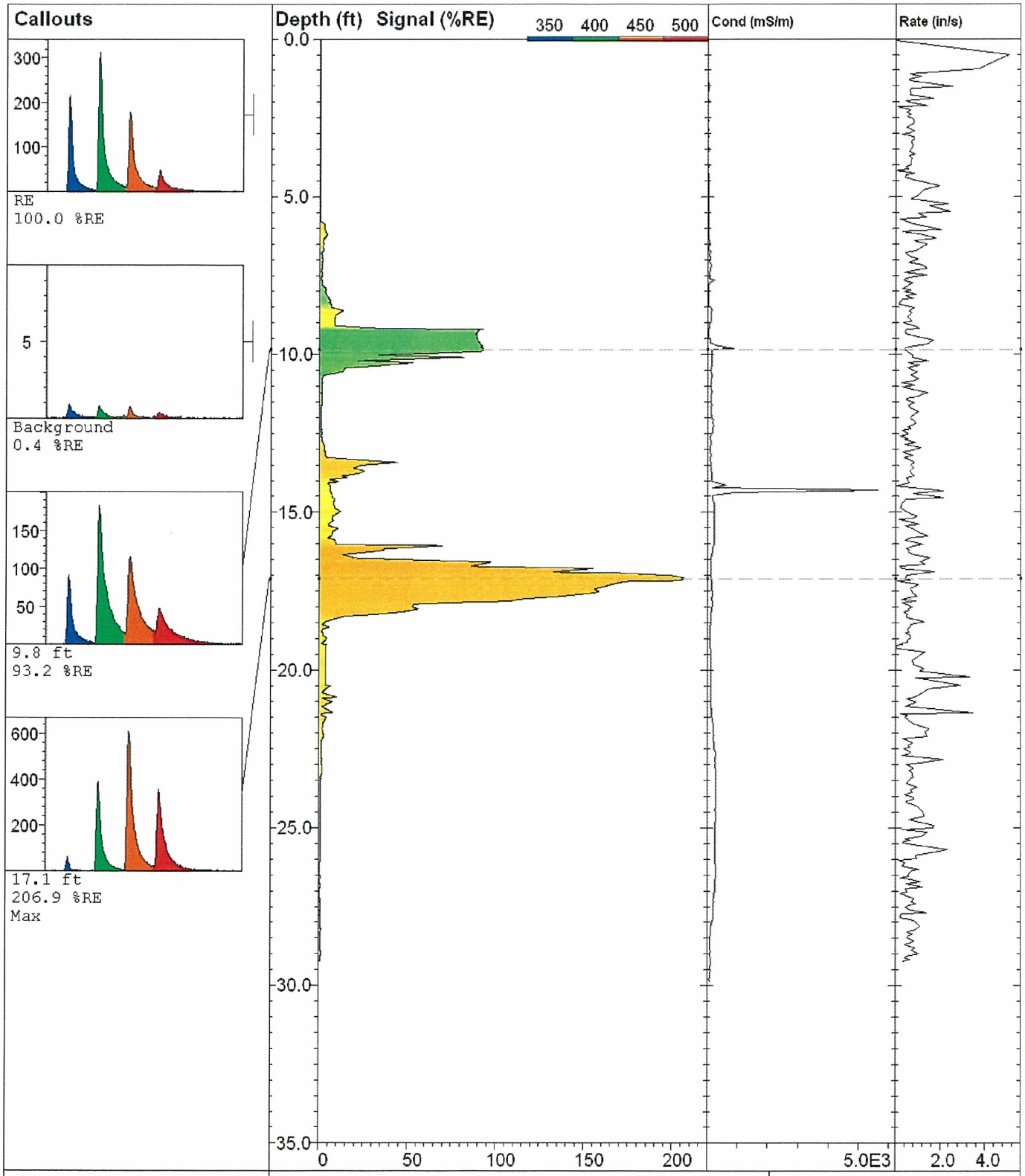
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.064 / ?** | *Final depth:* **29.43 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.904 / 0D** | *Max signal:* **6.2 % @ 4.98 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 10:00 EDT** |

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# LIF-10-018

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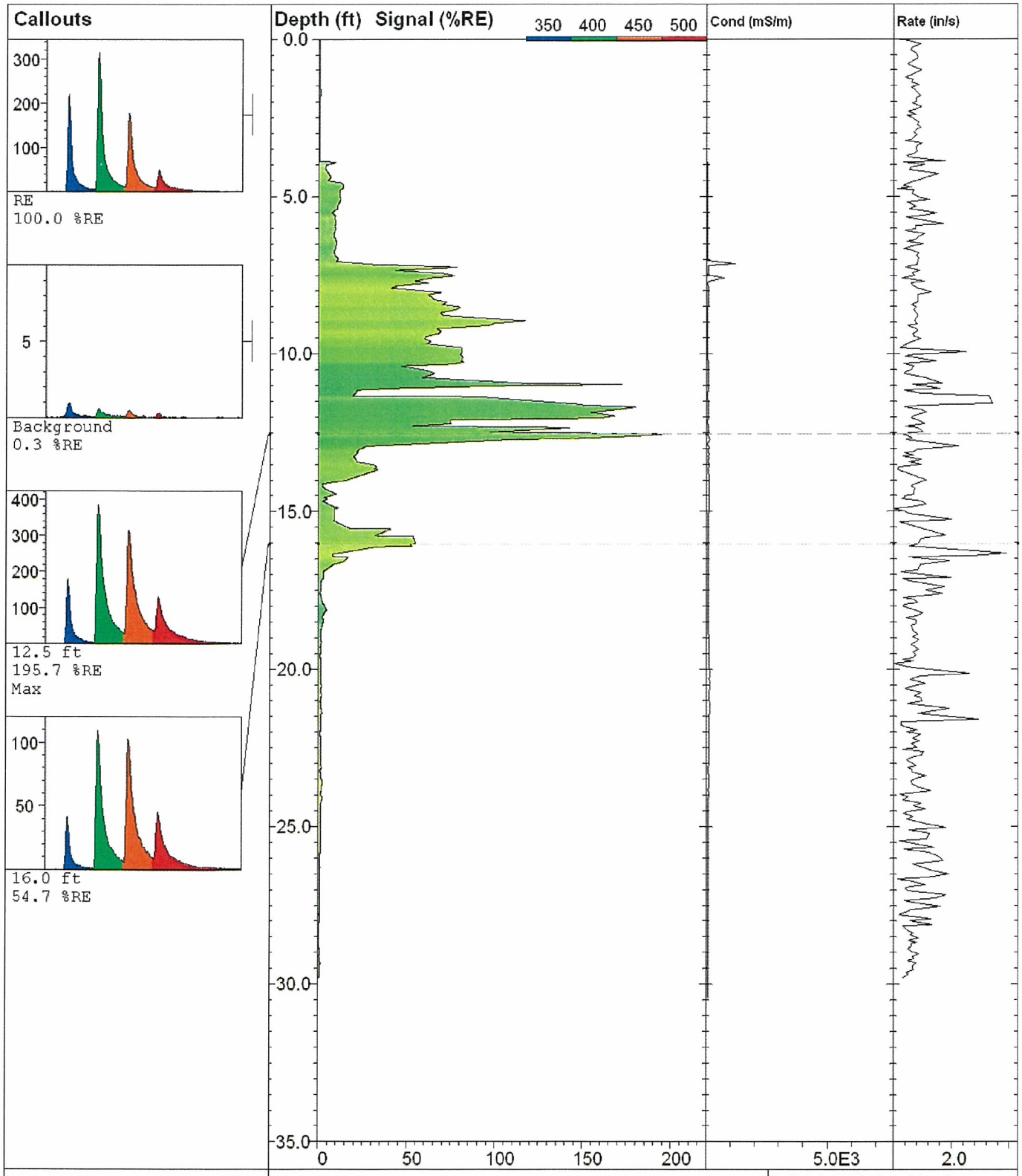
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.077 / ?** | *Final depth:* **29.24 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.926 / 0D** | *Max signal:* **206.9 % @ 17.09 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 10:36 EDT** |

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# LIF-10-019

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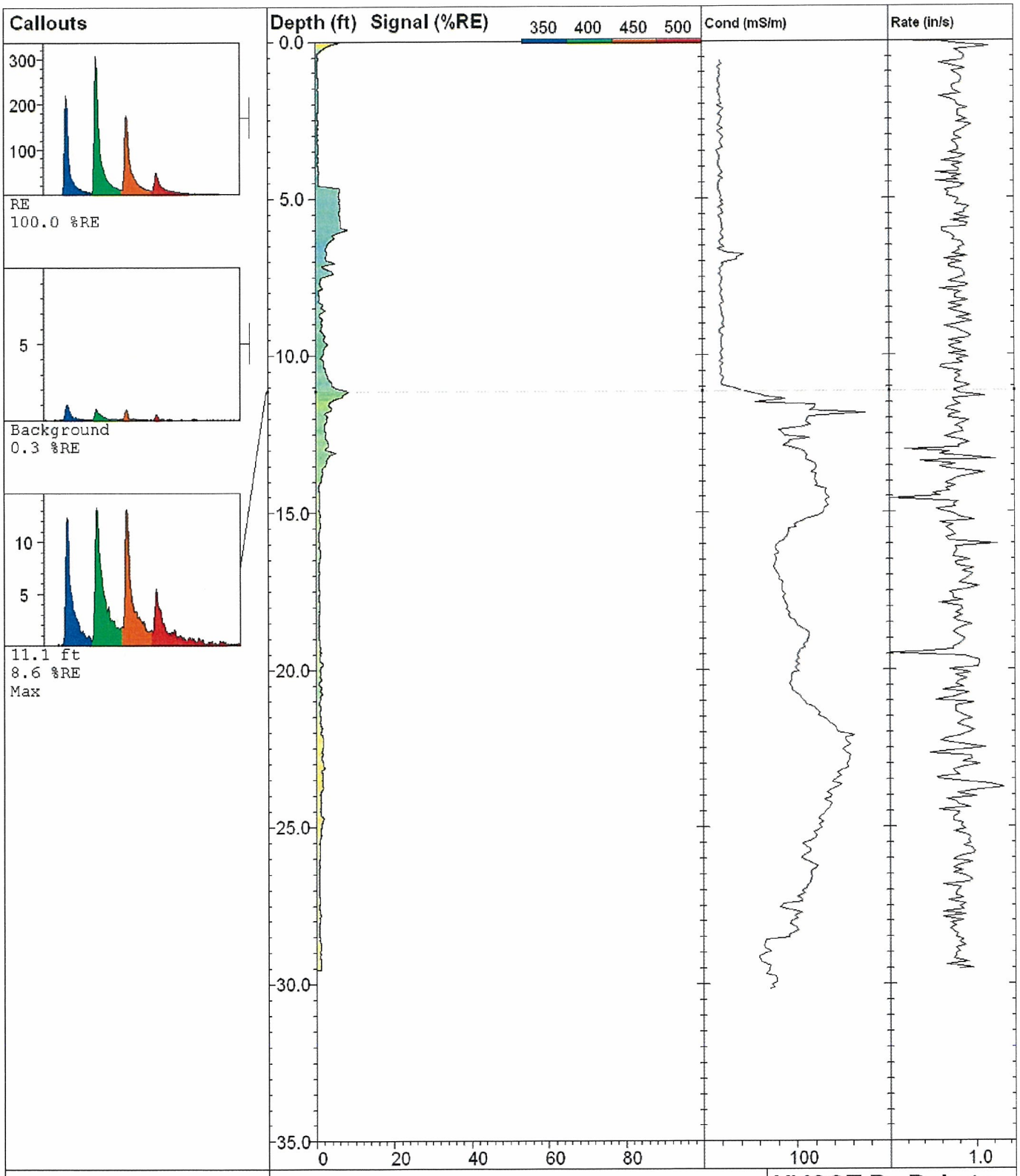
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.086 / ?** | *Final depth:* **29.79 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.975 / 0D** | *Max signal:* **195.7 % @ 12.54 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 11:36 EDT** |

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# LIF-10-020

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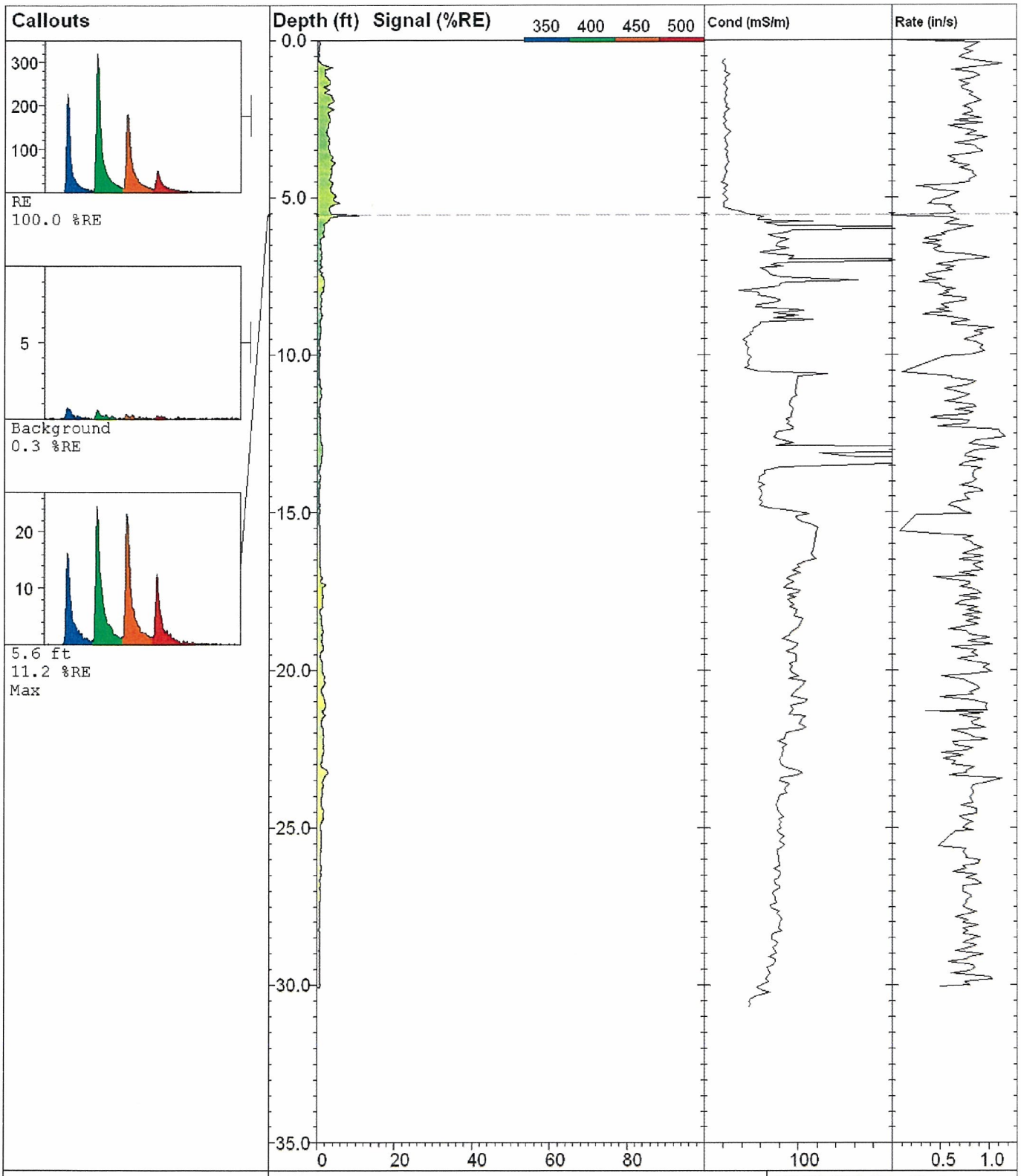
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.067 / ?** | *Final depth:* **29.55 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.981 / 0D** | *Max signal:* **8.6 % @ 11.14 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 14:02 EDT** |

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# LIF-10-021

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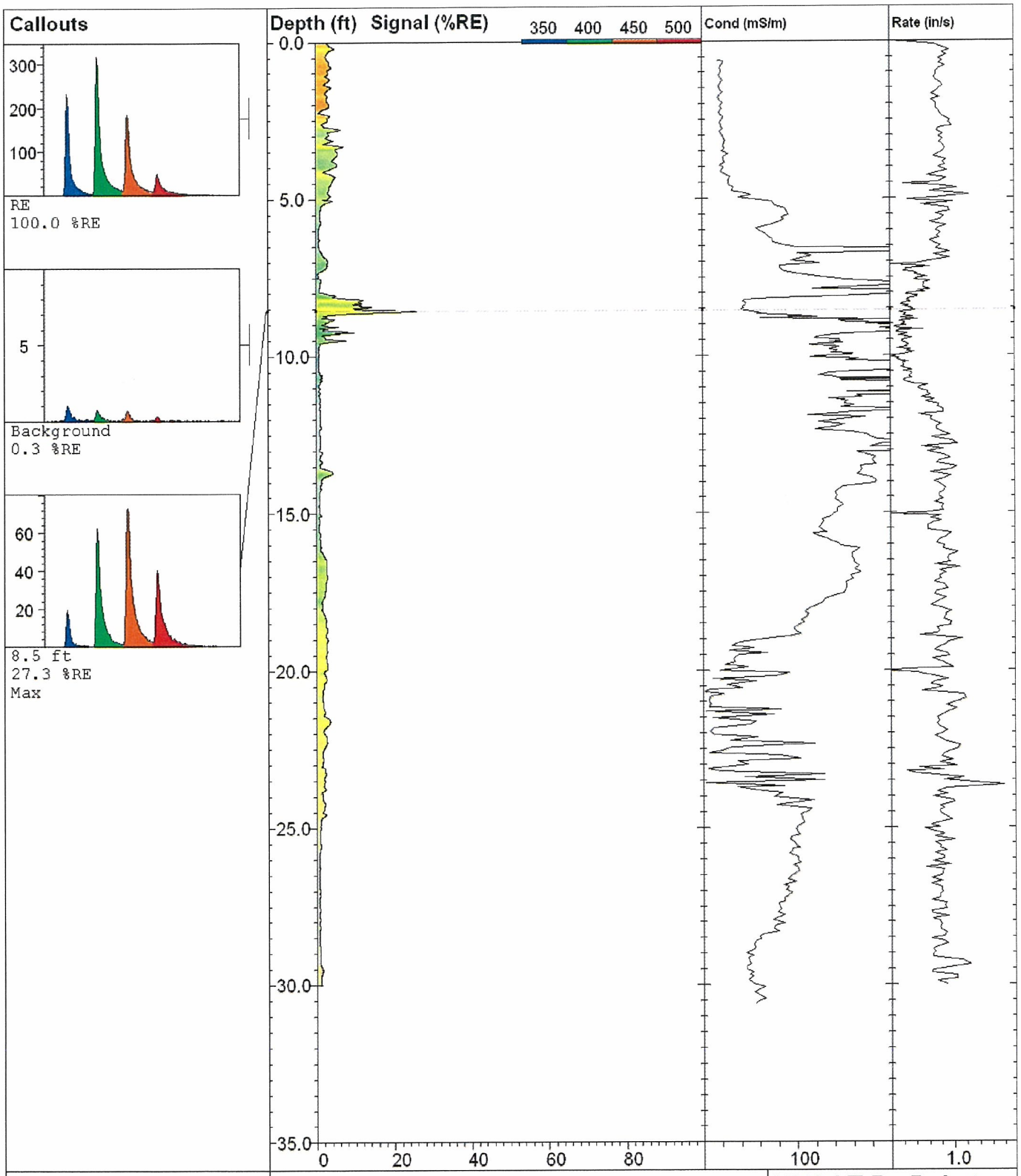
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.118 / ?** | *Final depth:* **30.07 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.973 / 0D** | *Max signal:* **11.2 % @ 5.56 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 14:45 EDT** |

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# LIF-10-022

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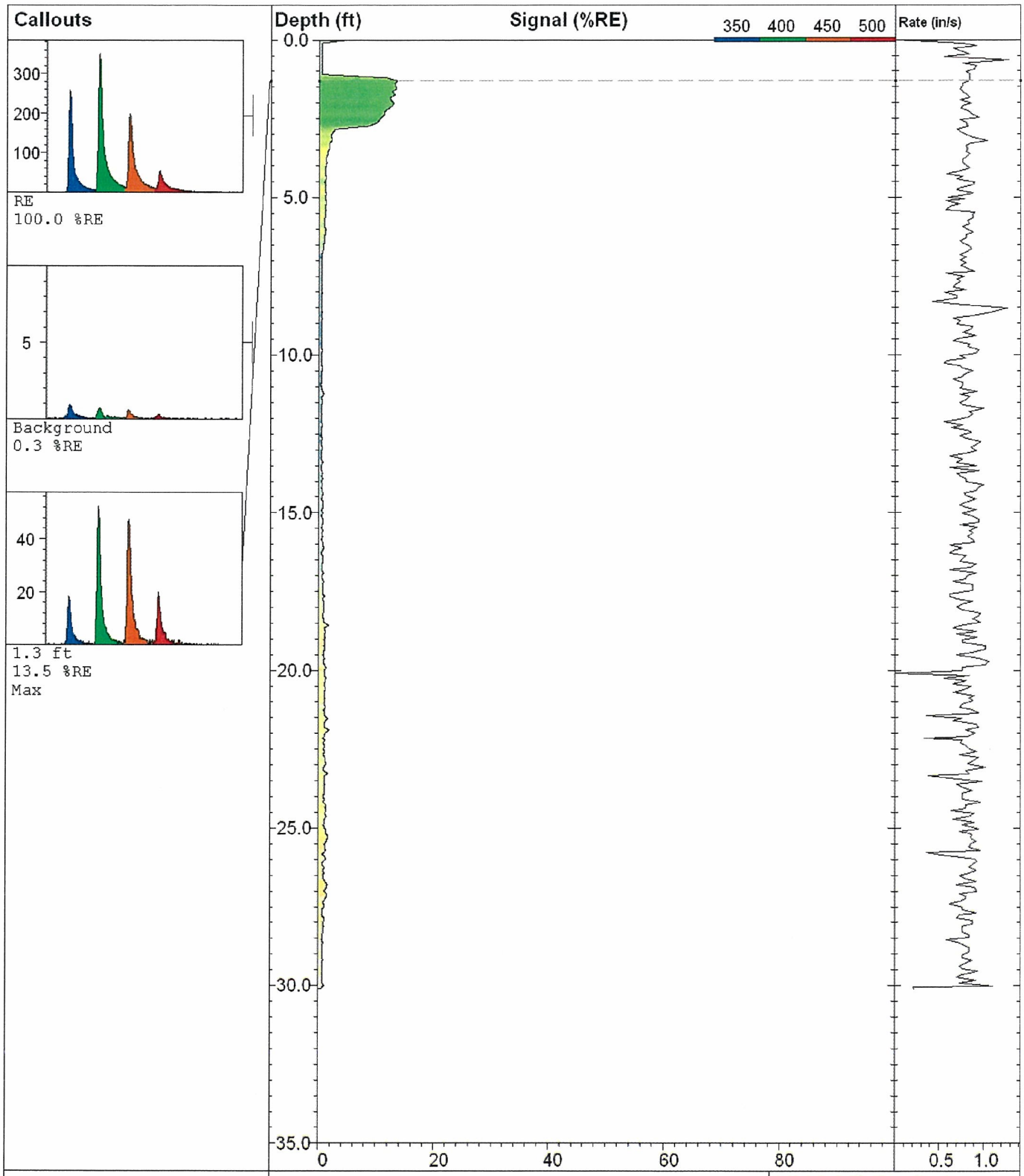
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.096 / ?** | *Final depth:* **30.00 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.949 / 0D** | *Max signal:* **27.3 % @ 8.55 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-06 15:33 EDT** |

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# LIF-36-059

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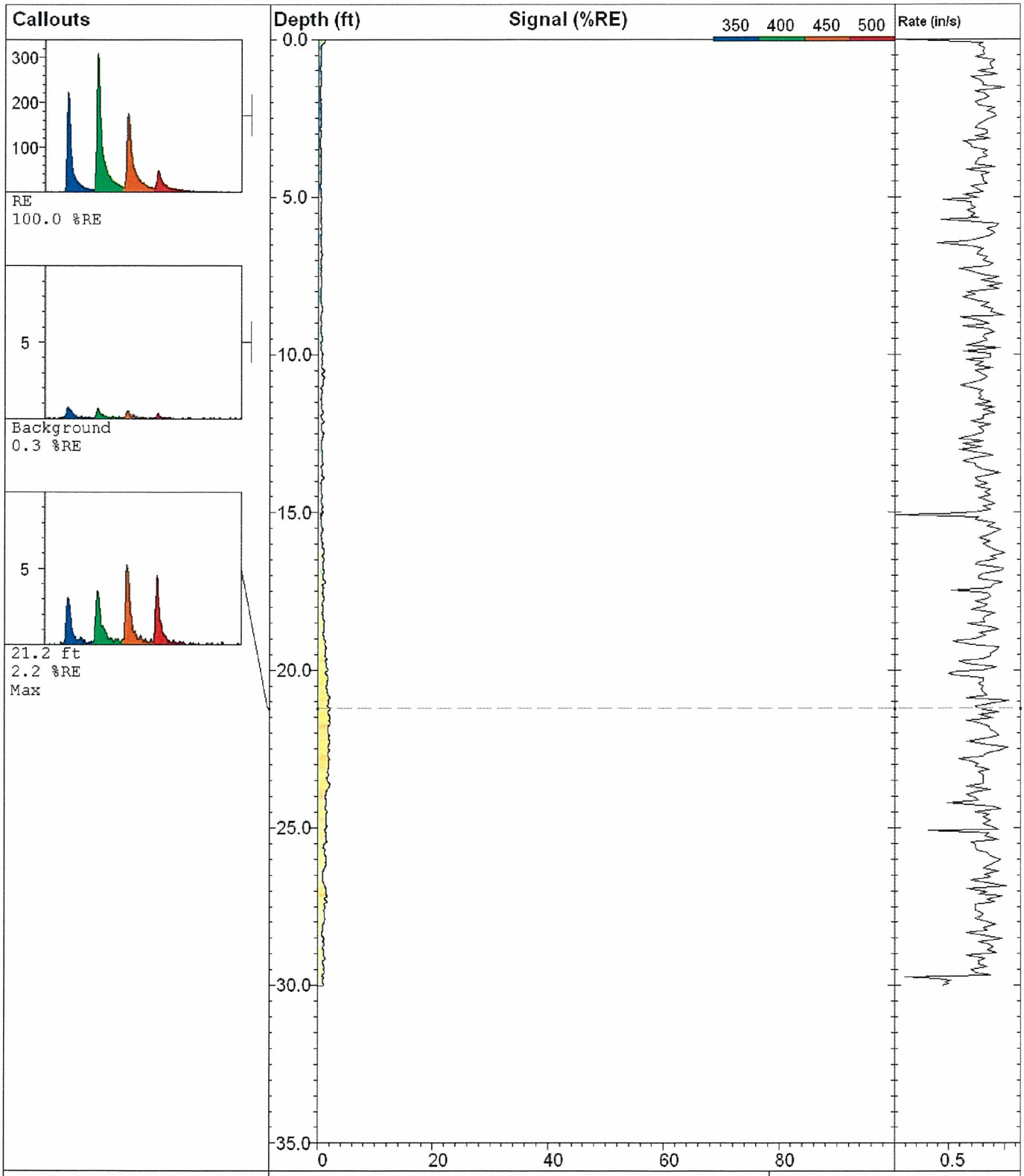
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.424 / ?** | *Final depth:* **30.10 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.987 / 0D** | *Max signal:* **13.5 % @ 1.30 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 11:21 EDT** |

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# LIF-36-060

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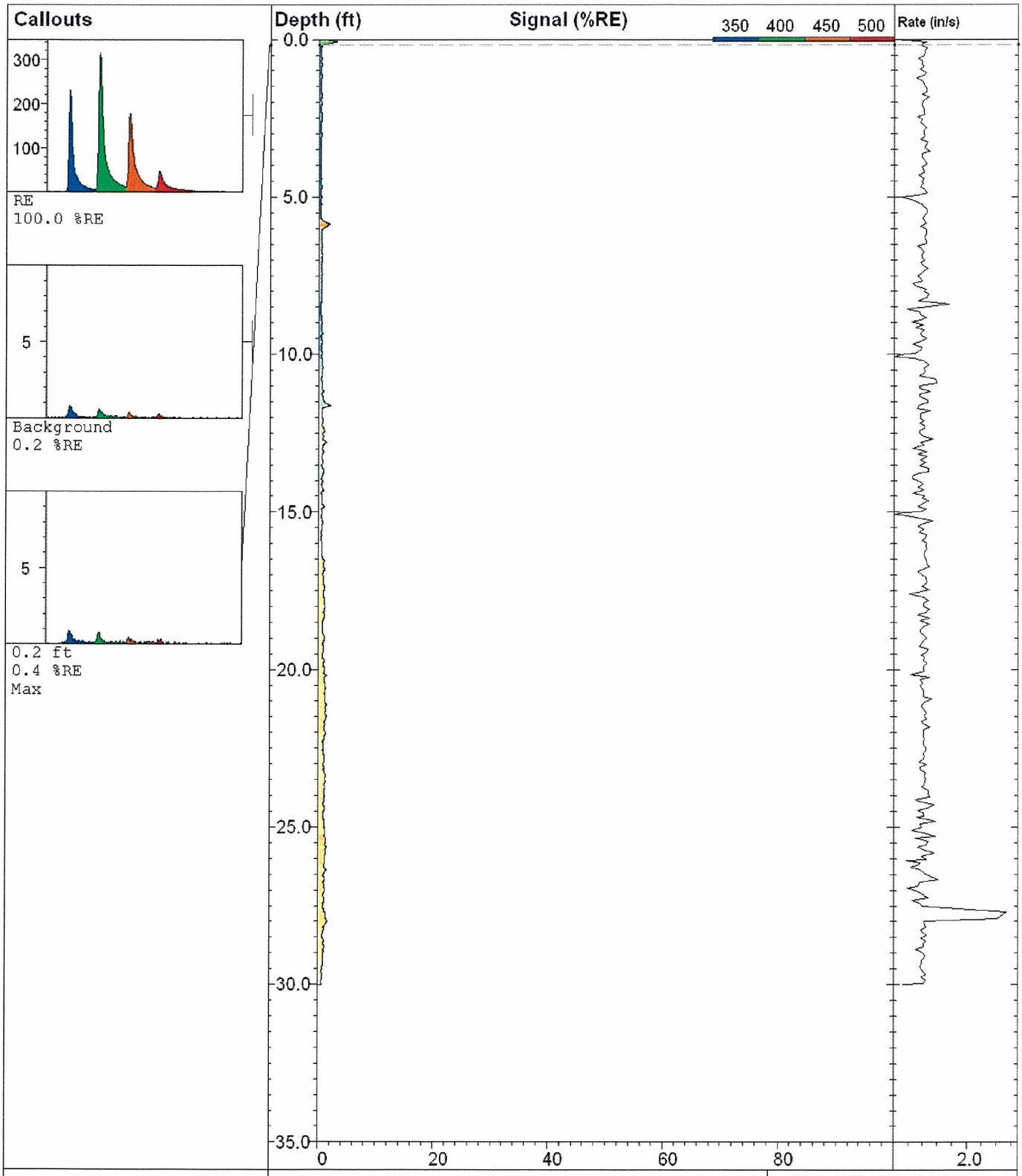
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.474 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.955 / 0D** | *Max signal:* **2.2 % @ 21.24 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 11:58 EDT** |

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# LIF-36-061

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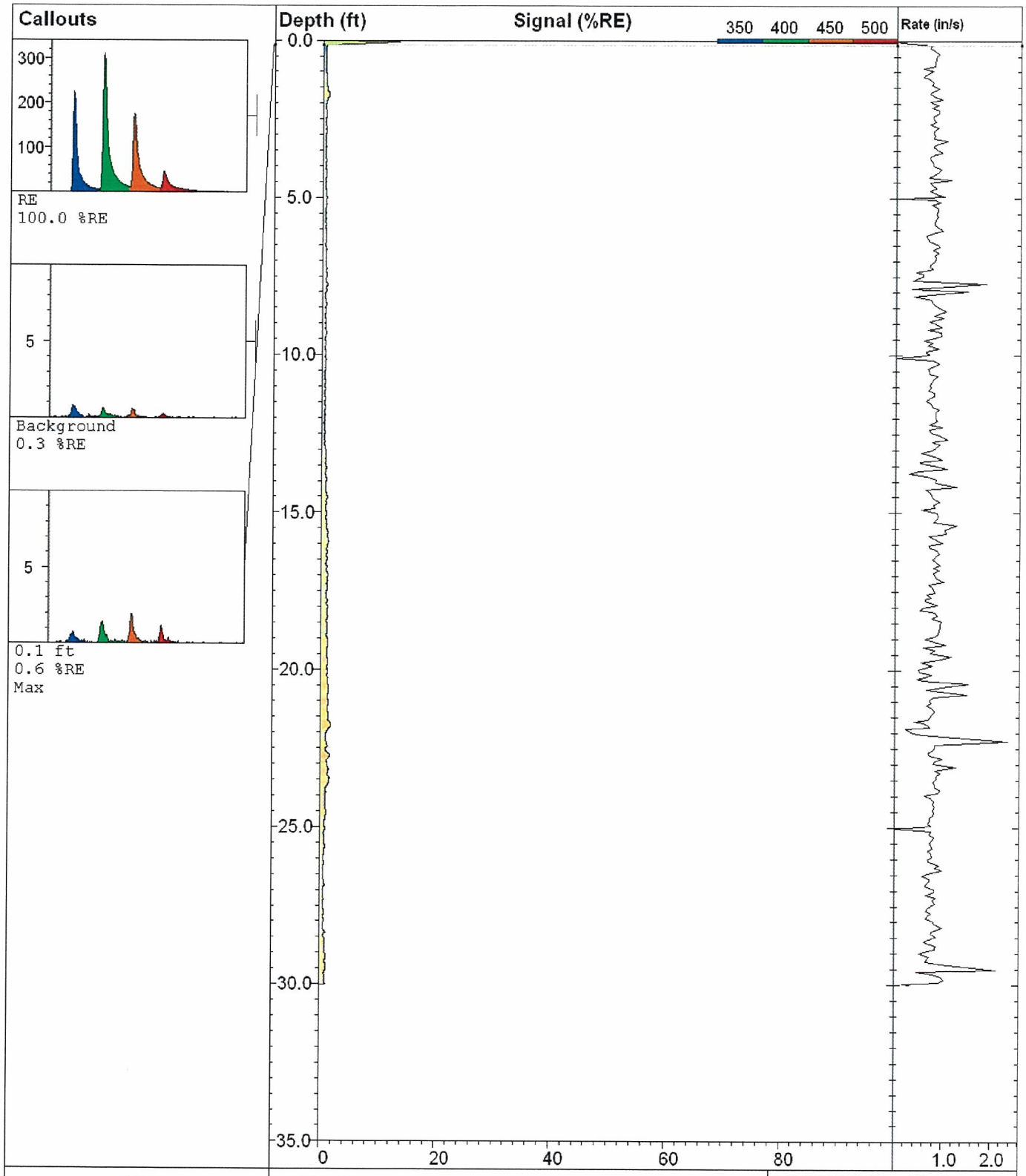
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.503 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.890 / 0D** | *Max signal:* **3.1 % @ 0.08 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 12:45 EDT** |

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# LIF-36-062

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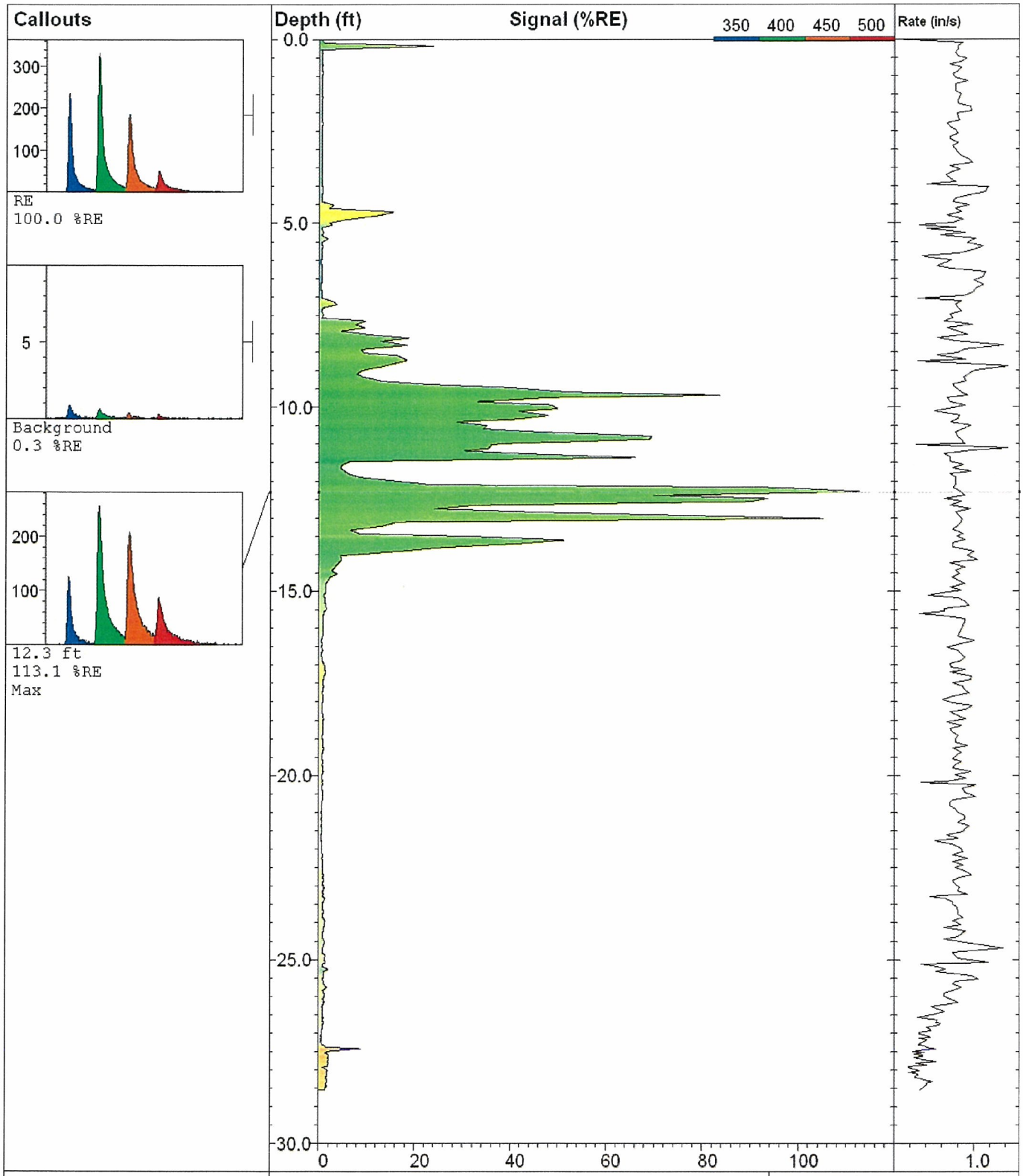
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.253 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.816 / 0D** | *Max signal:* **13.4 % @ 0.06 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 13:35 EDT** |

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# LIF-03-004

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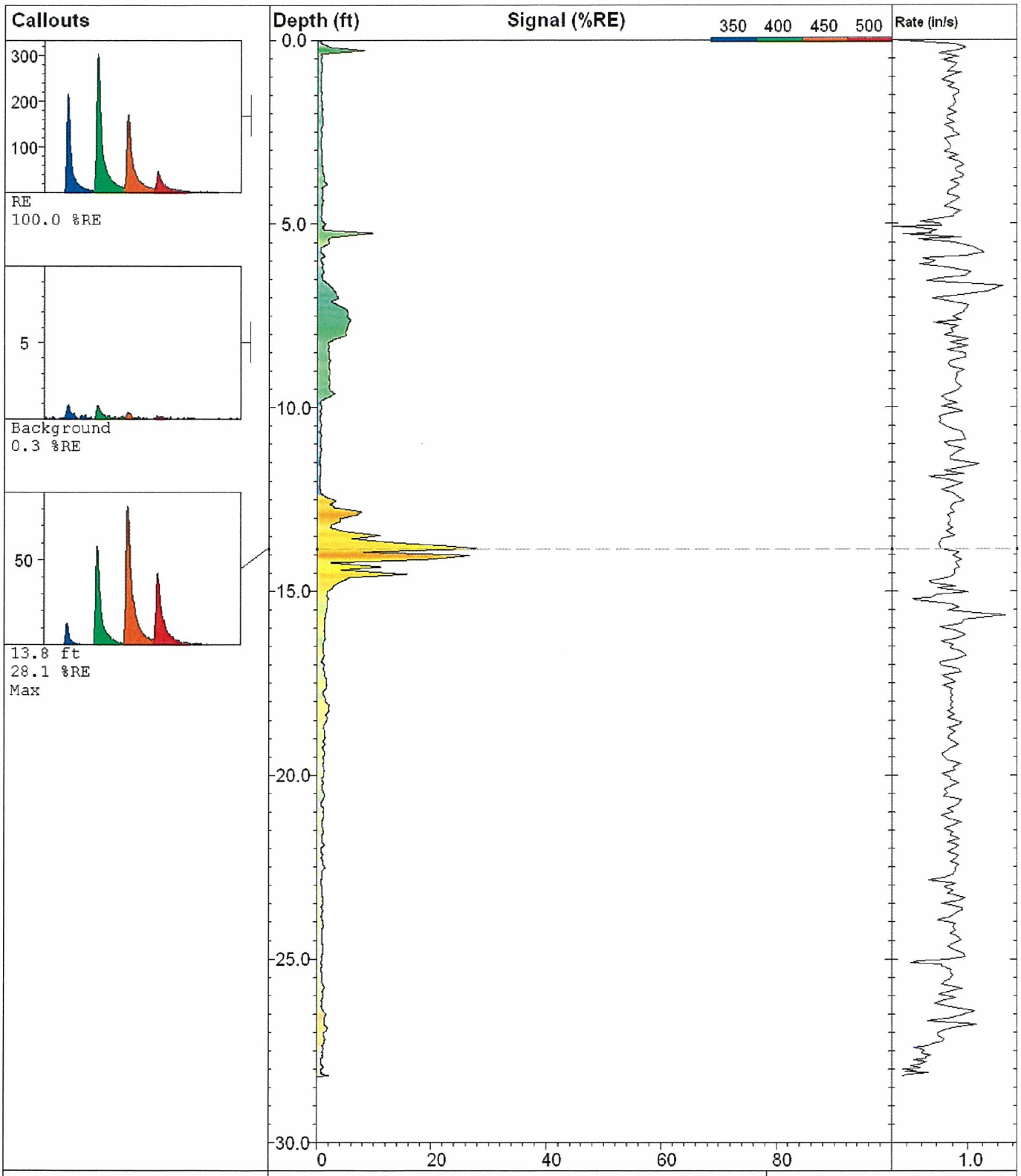
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.943 / ?** | *Final depth:* **28.54 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.951 / 0D** | *Max signal:* **113.1 % @ 12.29 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 14:19 EDT** |

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# LIF-03-005

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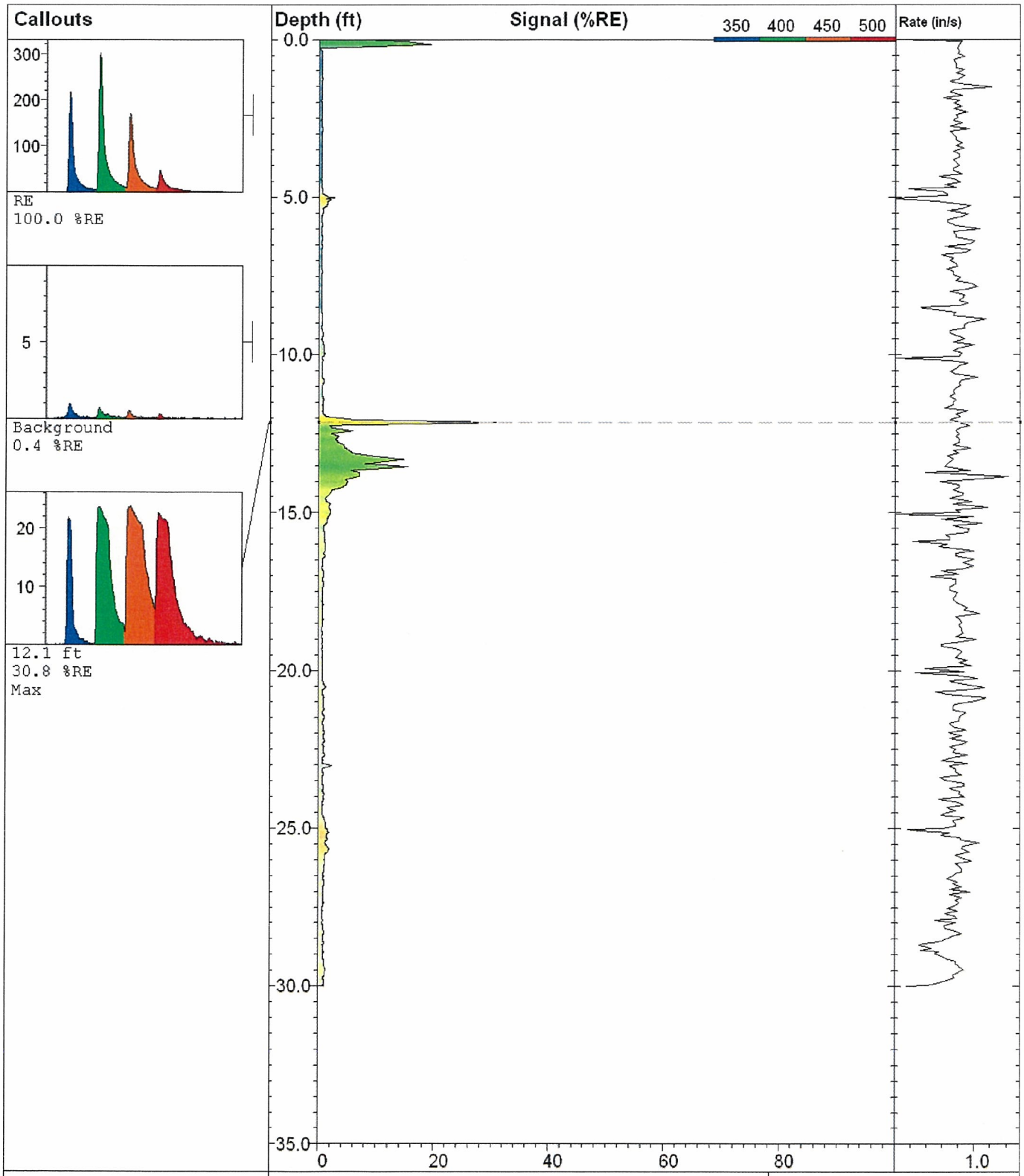
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.955 / ?** | *Final depth:* **28.20 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.990 / 0D** | *Max signal:* **28.1 % @ 13.84 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 14:59 EDT** |

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# LIF-03-006

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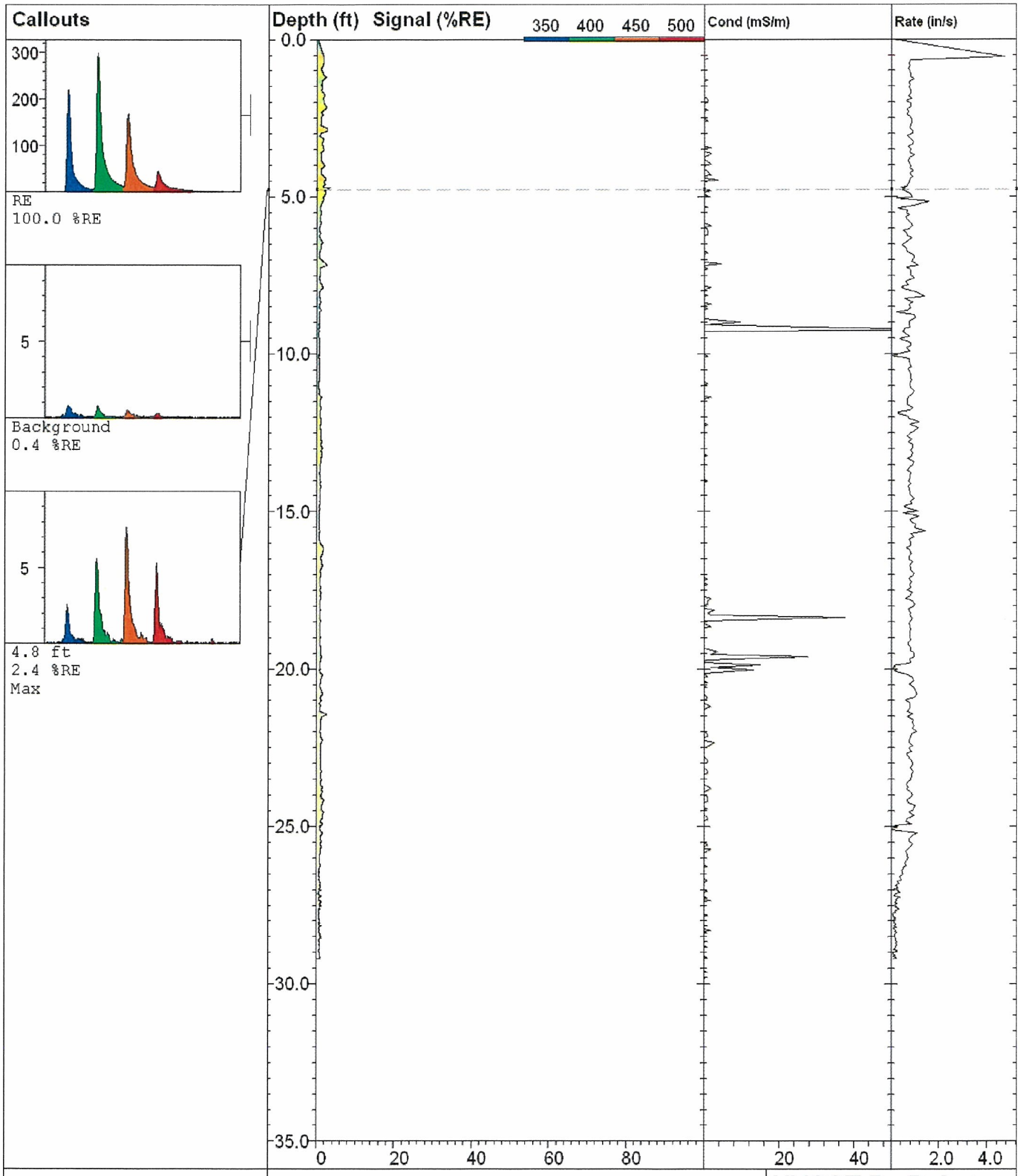
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.922 / ?** | *Final depth:* **30.00 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.993 / 0D** | *Max signal:* **30.8 % @ 12.14 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 15:28 EDT** |

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# LIF-10-025

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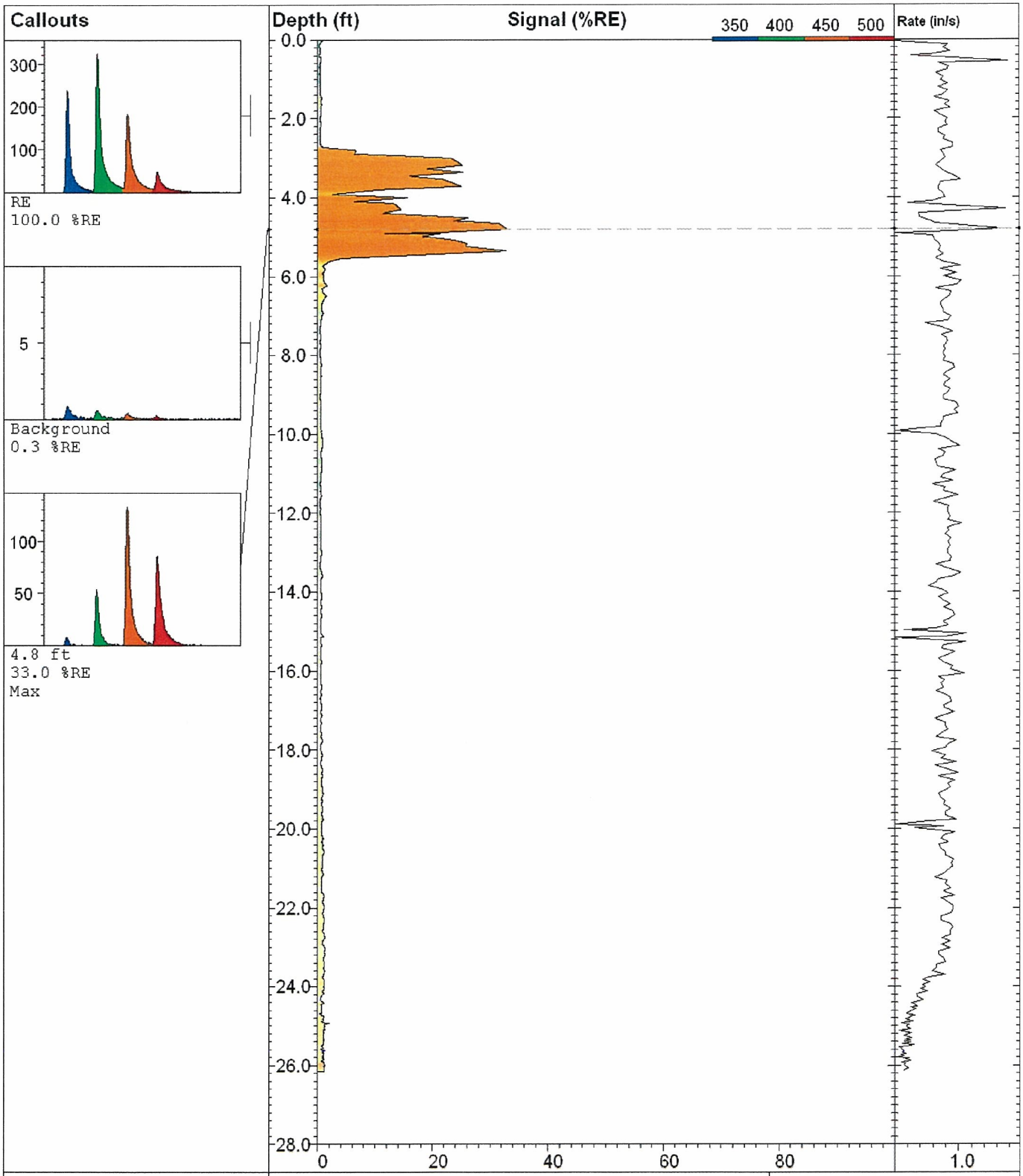
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.990 / ?** | *Final depth:* **29.21 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.955 / 0D** | *Max signal:* **3.5 % @ 4.71 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-07 09:15 EDT** |

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|---|---|---|
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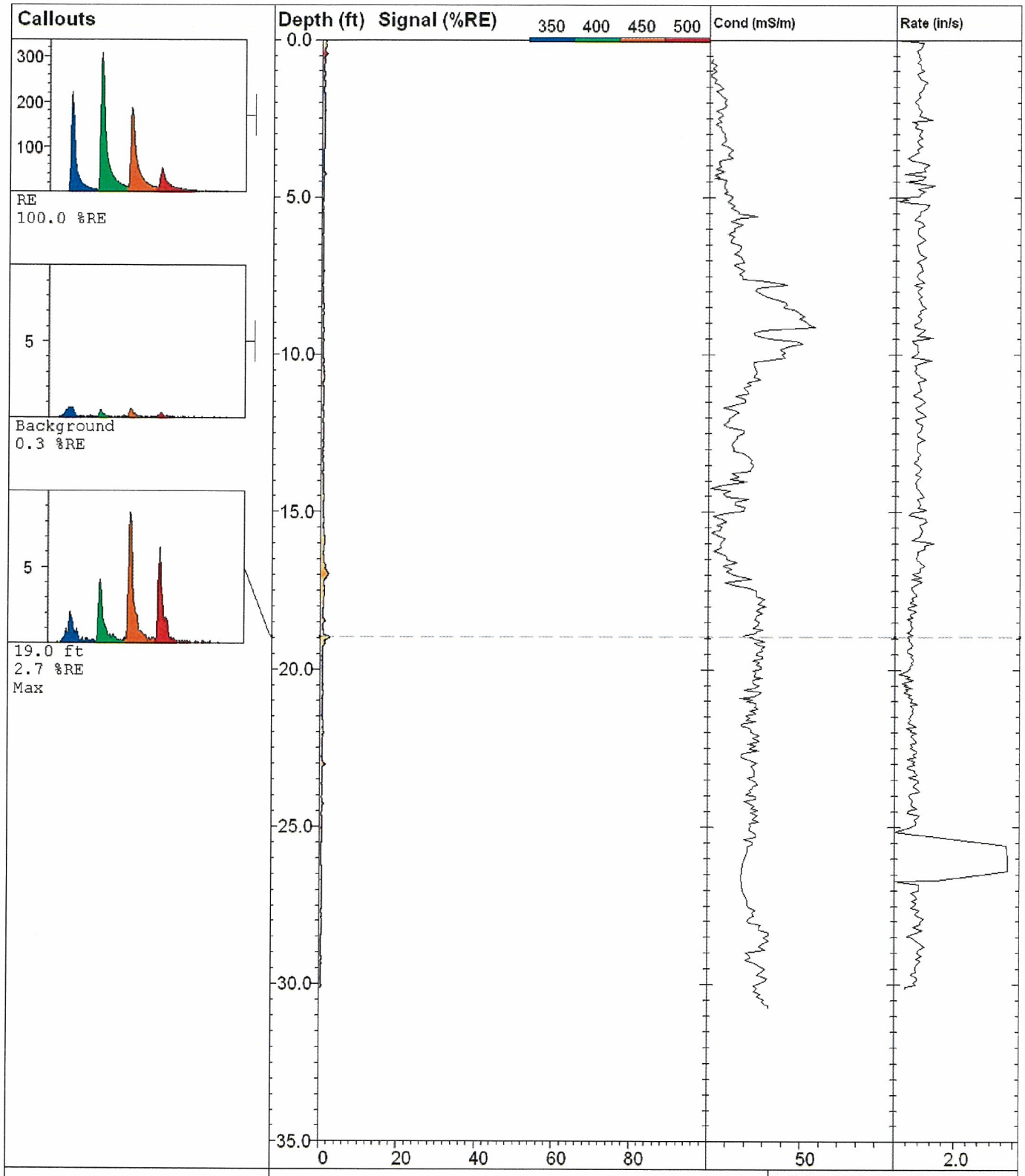
| *Site:*<br>**Racer Buick City - Flint** | *Latitude / Datum:*<br>**43.2.970 / ?** | *Final depth:*<br>**26.15 ft** |
| *Client:*<br>**Arcadis** | *Longitude / Fix:*<br>**83.40.933 / 0D** | *Max signal:*<br>**33.0 % @ 4.81 ft** |
| *Job:* | *Operator/Unit:*<br>**Jonathan W./UVOST1021** | *Date & Time:*<br>**2012-09-07 10:12 EDT** |

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# LIF-86-006

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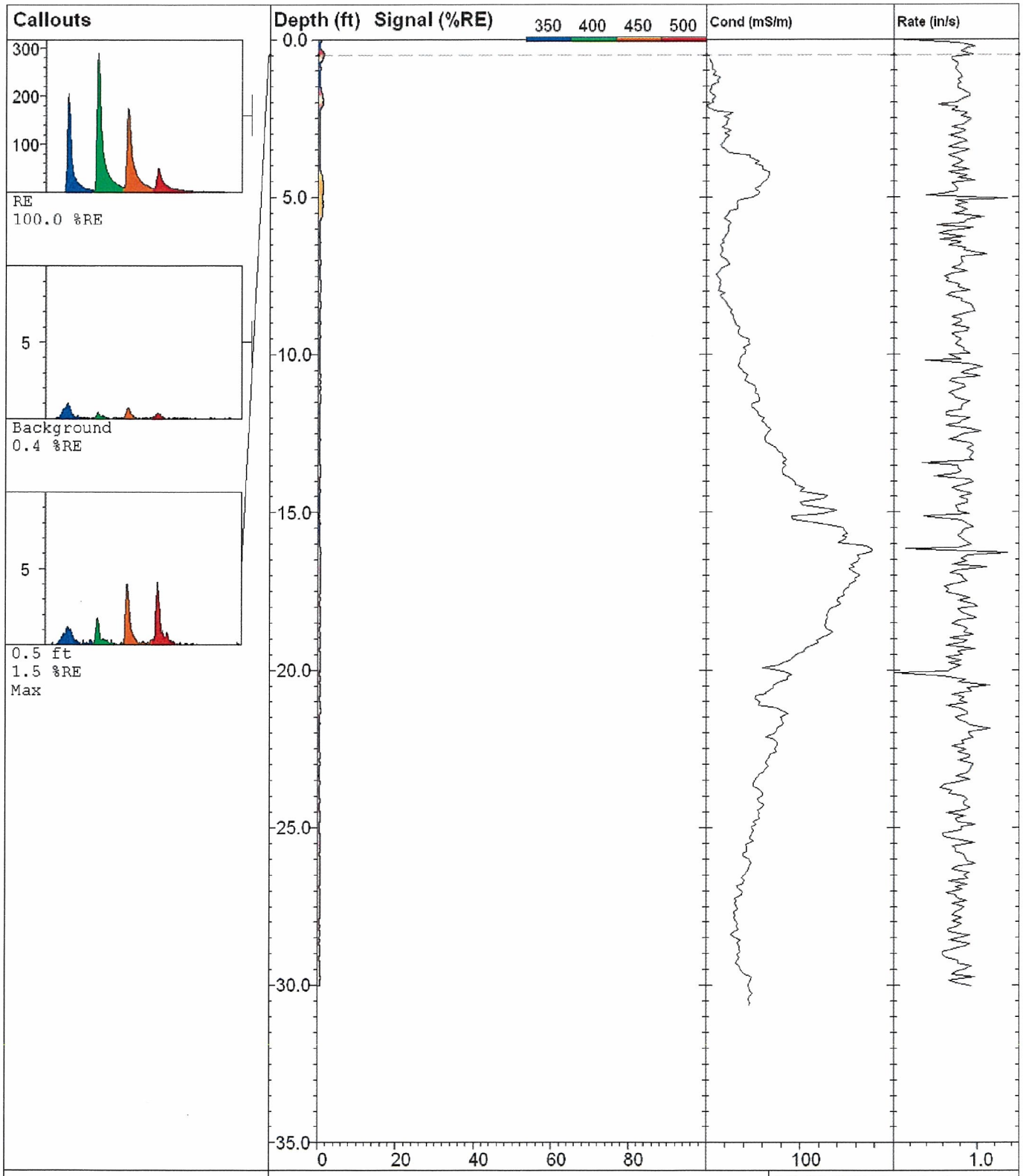
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.627 / ?** | *Final depth:* **30.13 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.941 / 0D** | *Max signal:* **2.7 % @ 18.96 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-10 17:25 EDT** |

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# LIF-86-007

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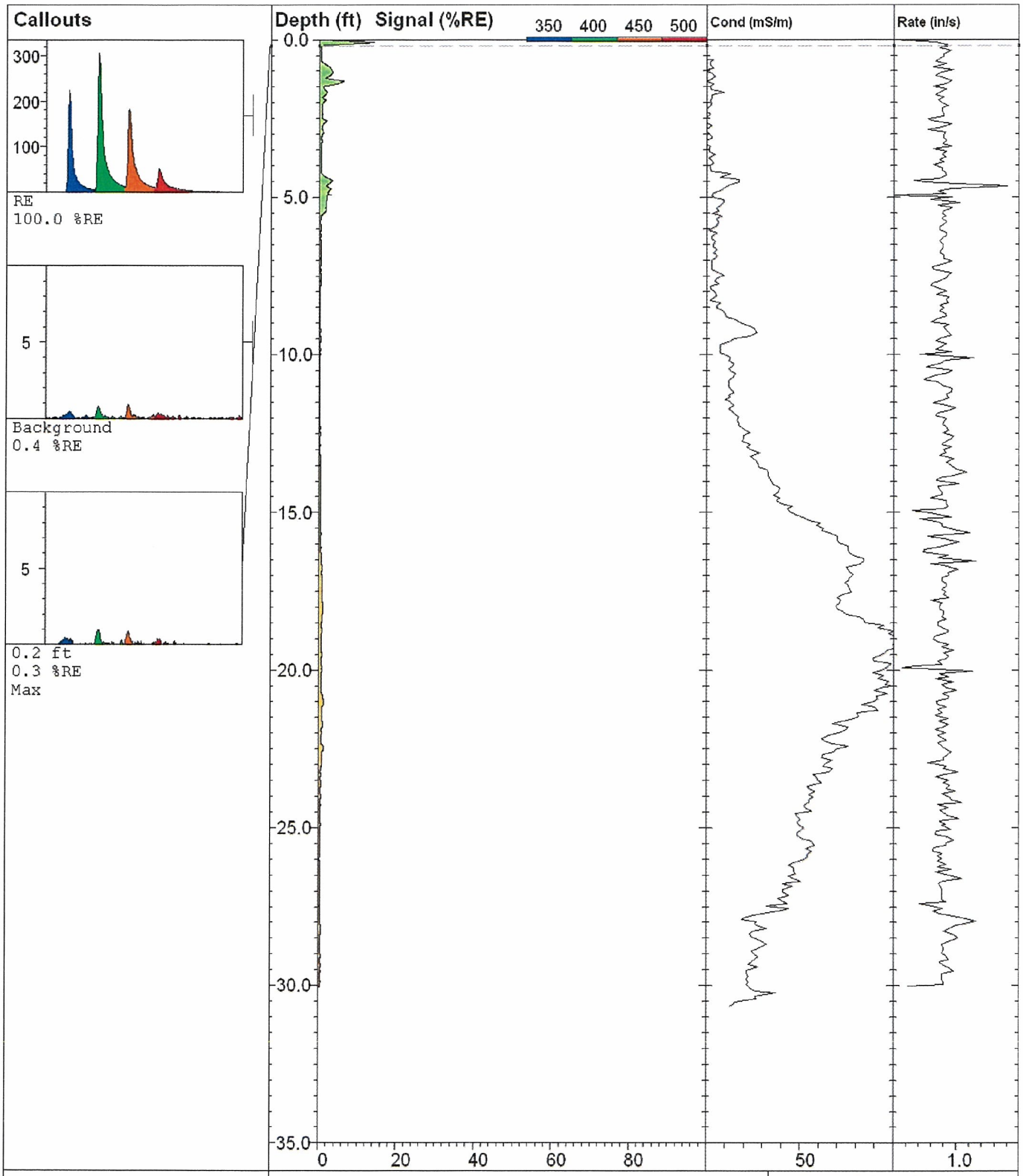
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.599 / ?** | *Final depth:* **30.03 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.949 / 0D** | *Max signal:* **1.5 % @ 0.48 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-10 18:24 EDT** |

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# LIF-36-063

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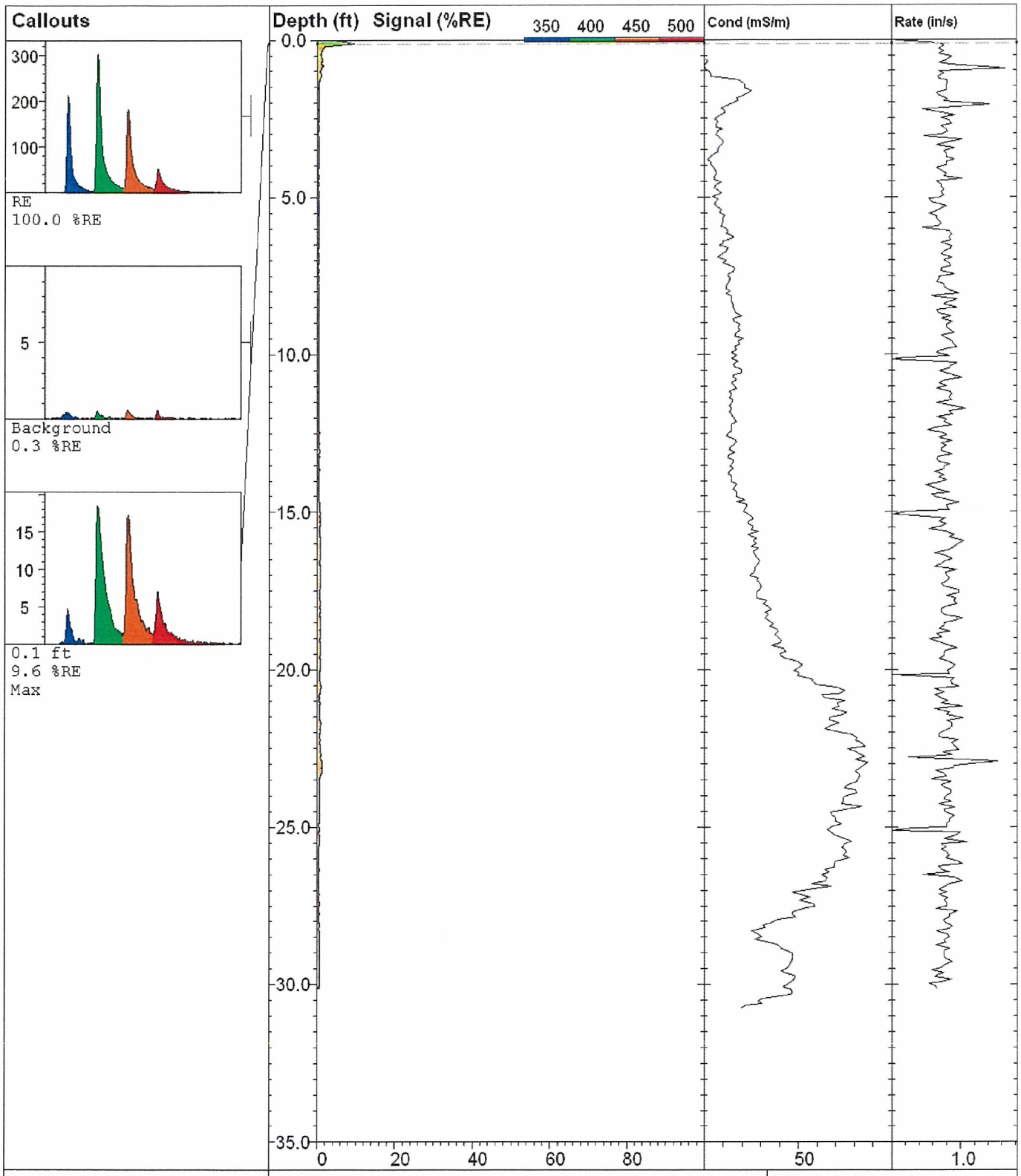
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.336 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.750 / 0D** | *Max signal:* **14.4 % @ 0.09 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-10 11:32 EDT** |

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# LIF-36-064

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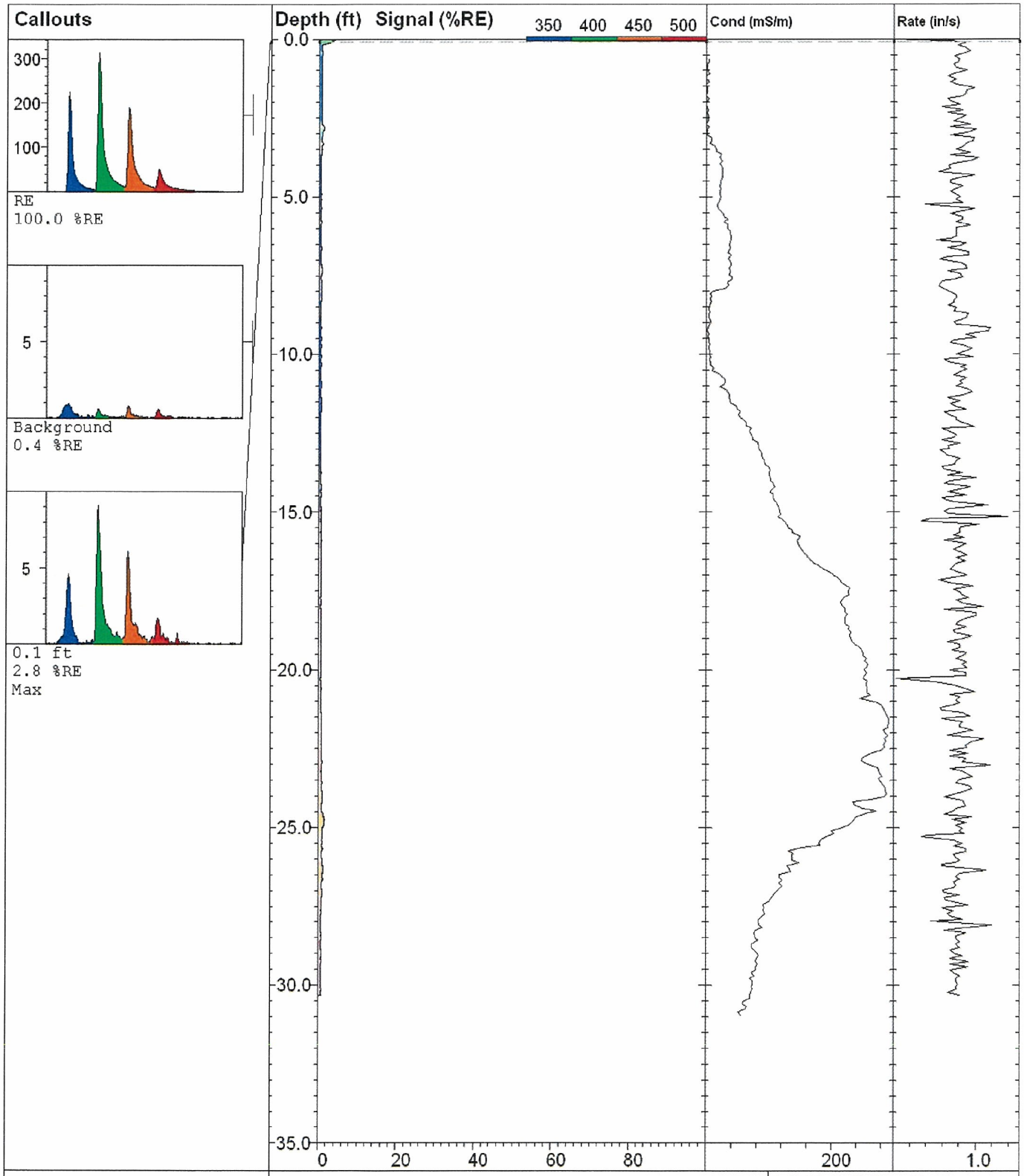
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.269 / ?** | *Final depth:* **30.13 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.758 / 0D** | *Max signal:* **9.6 % @ 0.12 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-10 16:10 EDT** |

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# LIF-05-005

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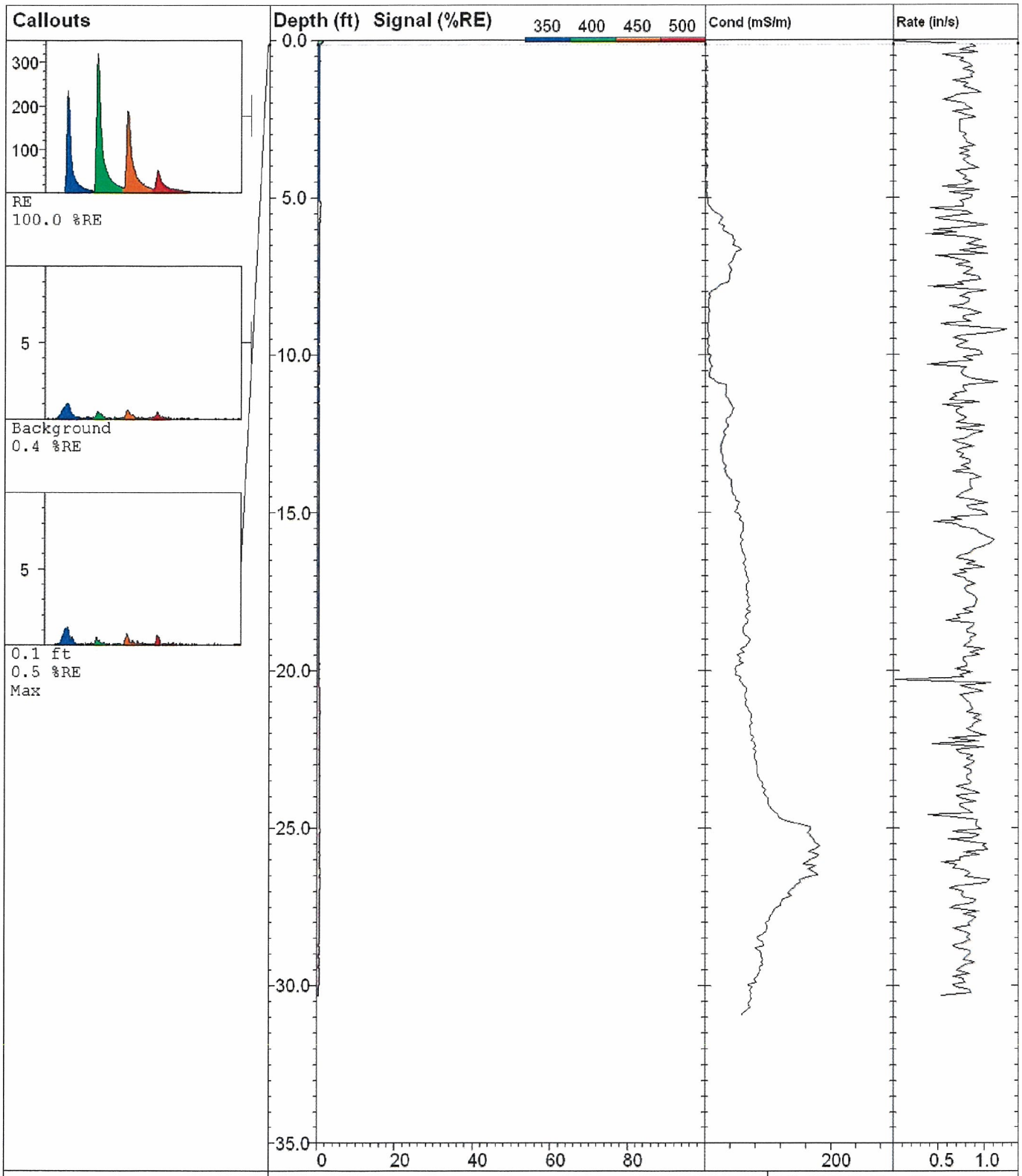
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.105 / ?** | *Final depth:* **30.33 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.097 / 0D** | *Max signal:* **4.5 % @ 0.01 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 15:37 EDT** |

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# LIF-05-006

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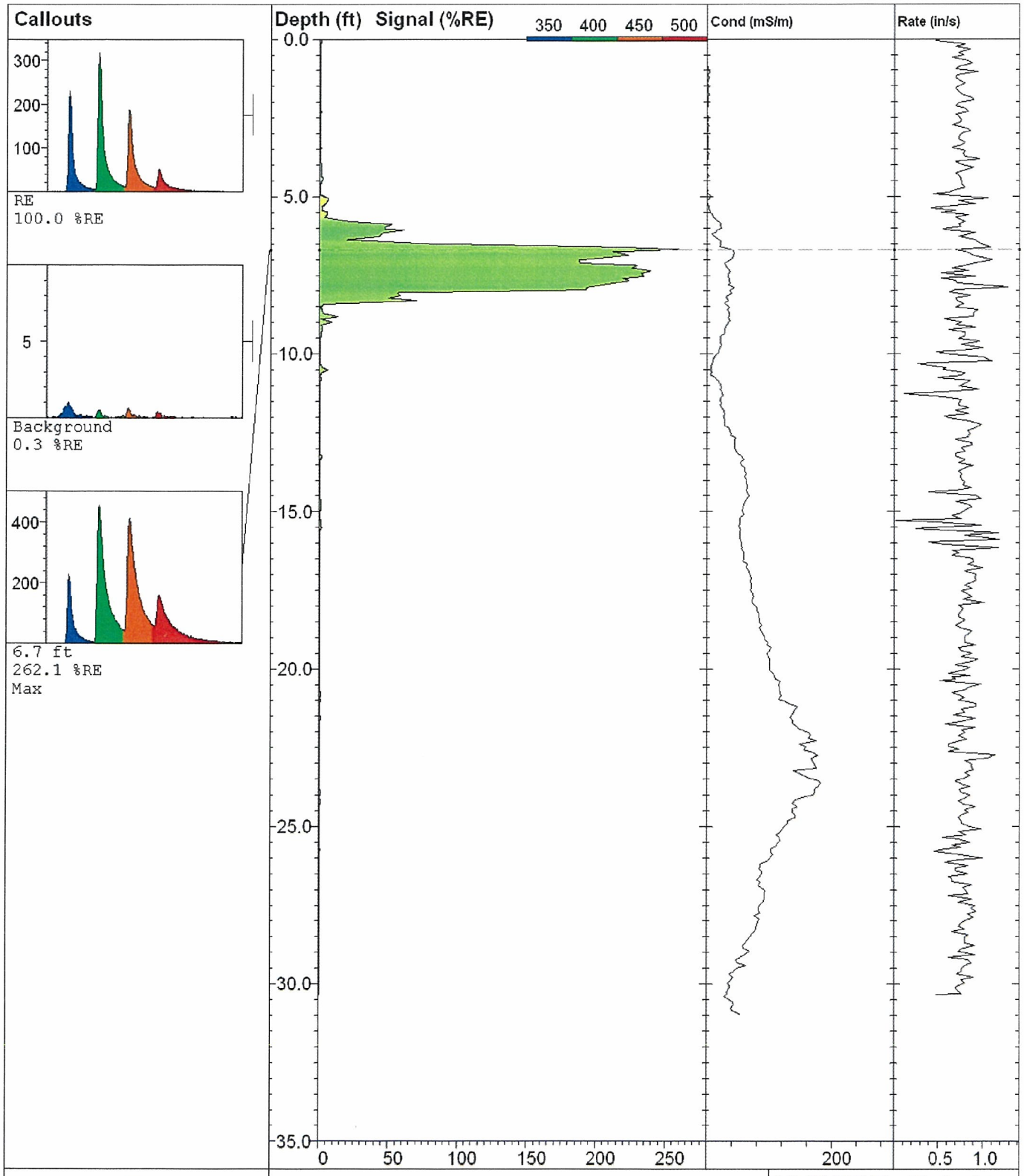
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.122 / ?** | *Final depth:* **30.32 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.103 / 0D** | *Max signal:* **1.4 % @ 0.00 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 16:06 EDT** |

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# LIF-05-007

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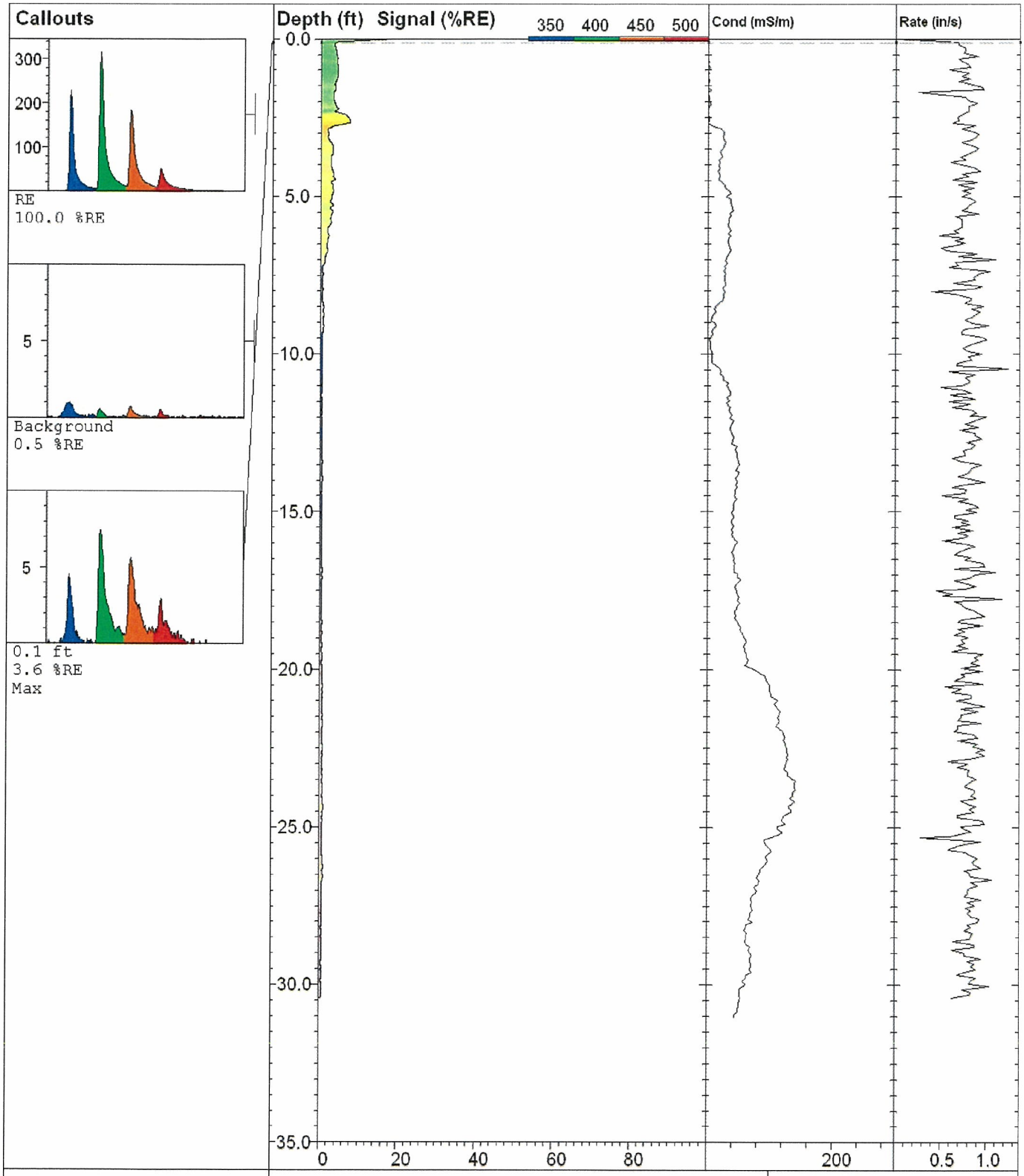
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.124 / ?** | *Final depth:* **30.34 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.132 / 0D** | *Max signal:* **262.1 % @ 6.69 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 16:31 EDT** |

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# LIF-05-008

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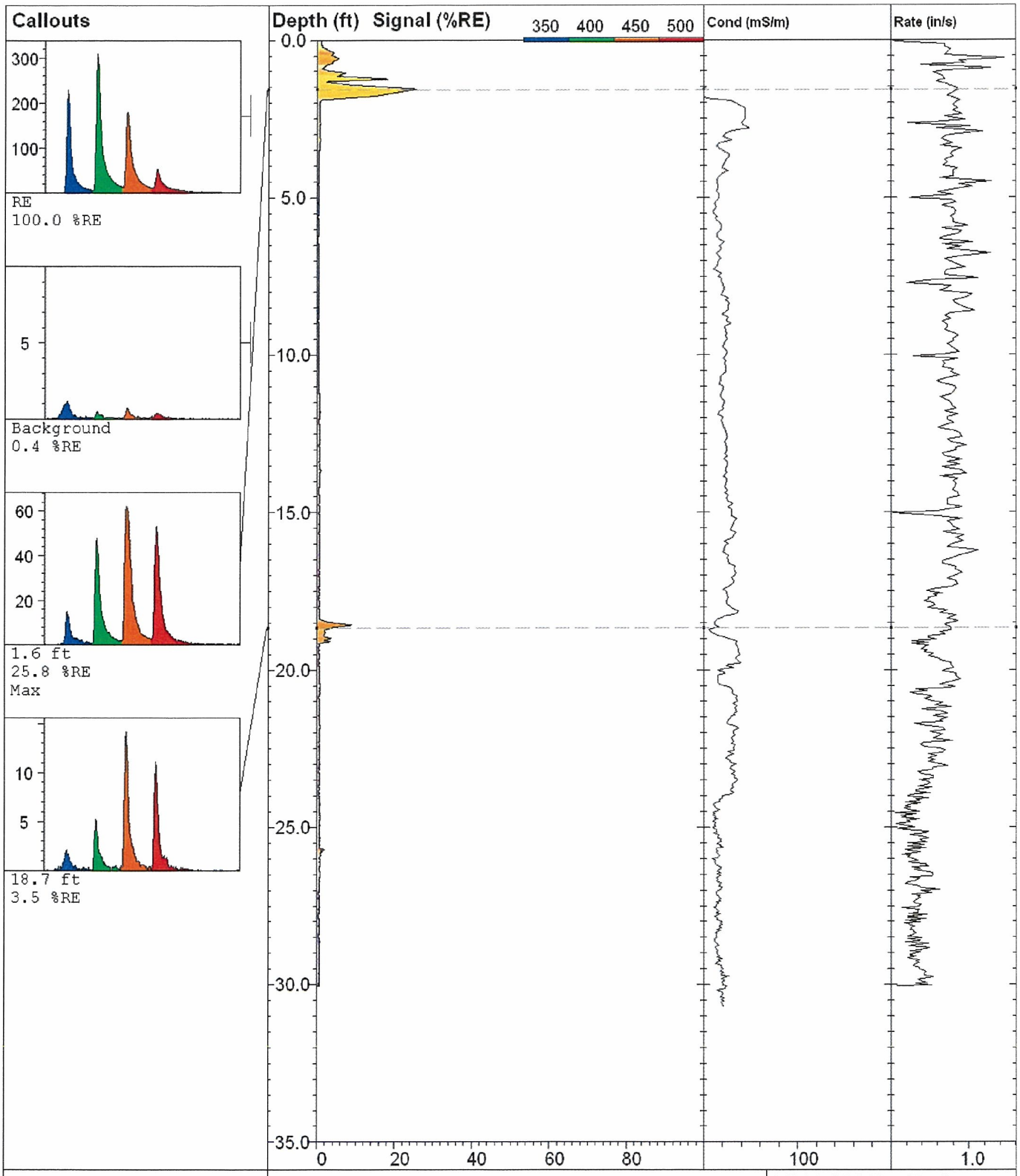
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.128 / ?** | *Final depth:* **30.41 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.124 / 0D** | *Max signal:* **20.5 % @ 0.01 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 16:58 EDT** |

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# LIF-02-029

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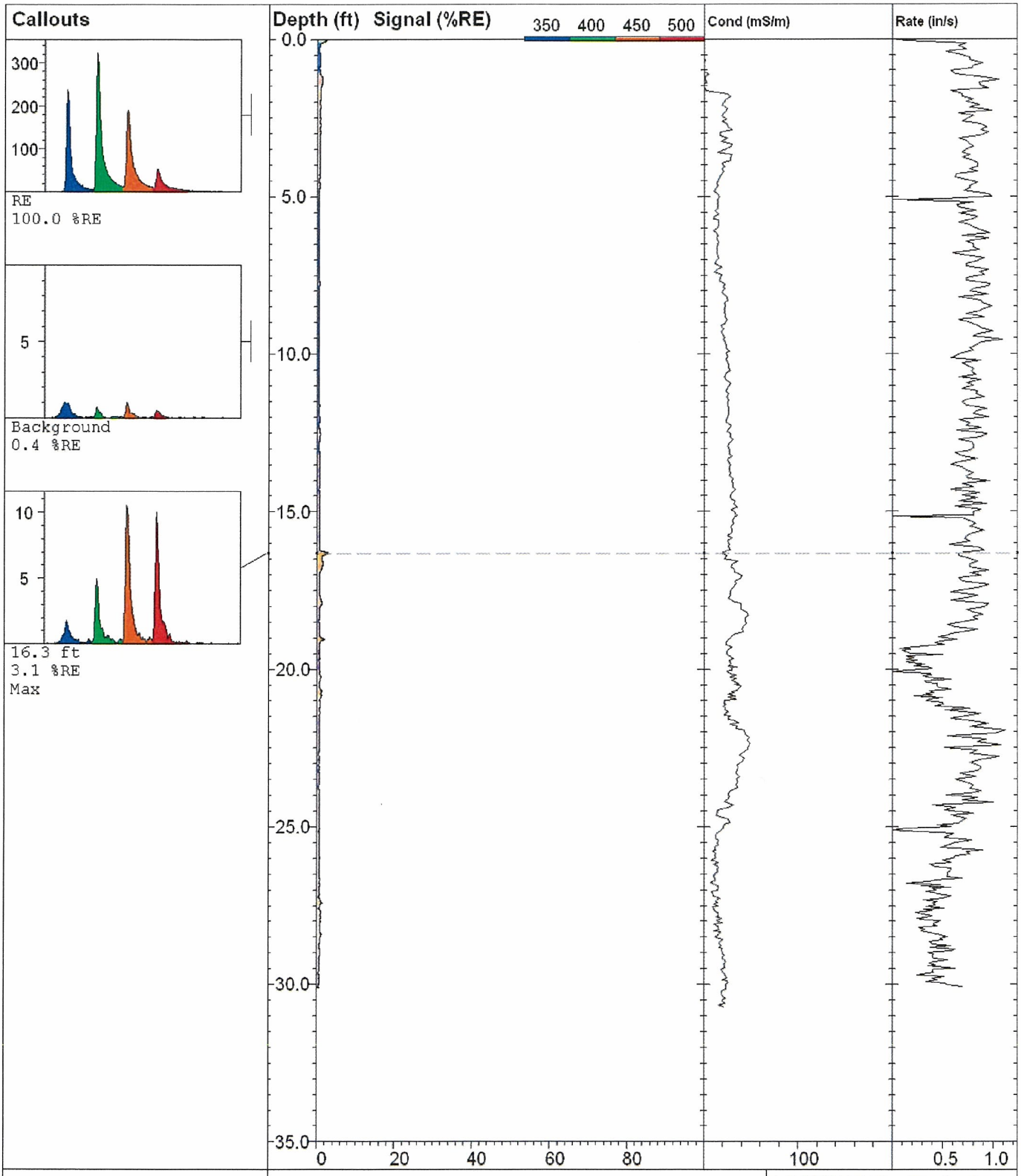
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.405 / ?** | *Final depth:* **30.06 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.982 / 0D** | *Max signal:* **25.8 % @ 1.56 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 09:45 EDT** |

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# LIF-02-030

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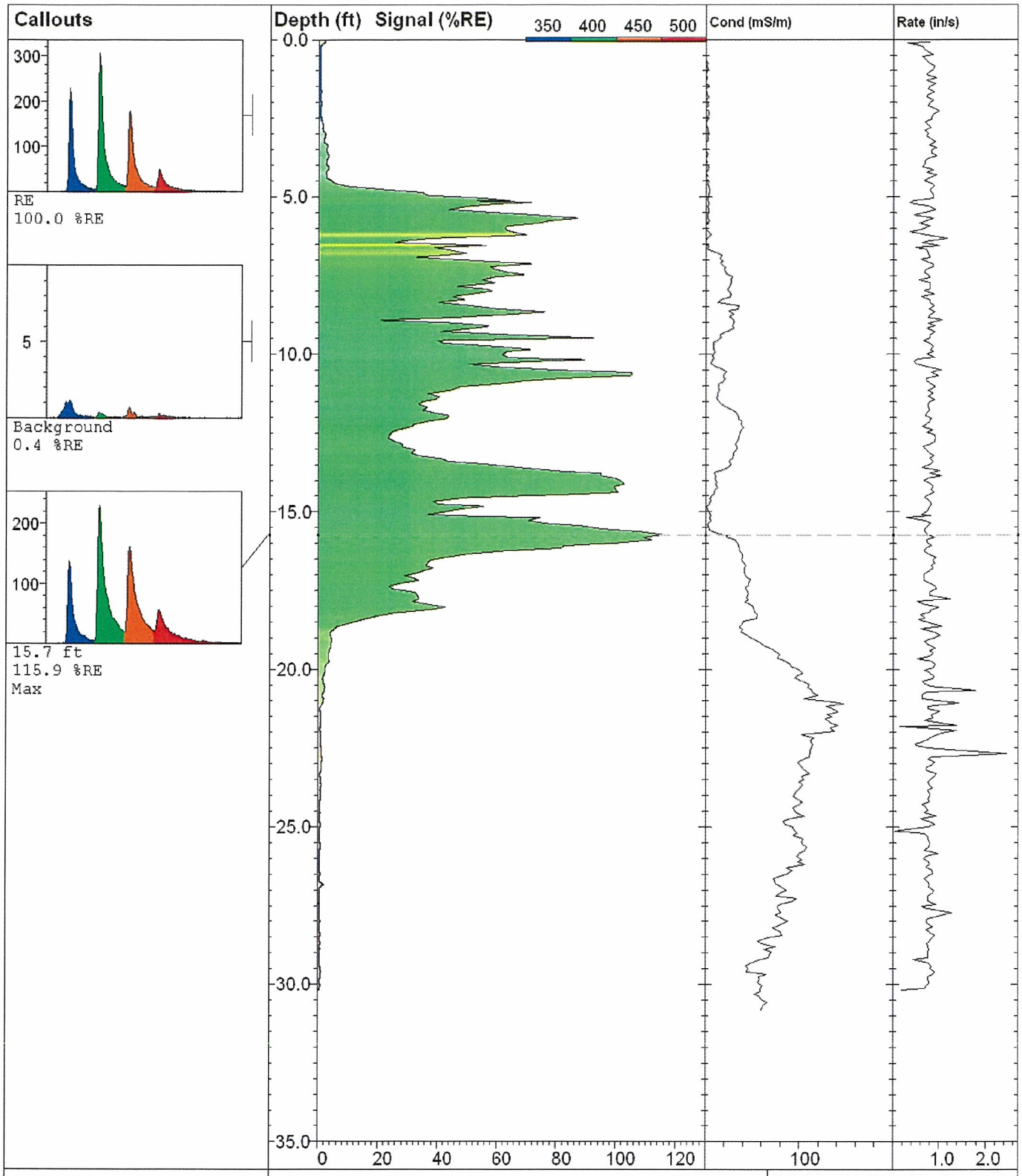
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.426 / ?** | *Final depth:* **30.09 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.979 / 0D** | *Max signal:* **3.1 % @ 16.31 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 10:54 EDT** |

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# LIF-05-001

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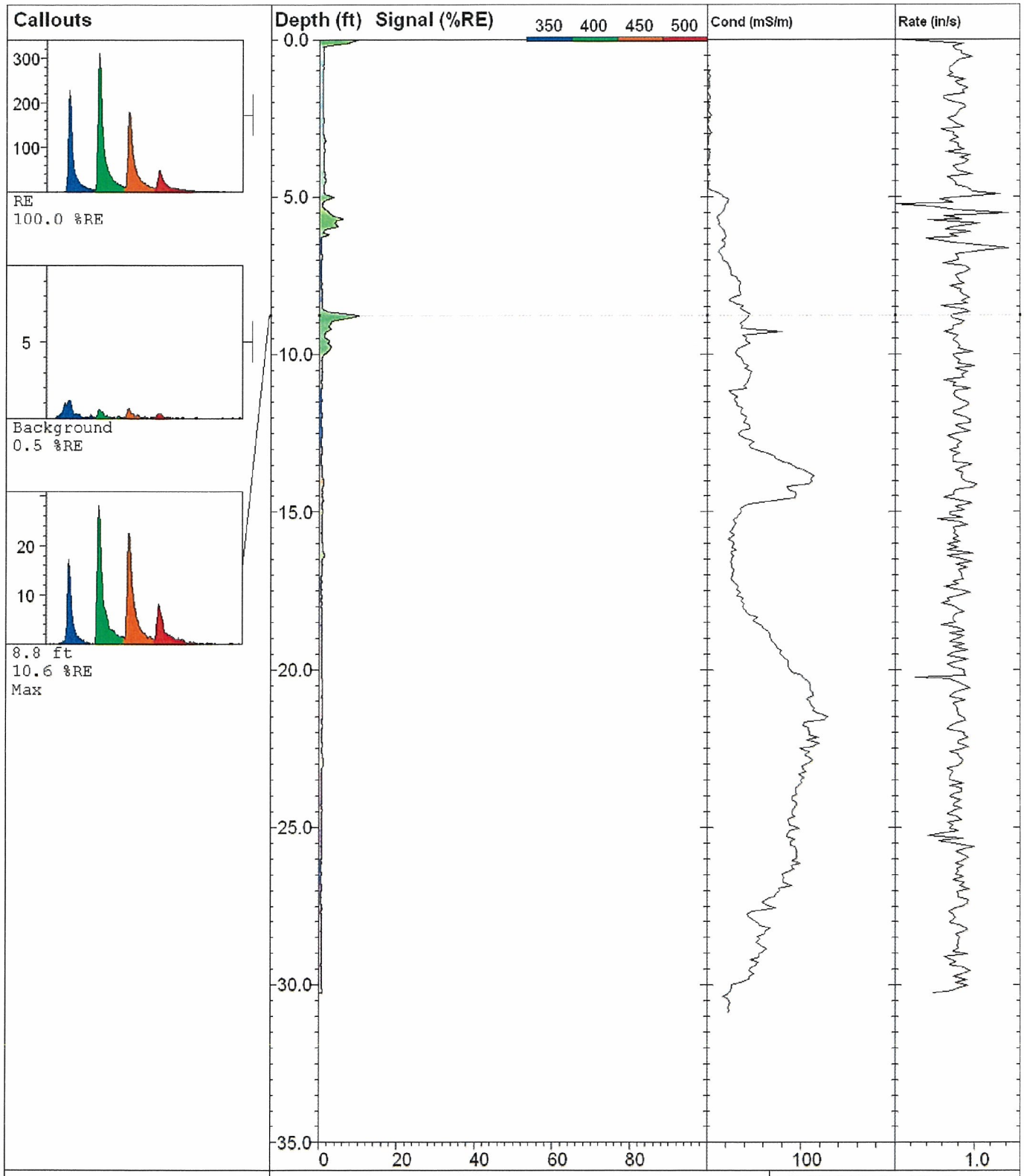
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.021 / ?** | *Final depth:* **30.18 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.137 / 0D** | *Max signal:* **115.9 % @ 15.72 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 13:34 EDT** |

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# LIF-05-002

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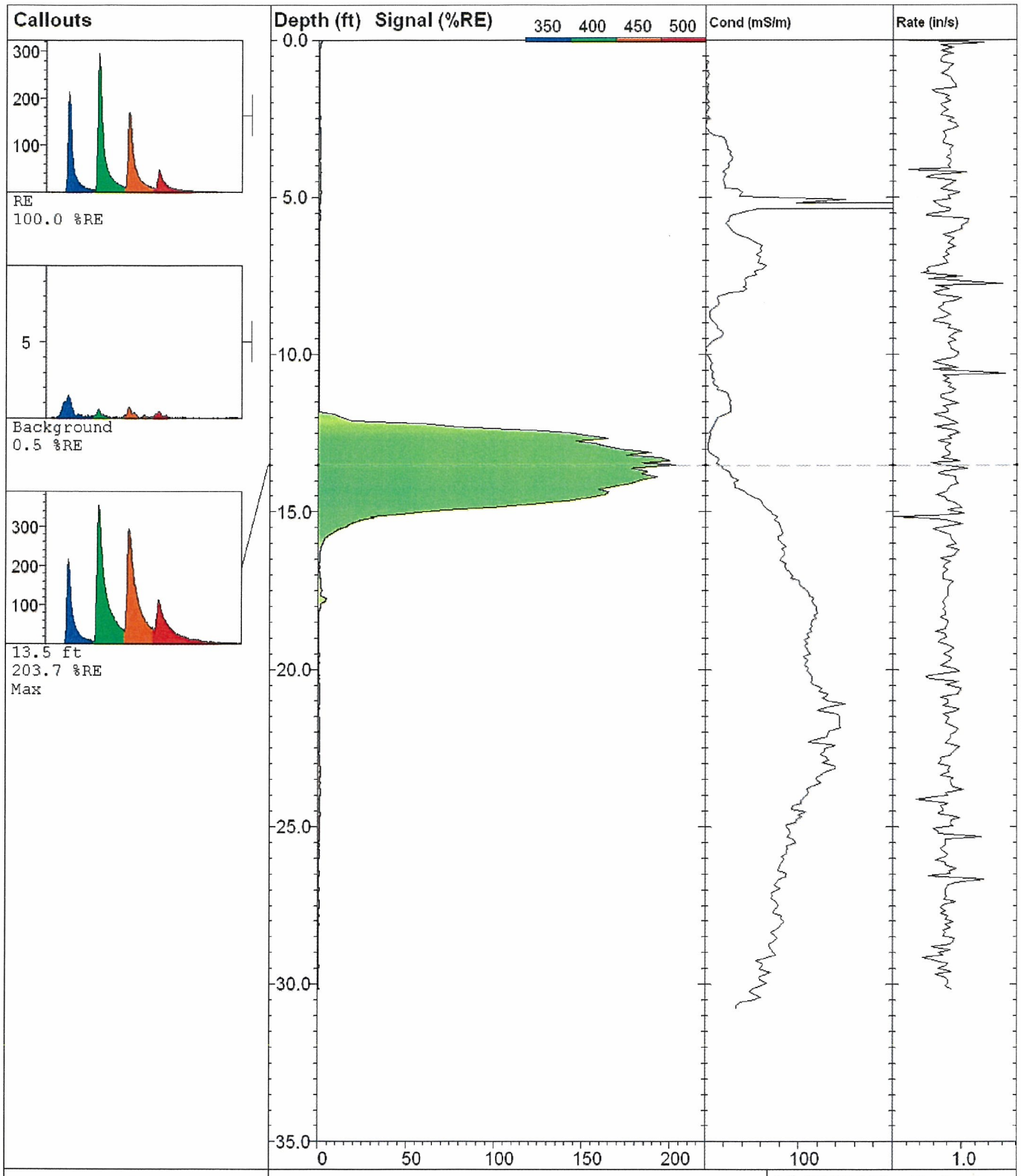
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.995 / ?** | *Final depth:* **30.25 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.109 / 0D** | *Max signal:* **10.6 % @ 8.76 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 14:09 EDT** |

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# LIF-05-003

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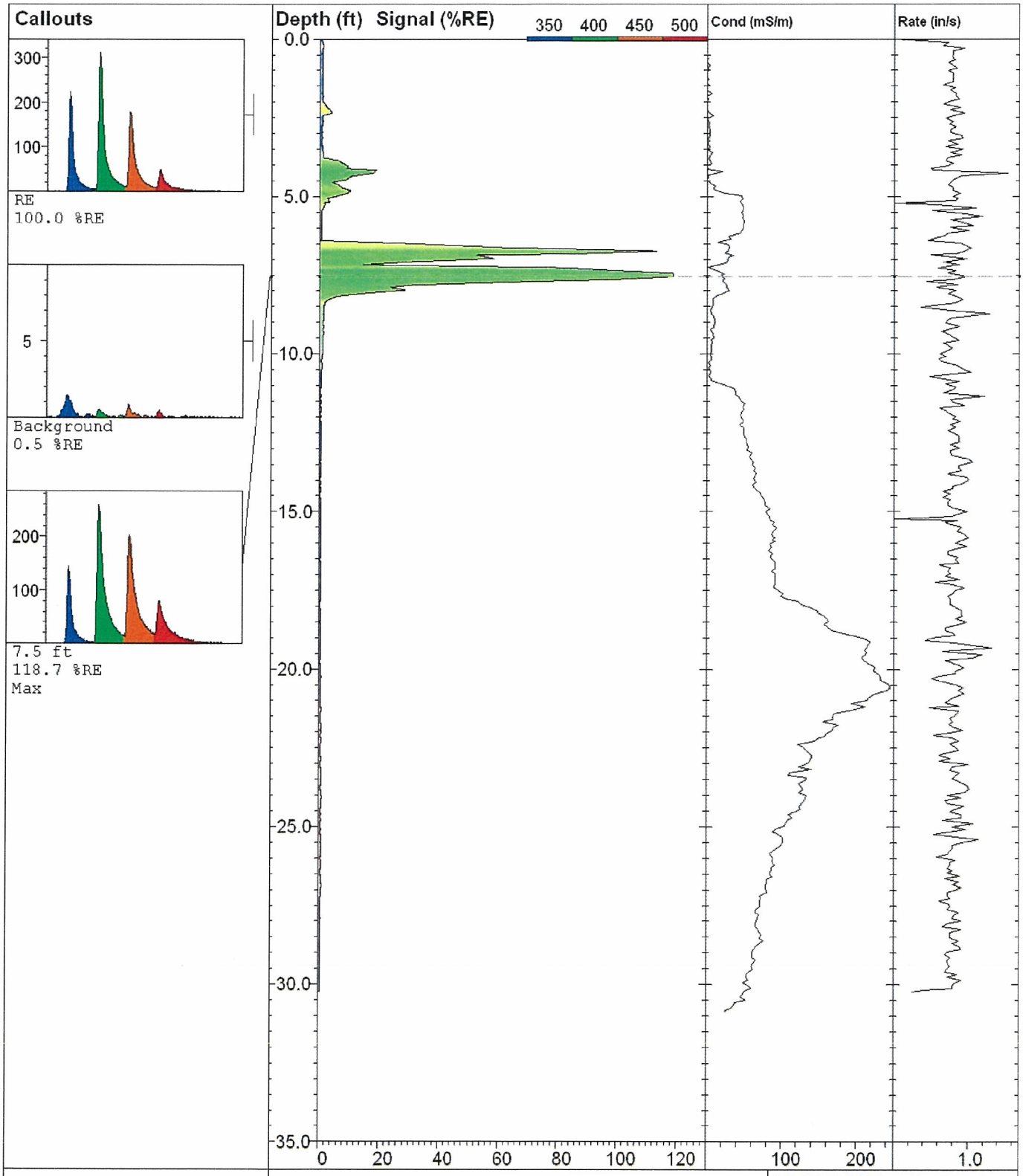
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.047 / ?** | *Final depth:* **30.15 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.135 / 0D** | *Max signal:* **203.7 % @ 13.51 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 14:37 EDT** |

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# LIF-05-004

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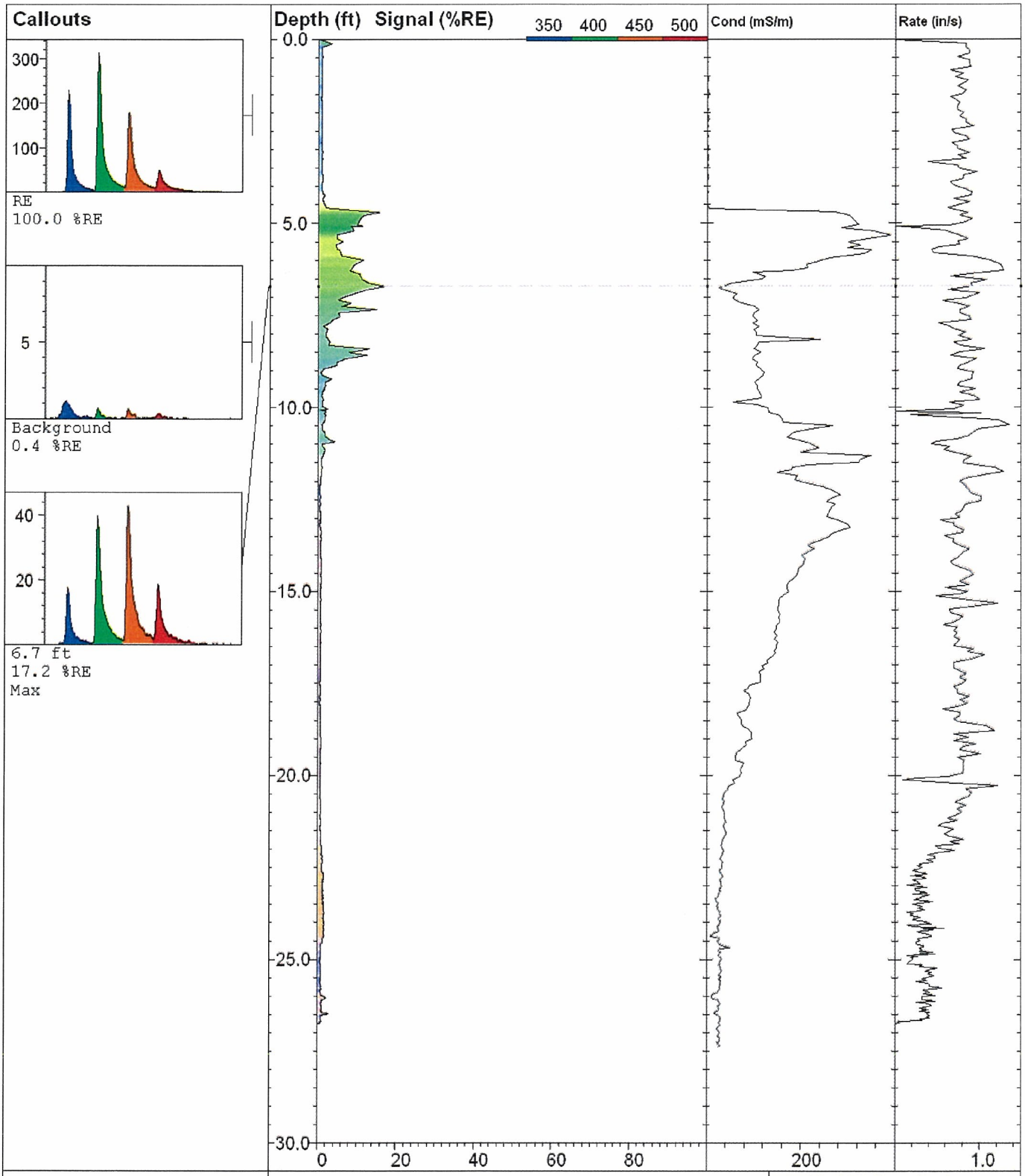
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.088 / ?** | *Final depth:* **30.23 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.127 / 0D** | *Max signal:* **118.7 % @ 7.54 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-11 15:06 EDT** |

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# LIF-81-013

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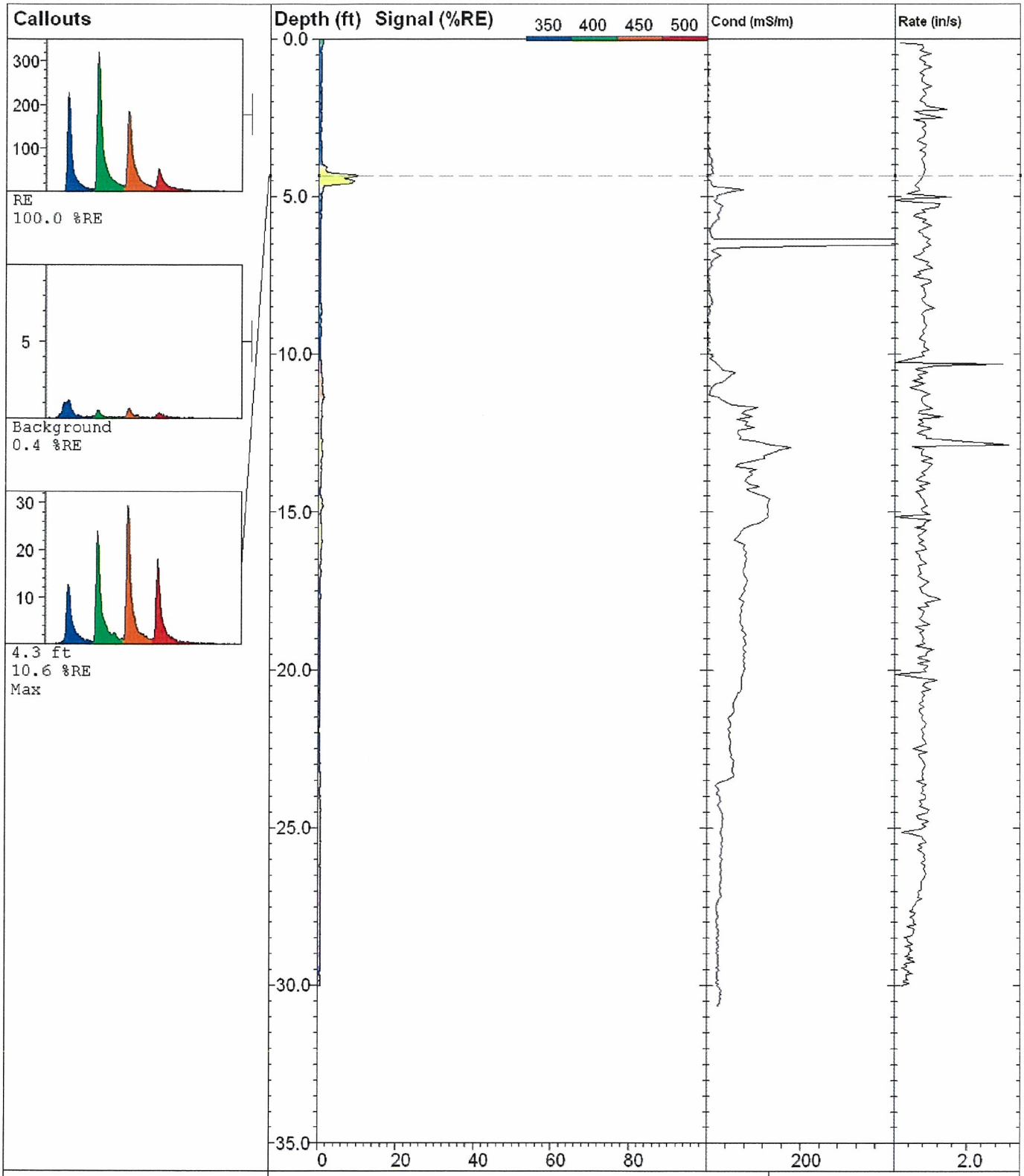
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.900 / ?** | *Final depth:* **26.76 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.928 / 0D** | *Max signal:* **17.2 % @ 6.71 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 14:56 EDT** |

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# LIF-81-014

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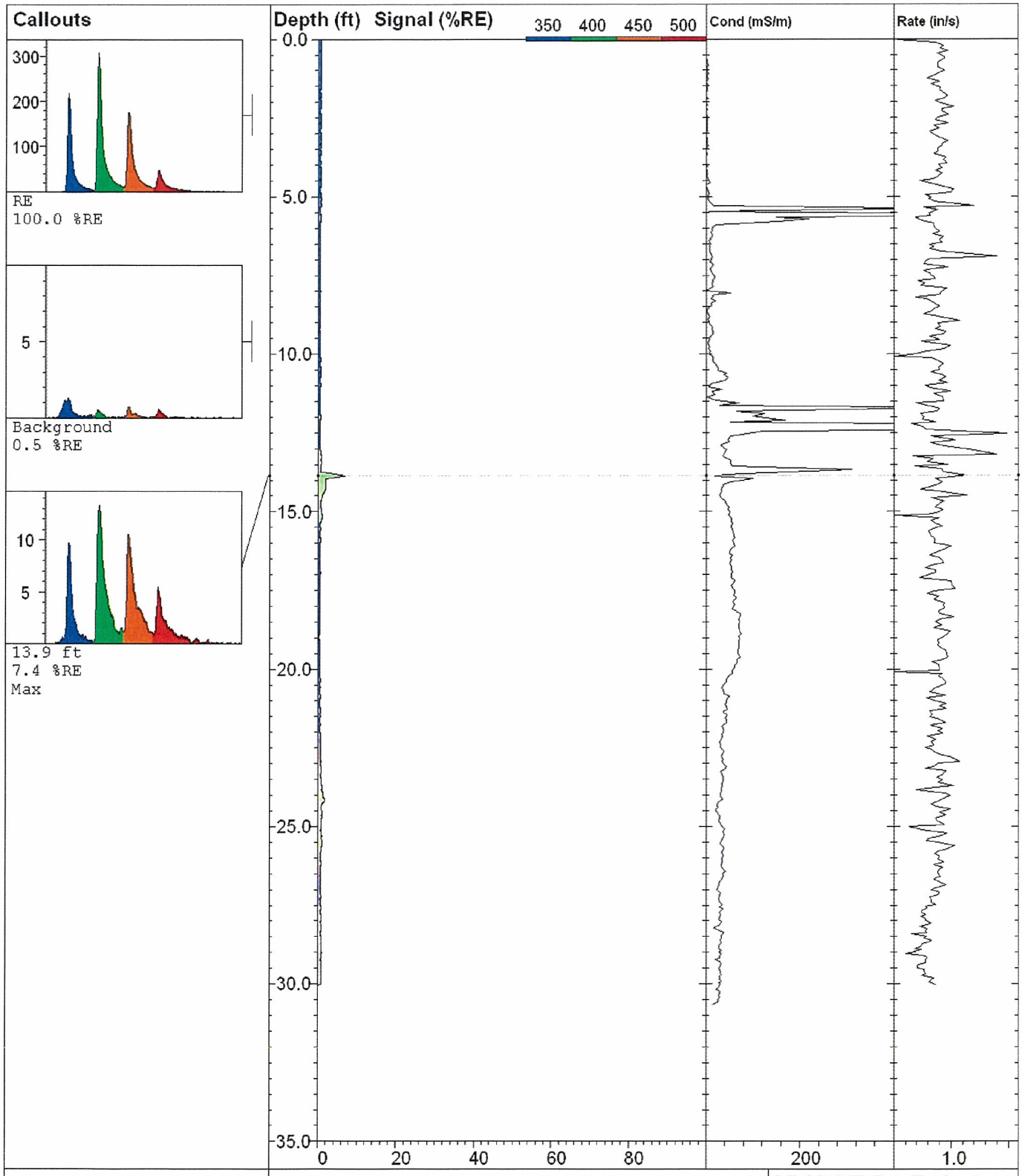
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.844 / ?** | *Final depth:* **30.03 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.942 / 0D** | *Max signal:* **10.6 % @ 4.34 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 15:36 EDT** |

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# LIF-81-015

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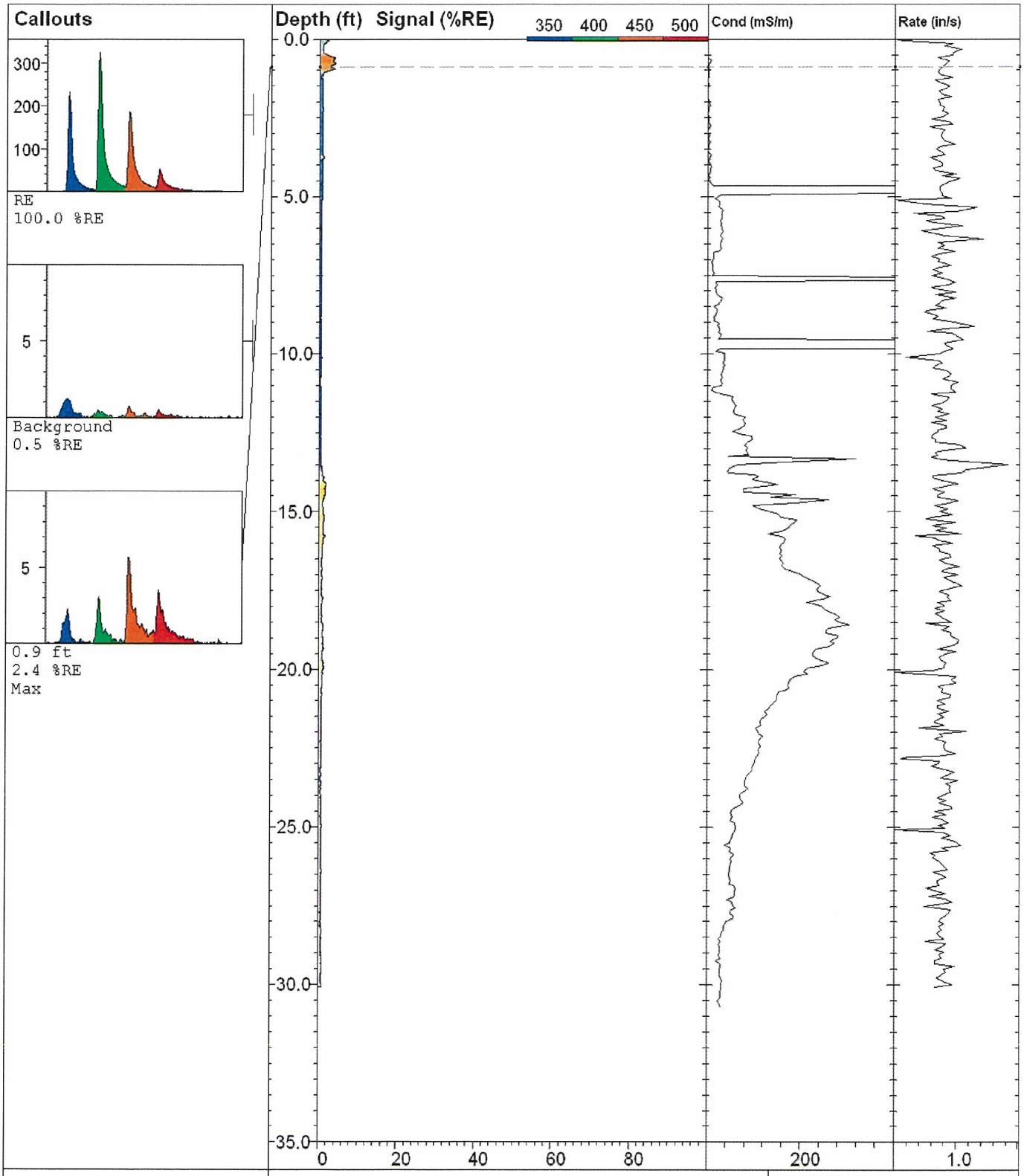
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.759 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.963 / 0D** | *Max signal:* **7.4 % @ 13.86 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 16:10 EDT** |

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# LIF-81-016

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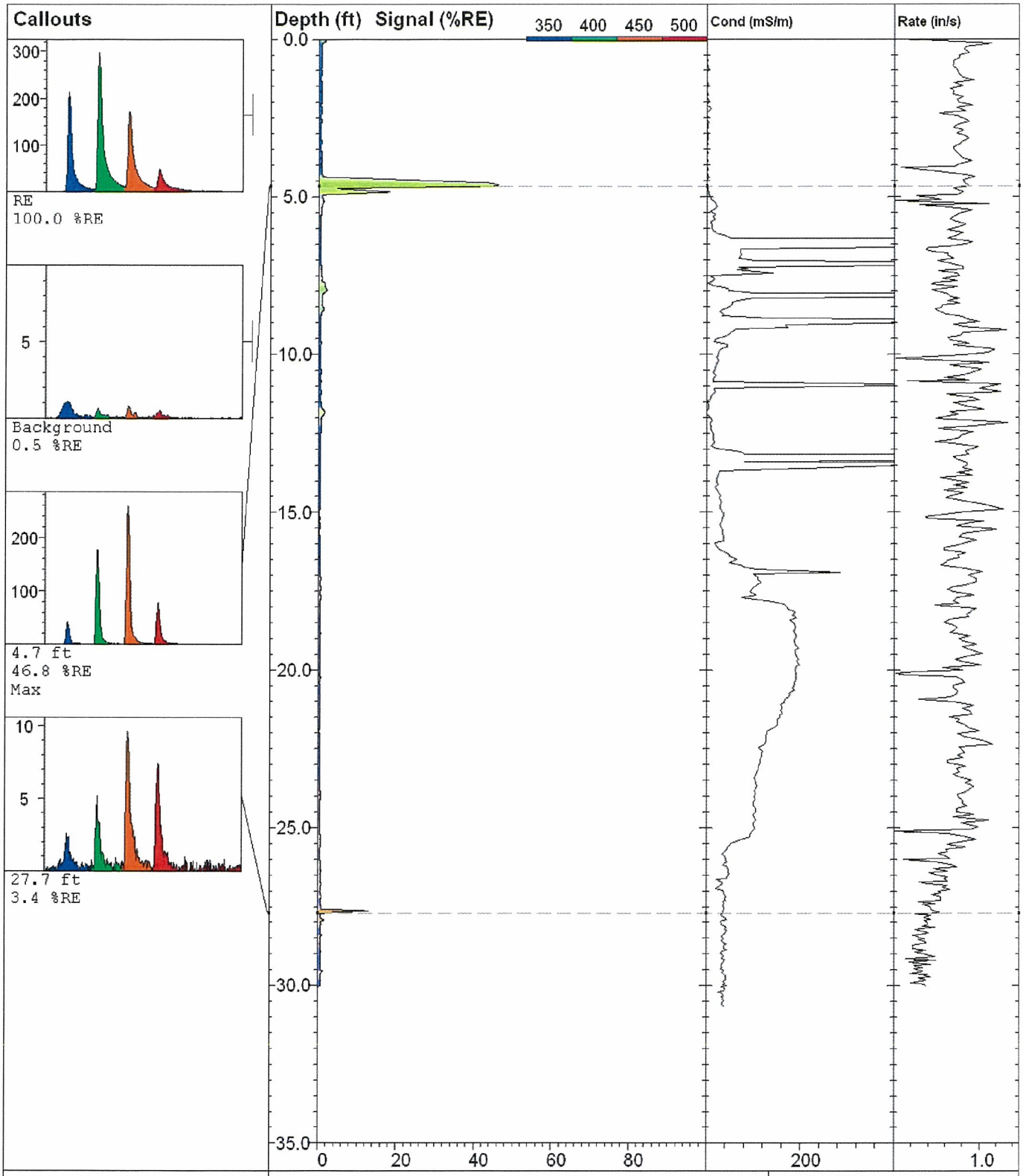
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.734 / ?** | *Final depth:* **30.08 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.995 / 0D** | *Max signal:* **4.0 % @ 0.79 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 16:45 EDT** |

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# LIF-81-017

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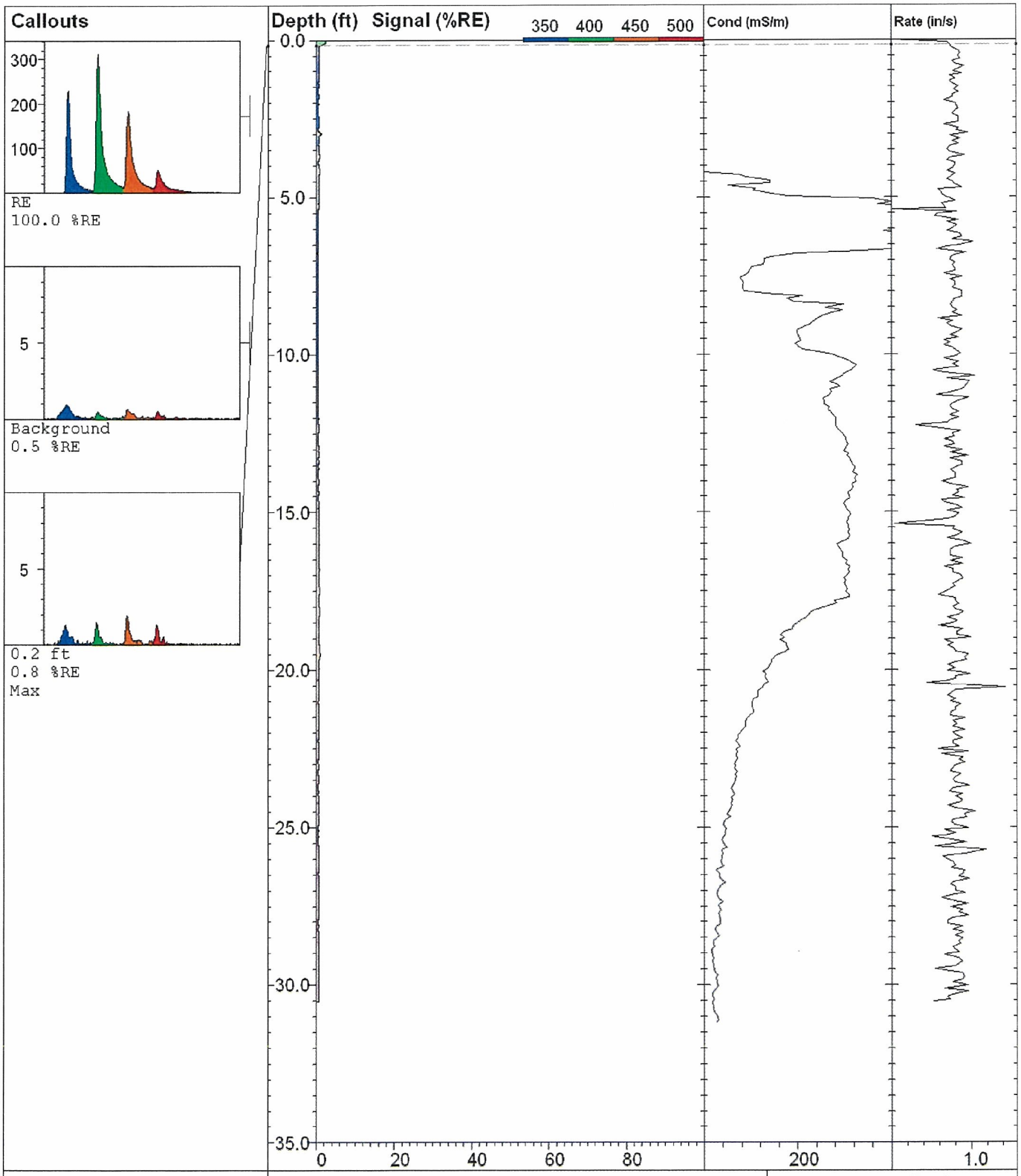
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.742 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.942 / 0D** | *Max signal:* **46.8 % @ 4.66 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 17:17 EDT** |

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# LIF-05-009

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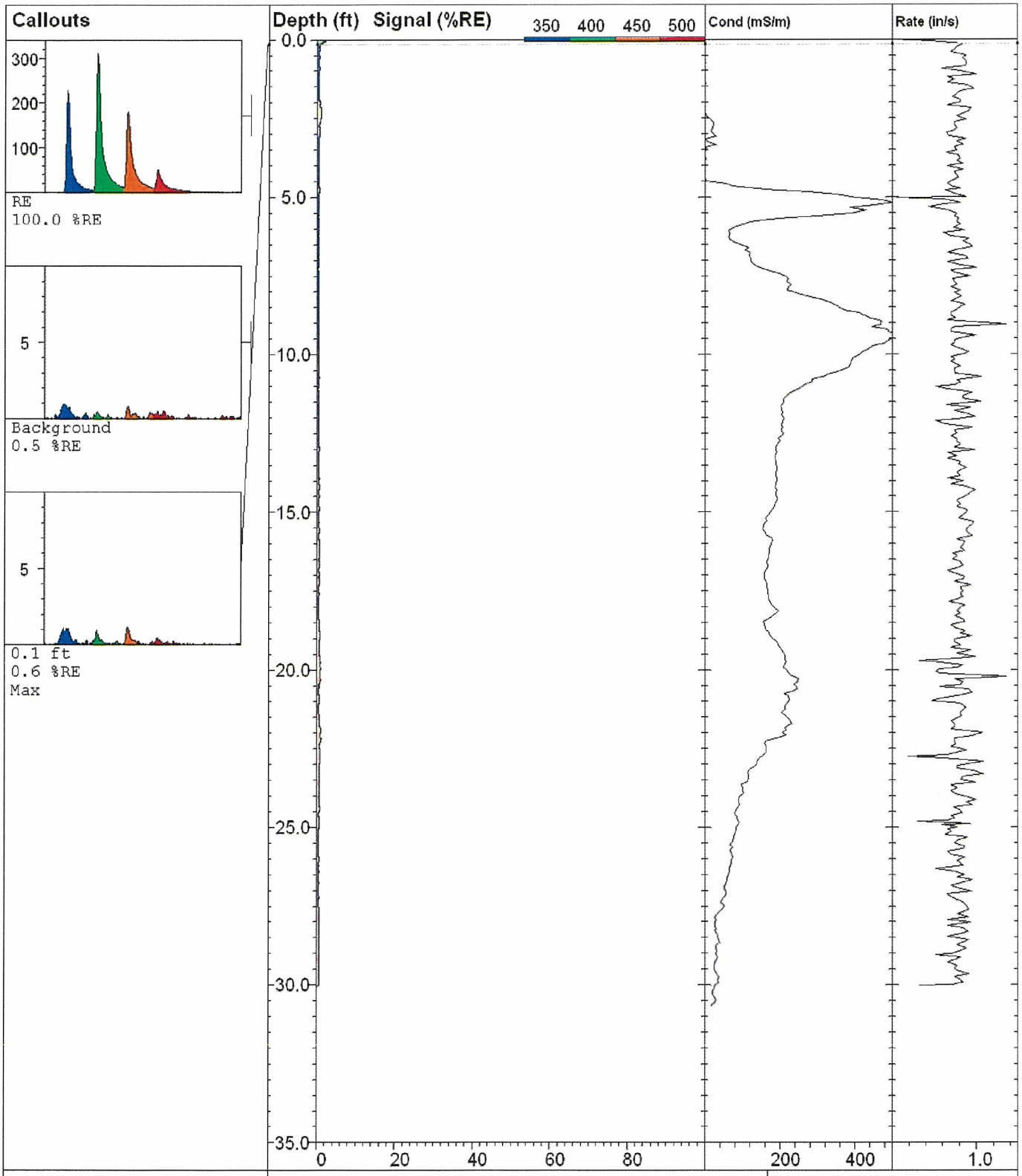
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.121 / ?** | *Final depth:* **30.53 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.082 / 0D** | *Max signal:* **2.4 % @ 0.09 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 09:25 EDT** |

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# LIF-05-010

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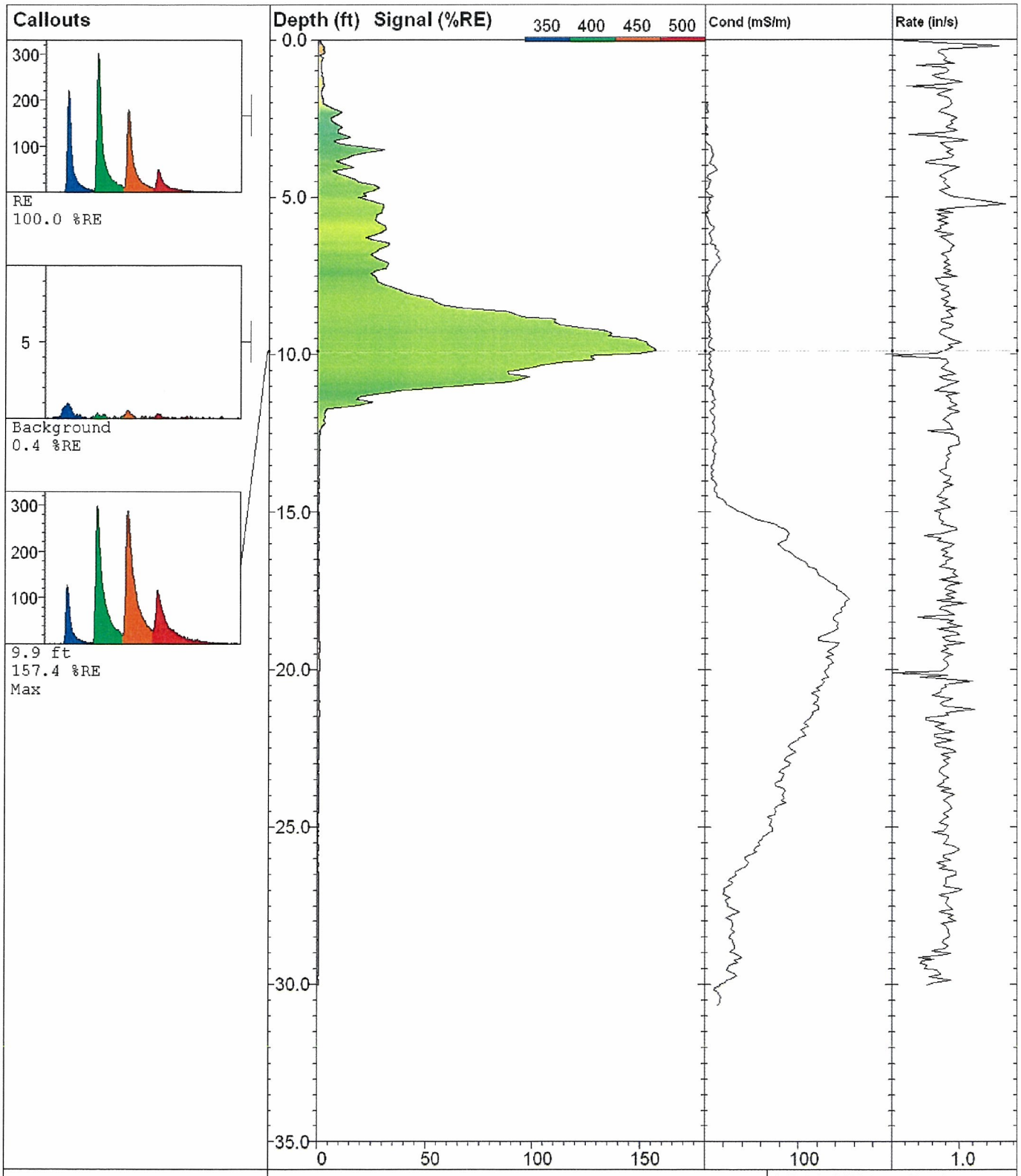
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.085 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.082 / 0D** | *Max signal:* **2.0 % @ 0.06 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 10:04 EDT** |

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# LIF-05-011

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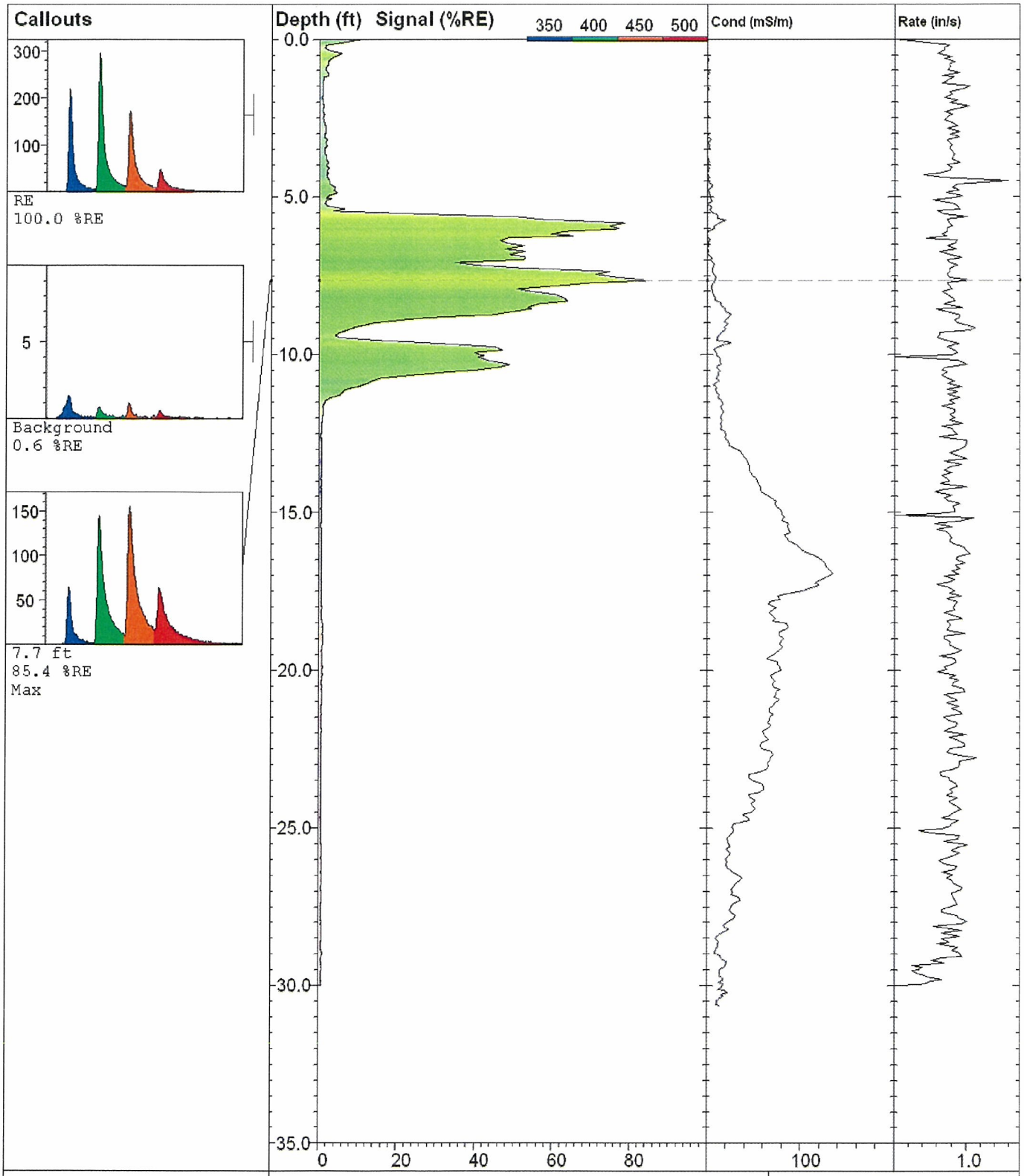
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.068 / ?** | *Final depth:* **30.03 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.090 / 0D** | *Max signal:* **157.4 % @ 9.88 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 10:56 EDT** |

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# LIF-05-012

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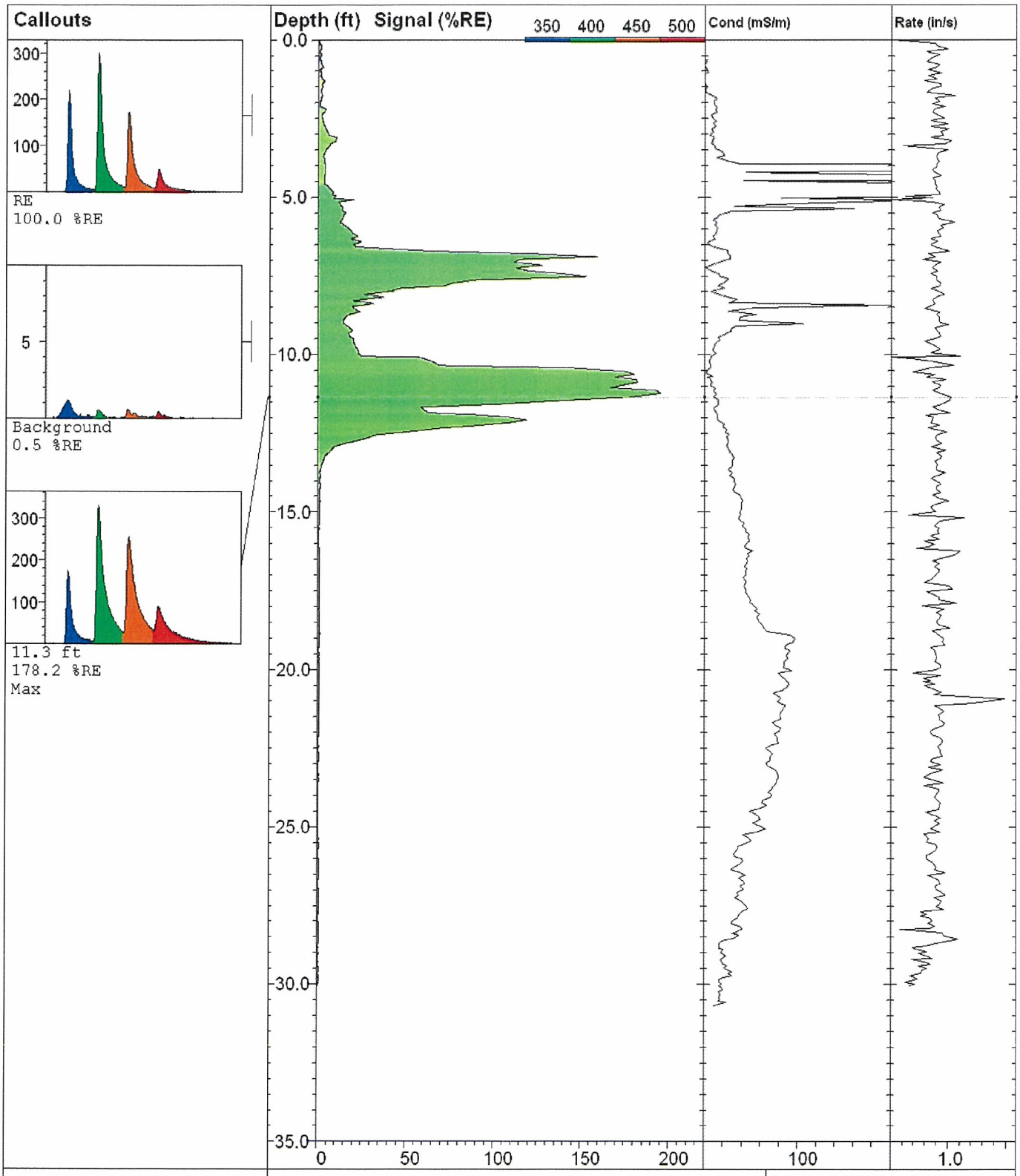
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.036 / ?** | *Final depth:* **30.00 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.089 / 0D** | *Max signal:* **85.4 % @ 7.65 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 11:34 EDT** |

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# LIF-05-013

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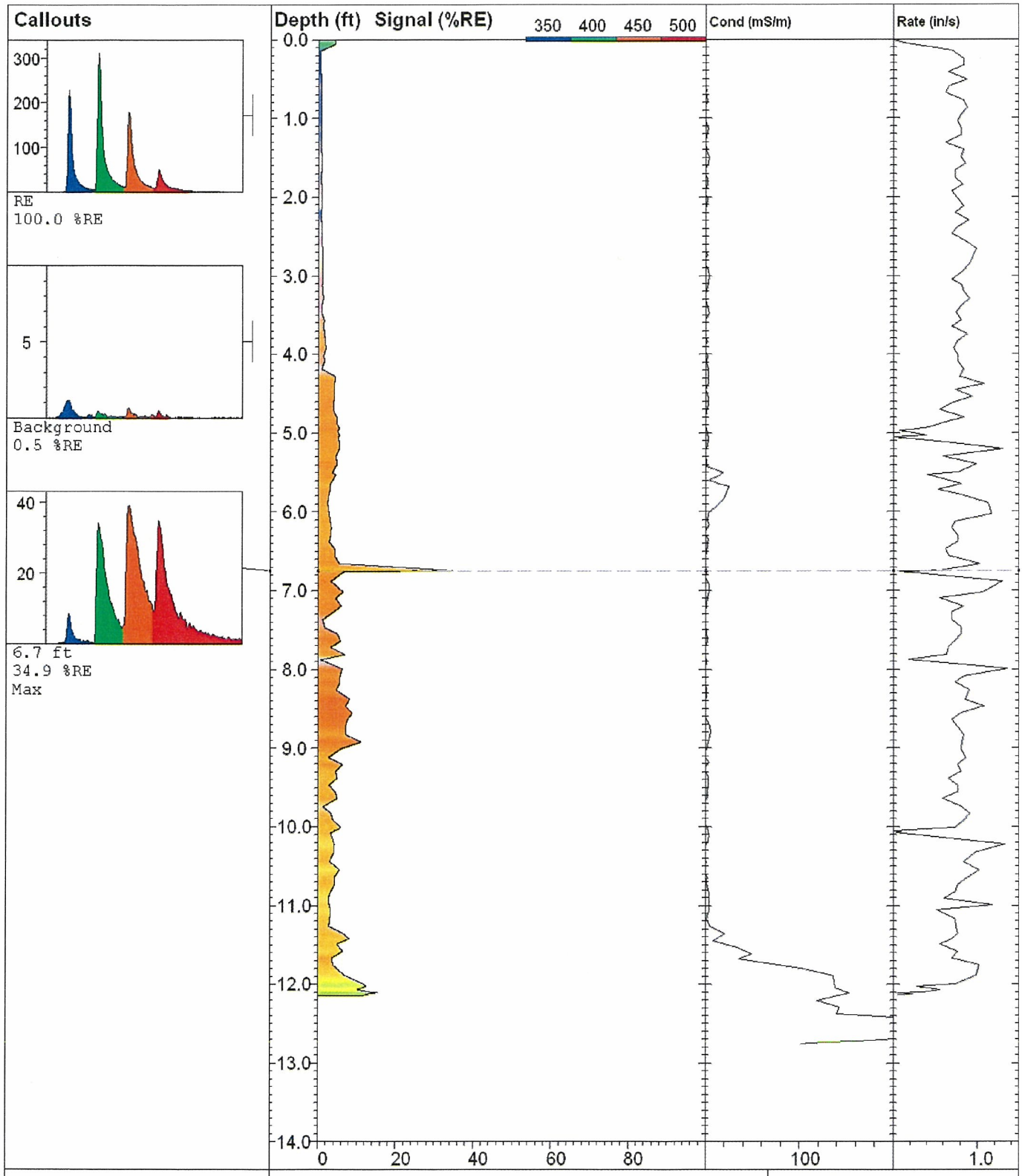
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.027 / ?** | *Final depth:* **30.06 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.098 / 0D** | *Max signal:* **195.3 % @ 11.24 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 12:54 EDT** |

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# LIF-05-014

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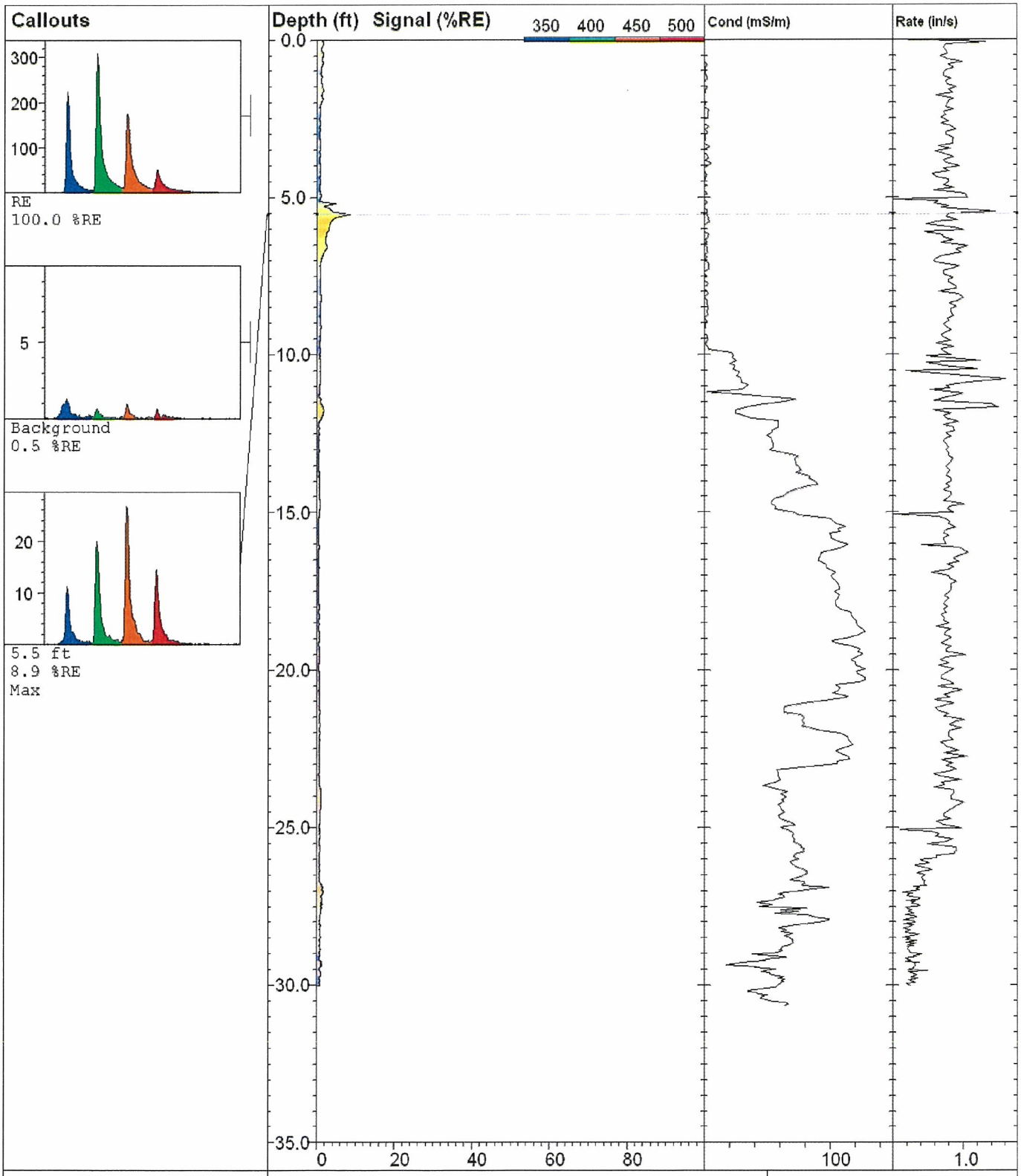
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.045 / ?** | *Final depth:* **12.15 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.102 / 0D** | *Max signal:* **34.9 % @ 6.75 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 13:27 EDT** |

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# LIF-81-012

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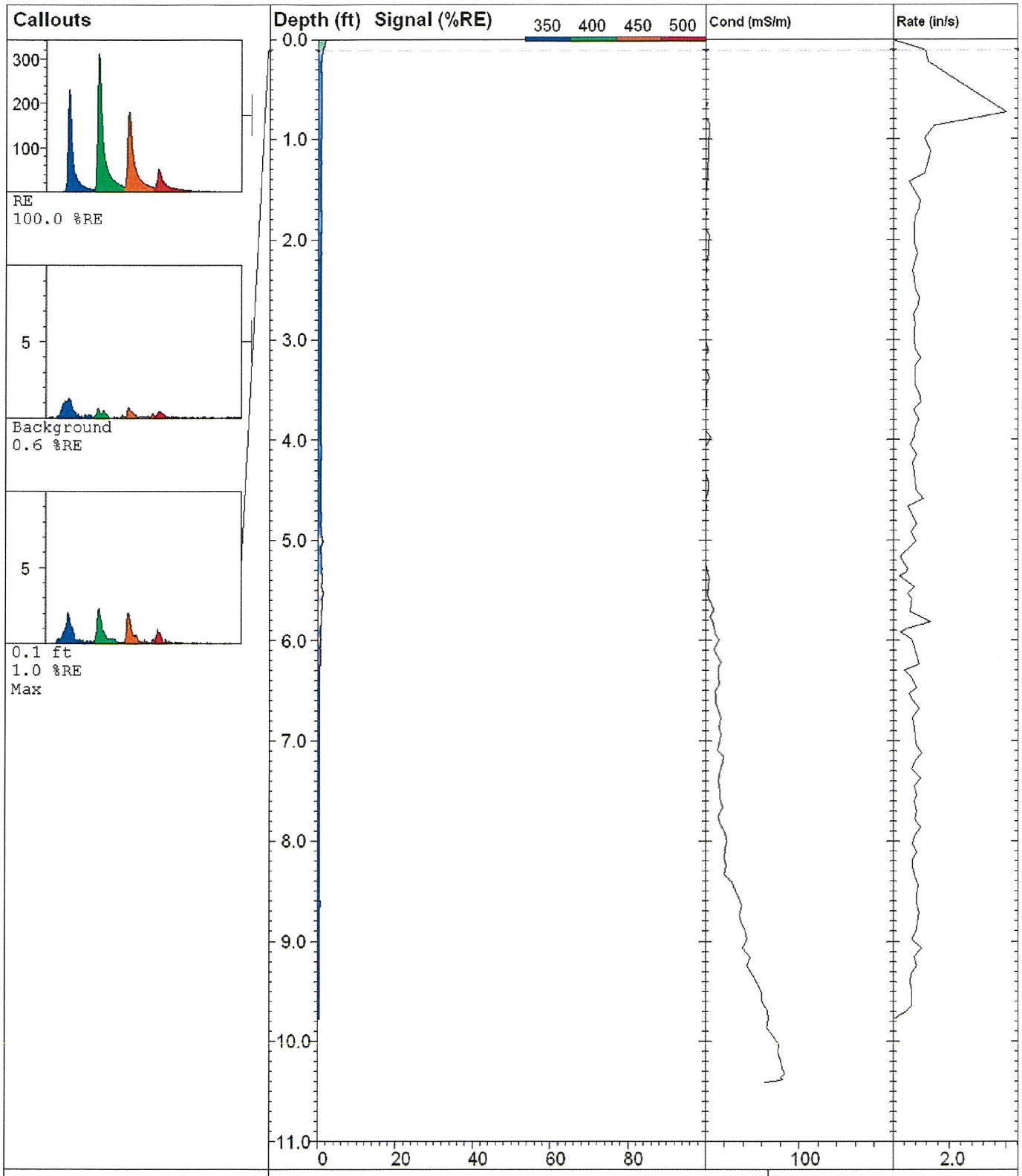
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.869 / ?** | *Final depth:* **30.03 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.945 / 0D** | *Max signal:* **8.9 % @ 5.54 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-12 14:17 EDT** |

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# LIF-83-027

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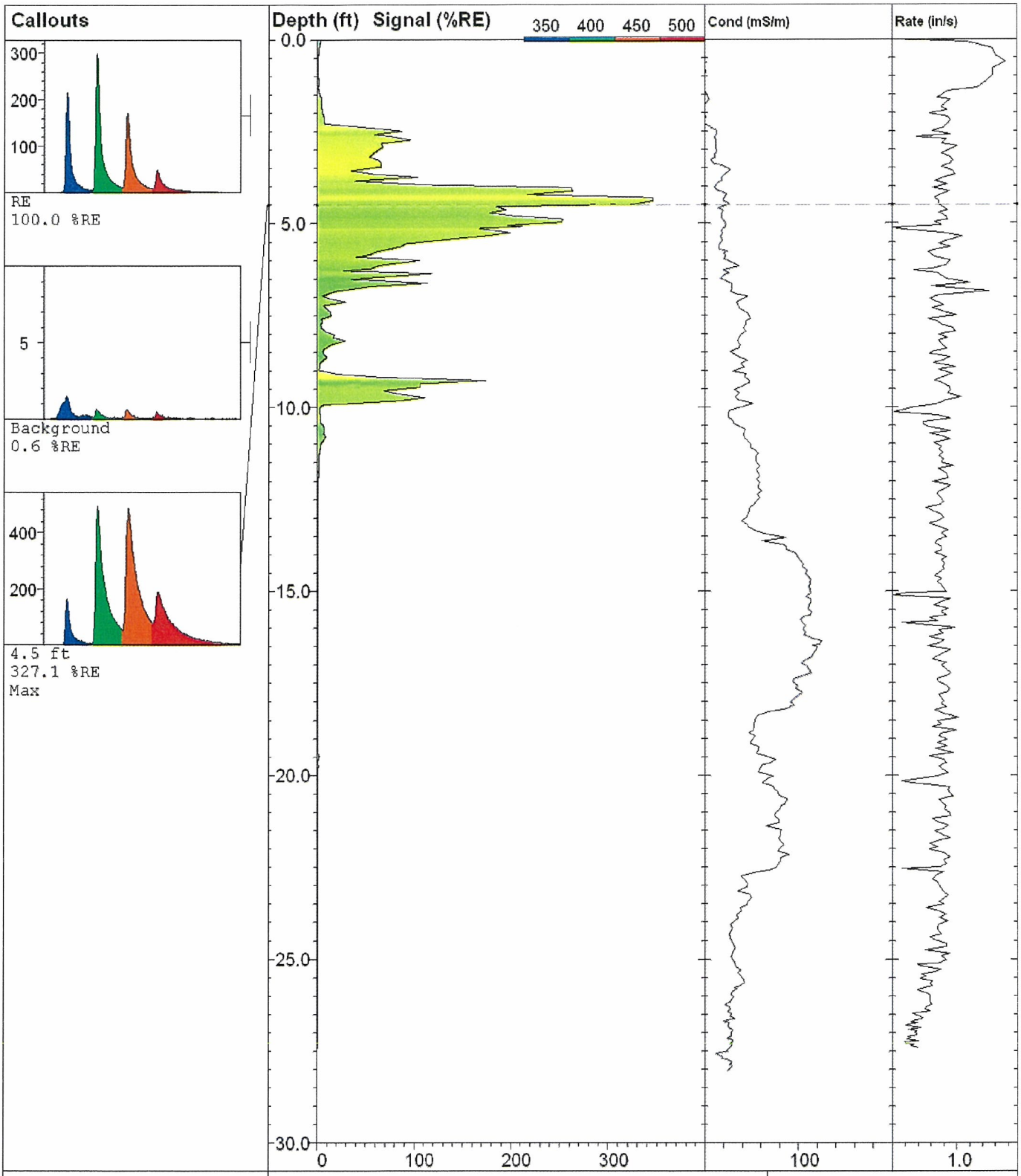
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.783 / ?** | *Final depth:* **9.78 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.138 / 0D** | *Max signal:* **2.1 % @ 0.01 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 14:31 EDT** |

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# LIF-83-028

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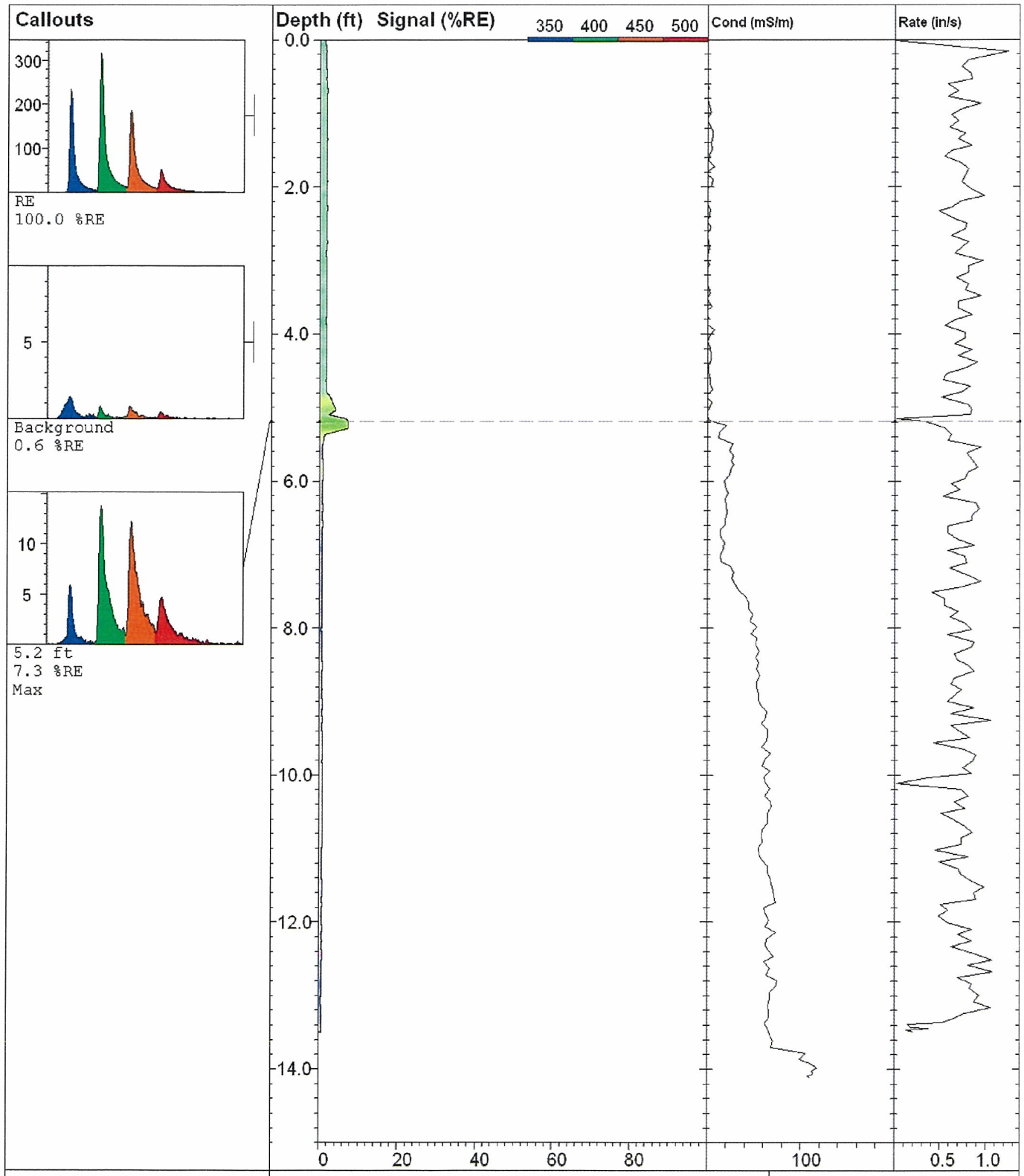
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.744 / ?** | *Final depth:* **27.41 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.173 / 0D** | *Max signal:* **346.0 % @ 4.40 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 14:57 EDT** |

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# LIF-83-029

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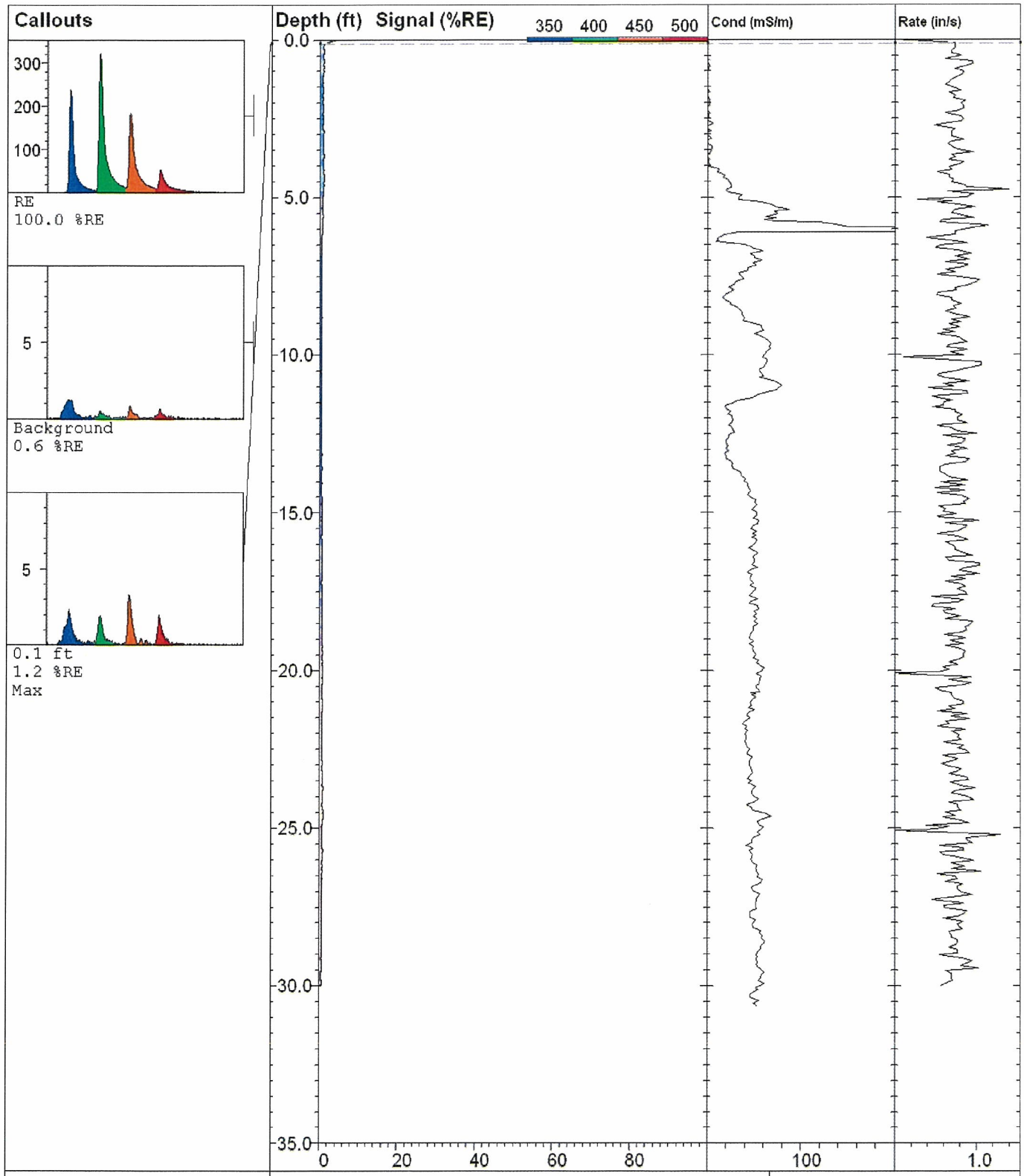
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.831 / ?** | *Final depth:* **13.50 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.103 / 0D** | *Max signal:* **7.3 % @ 5.20 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 15:33 EDT** |

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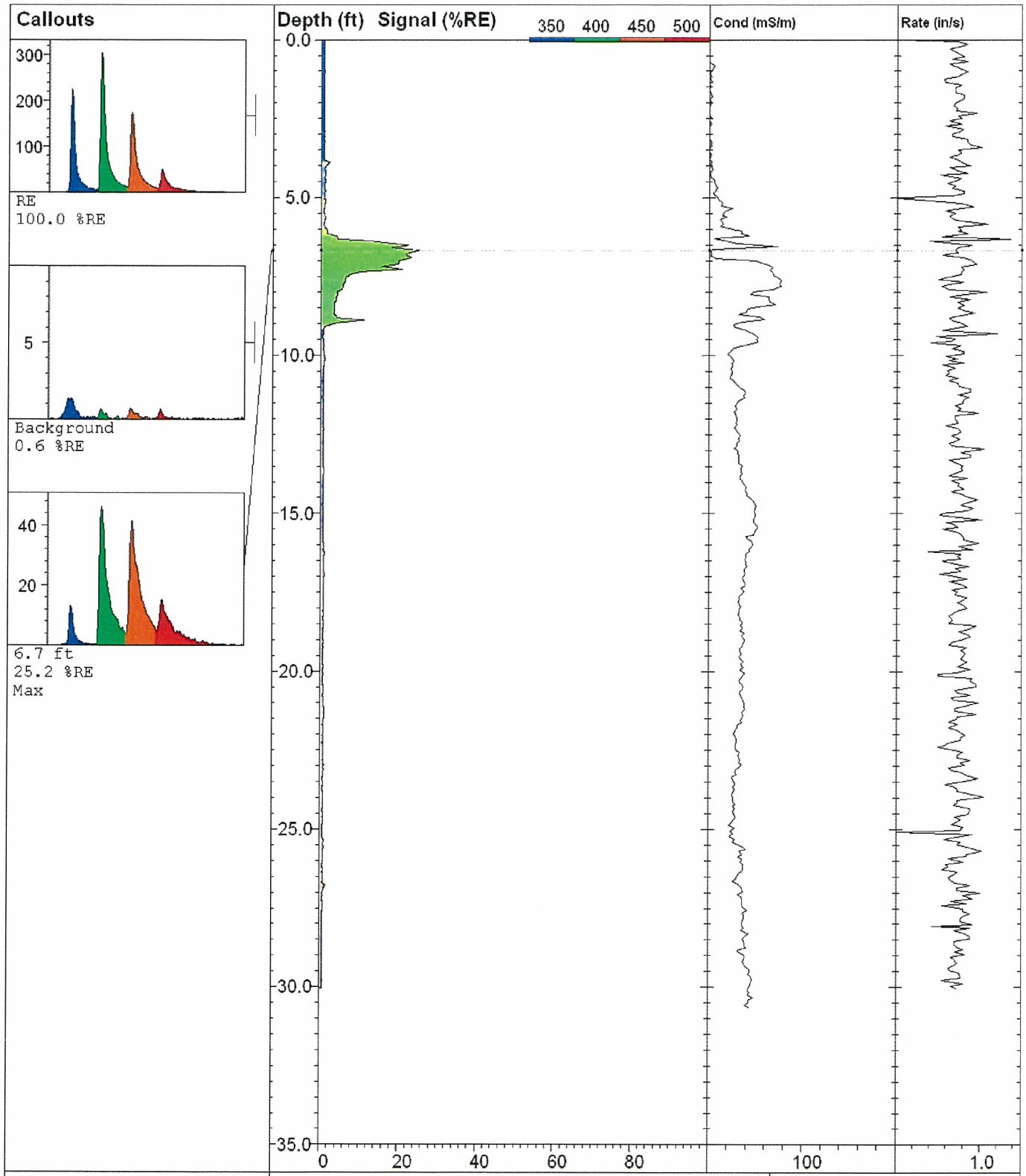
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.852 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.126 / 0D** | *Max signal:* **4.2 % @ 0.01 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 16:21 EDT** |

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# LIF-83-031

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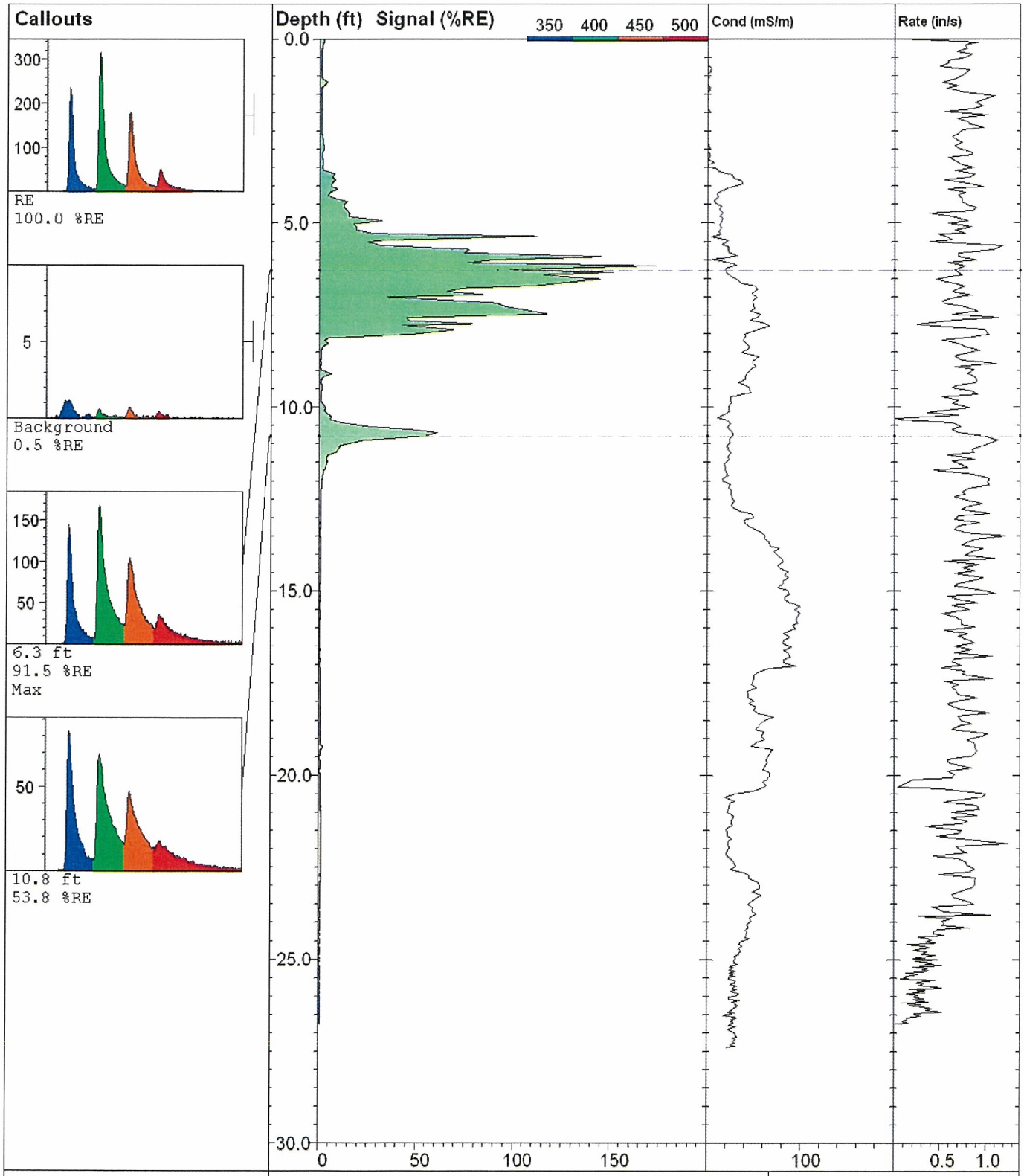
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.845 / ?** | *Final depth:* **30.06 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.175 / 0D** | *Max signal:* **25.2 % @ 6.68 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 16:54 EDT** |

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# LIF-83-020

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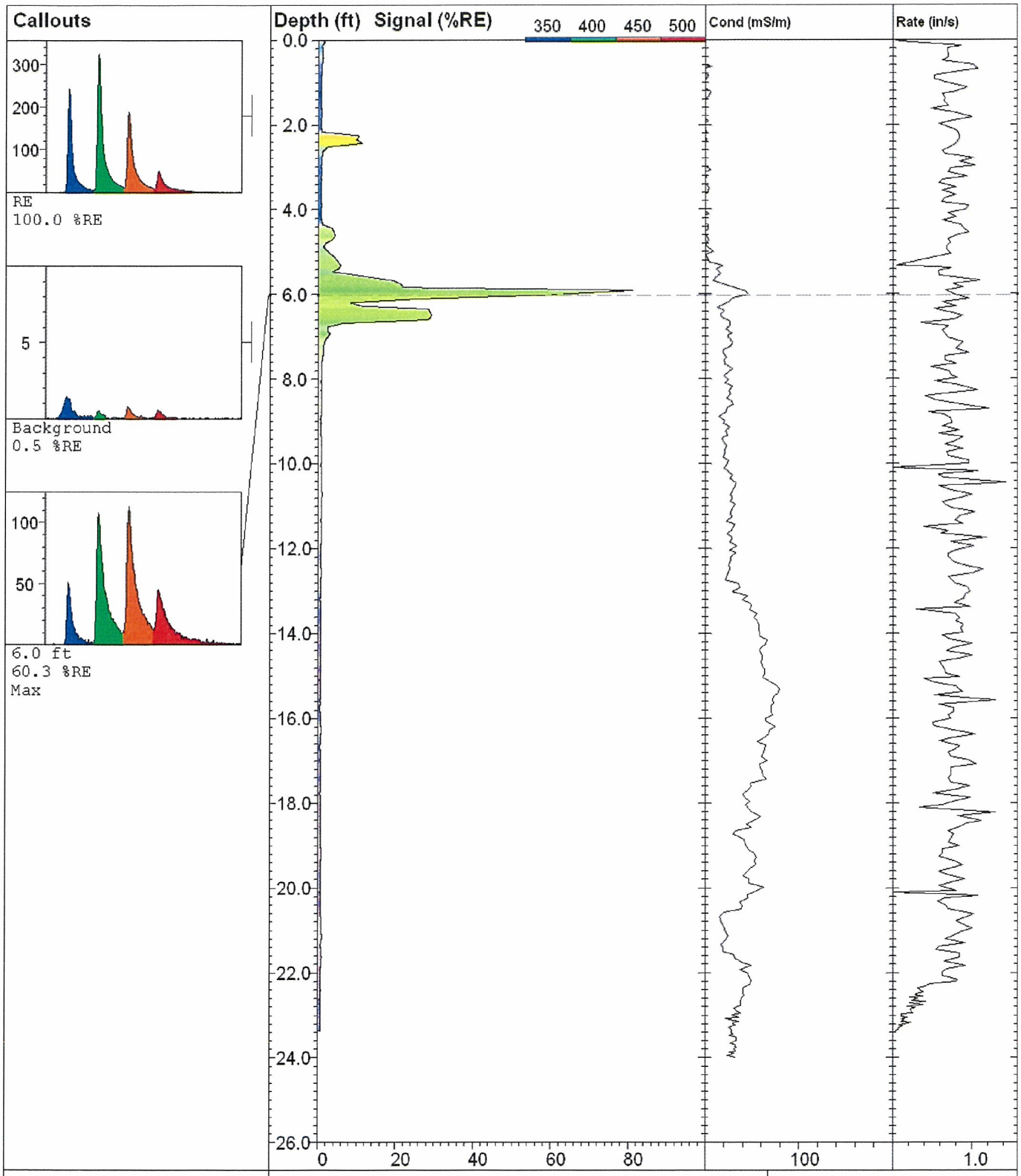
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.704 / ?** | *Final depth:* **26.75 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.169 / 0D** | *Max signal:* **173.4 % @ 6.17 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 09:03 EDT** |

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# LIF-83-021

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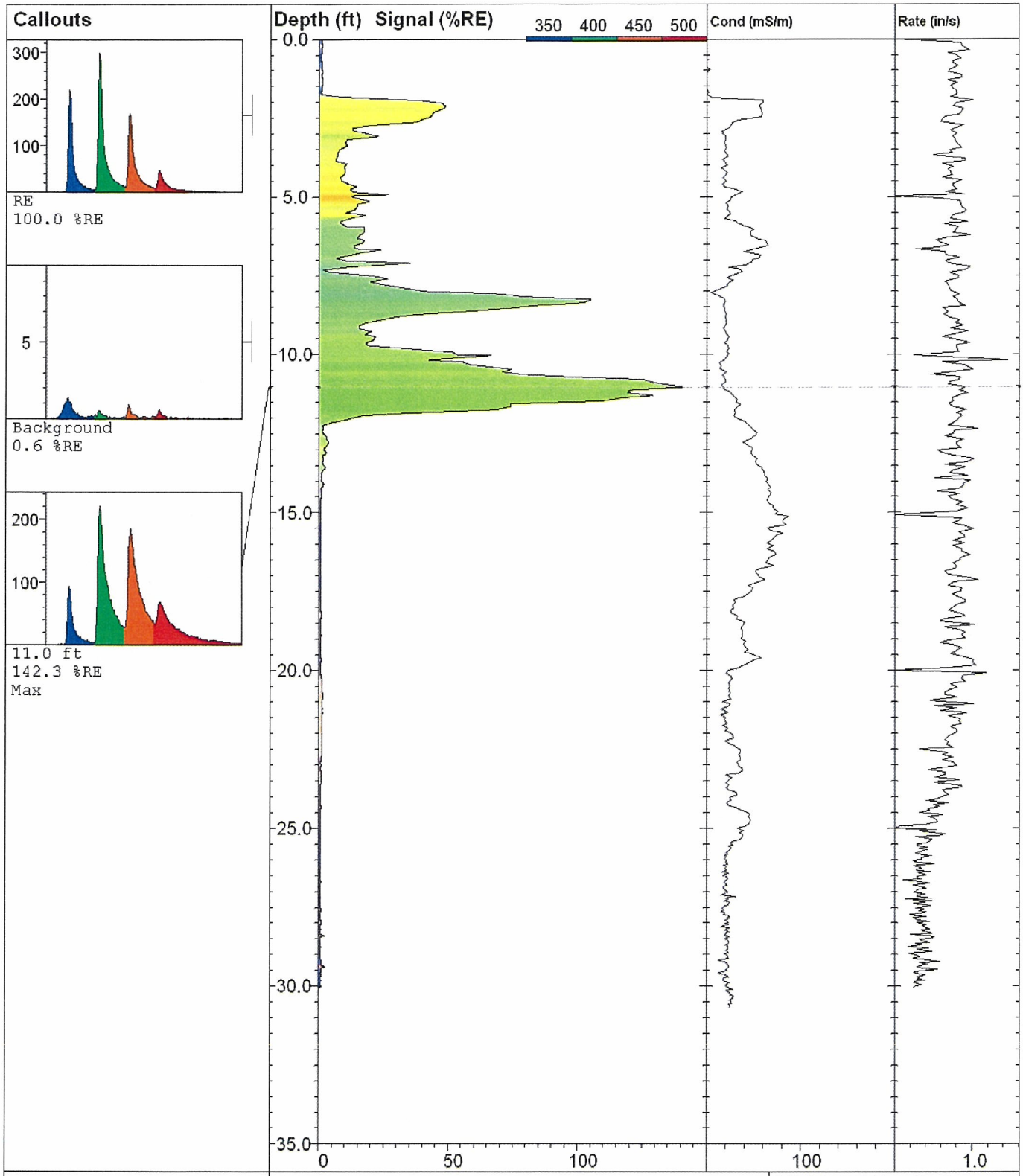
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.675 / ?** | *Final depth:* **23.36 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.167 / 0D** | *Max signal:* **81.4 % @ 5.91 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 09:46 EDT** |

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# LIF-83-022

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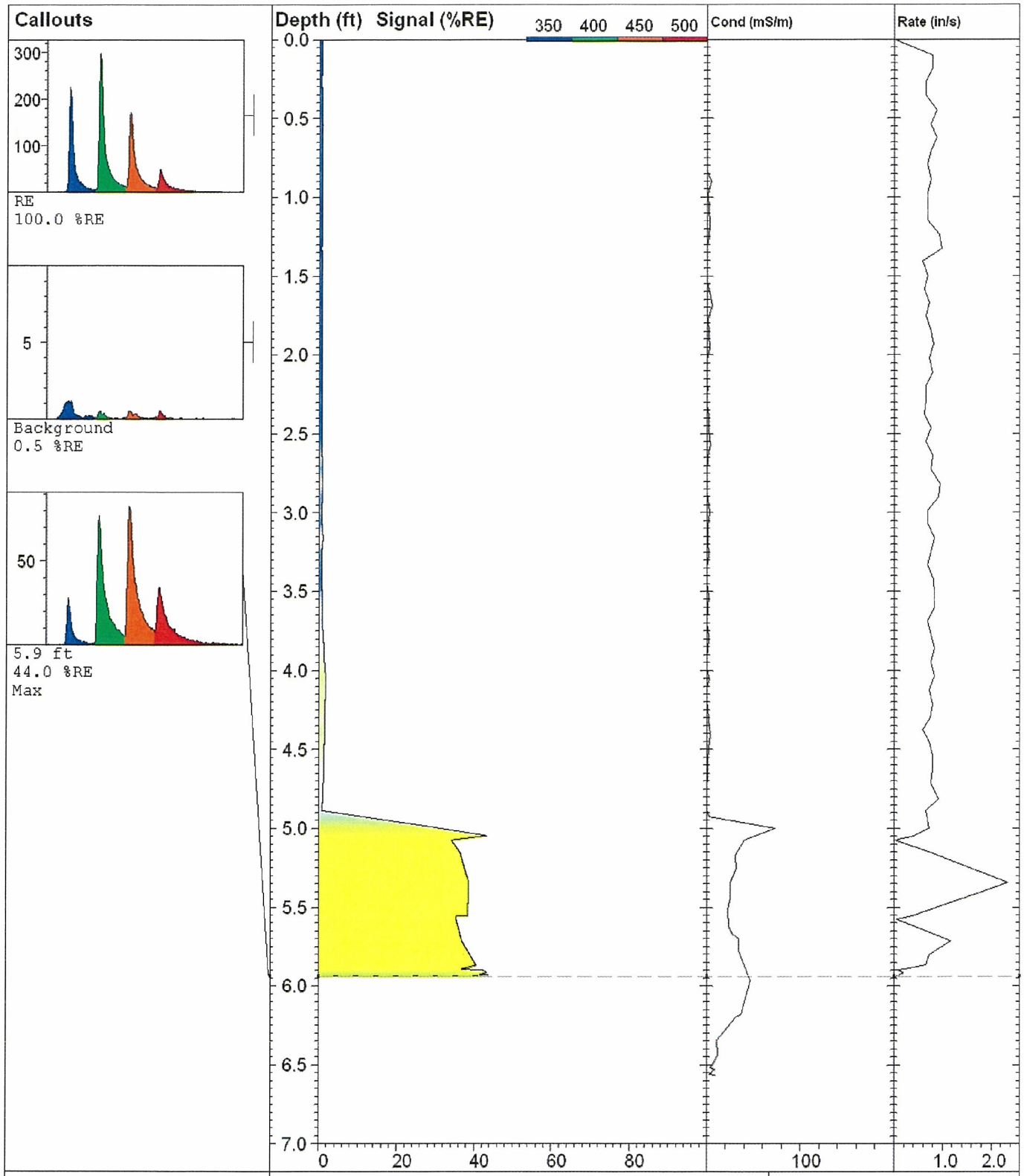
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.678 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.117 / 0D** | *Max signal:* **142.3 % @ 11.03 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 10:48 EDT** |

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# LIF-83-023

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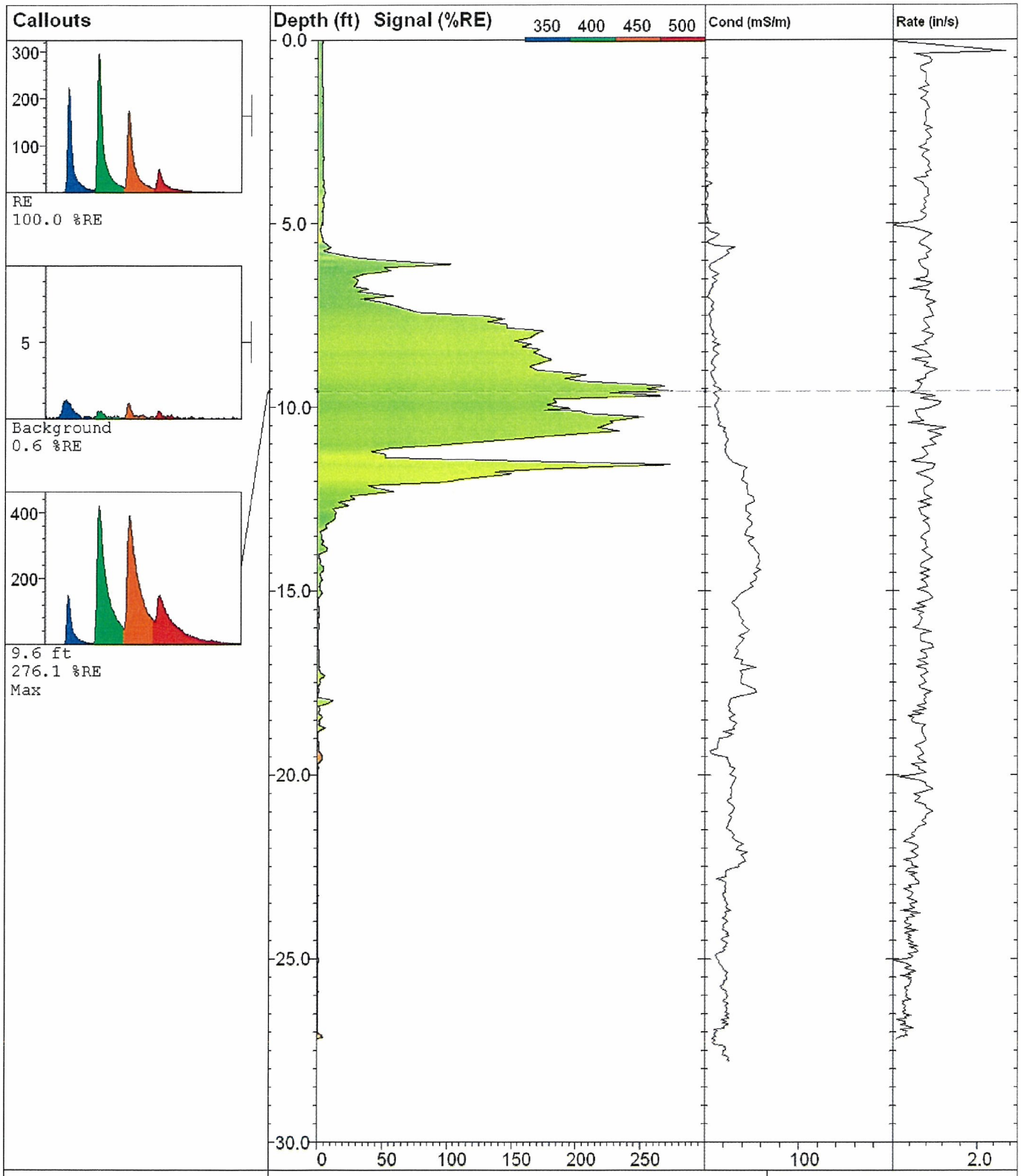
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.645 / ?** | *Final depth:* **5.94 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.125 / 0D** | *Max signal:* **44.0 % @ 5.93 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 11:24 EDT** |

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# LIF-83-024

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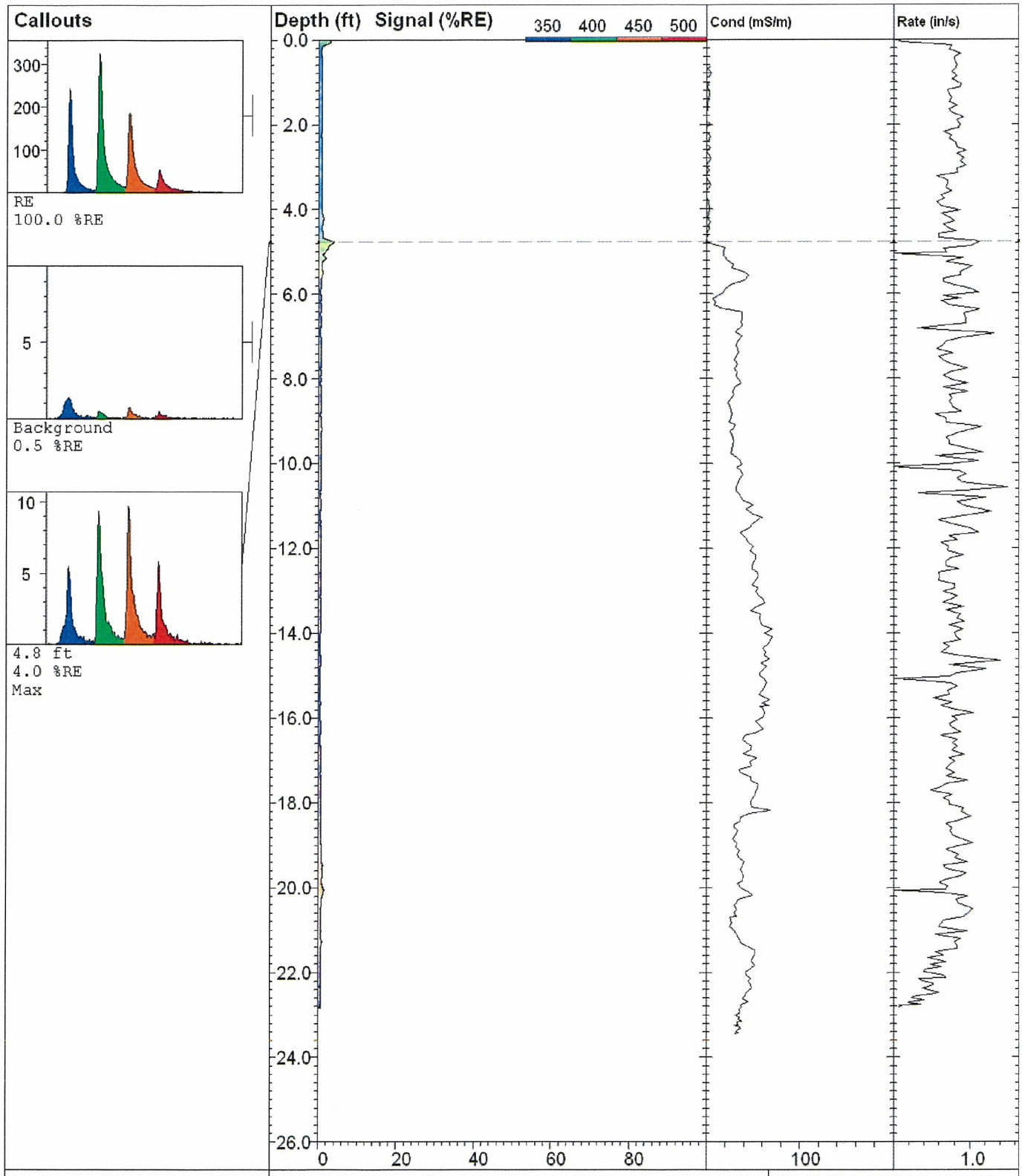
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.608 / ?** | *Final depth:* **27.17 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.145 / 0D** | *Max signal:* **276.1 % @ 9.57 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 11:44 EDT** |

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# LIF-83-025

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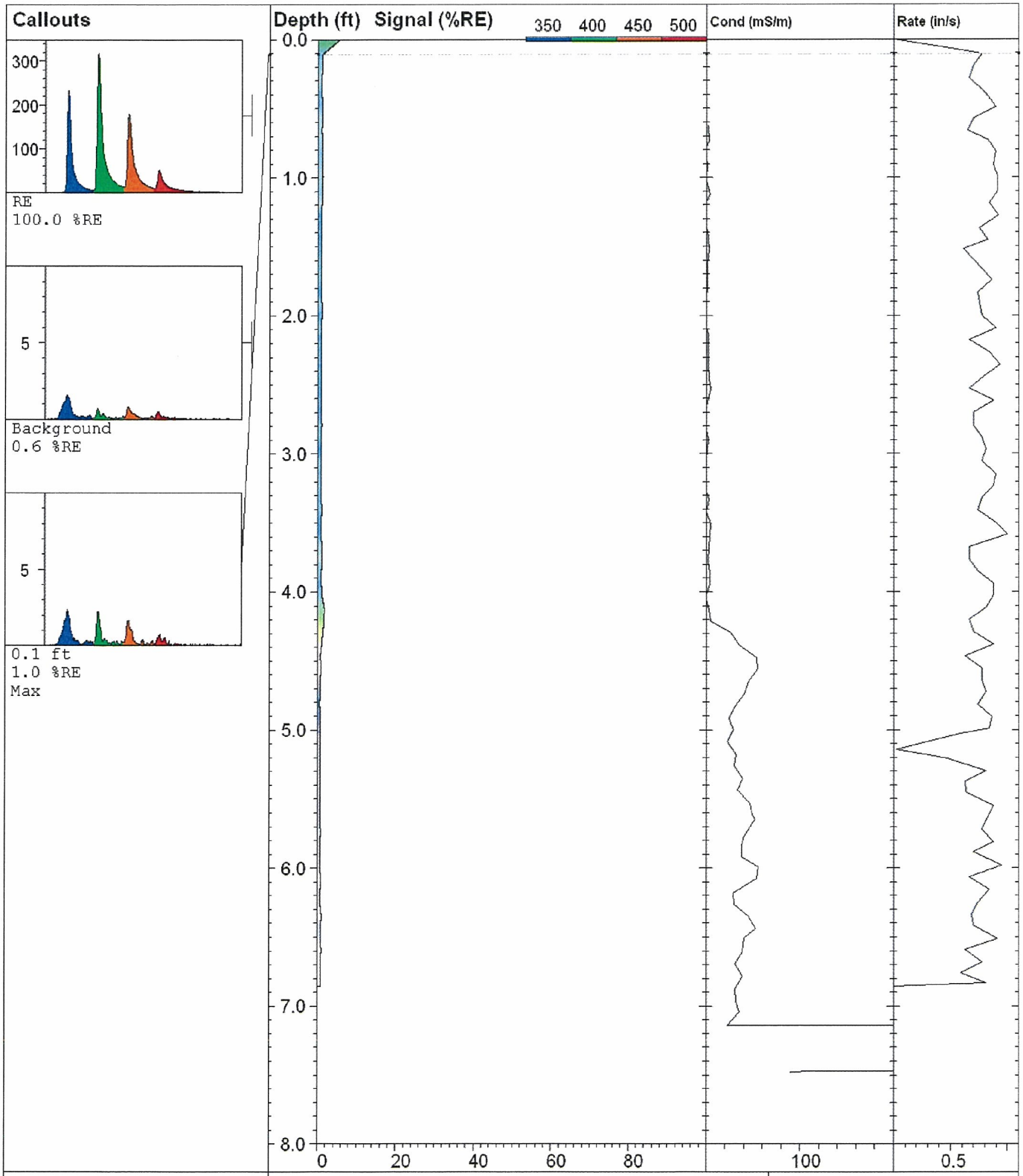
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.644 / ?** | *Final depth:* **22.84 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.182 / 0D** | *Max signal:* **4.0 % @ 4.77 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 13:40 EDT** |

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# LIF-83-026

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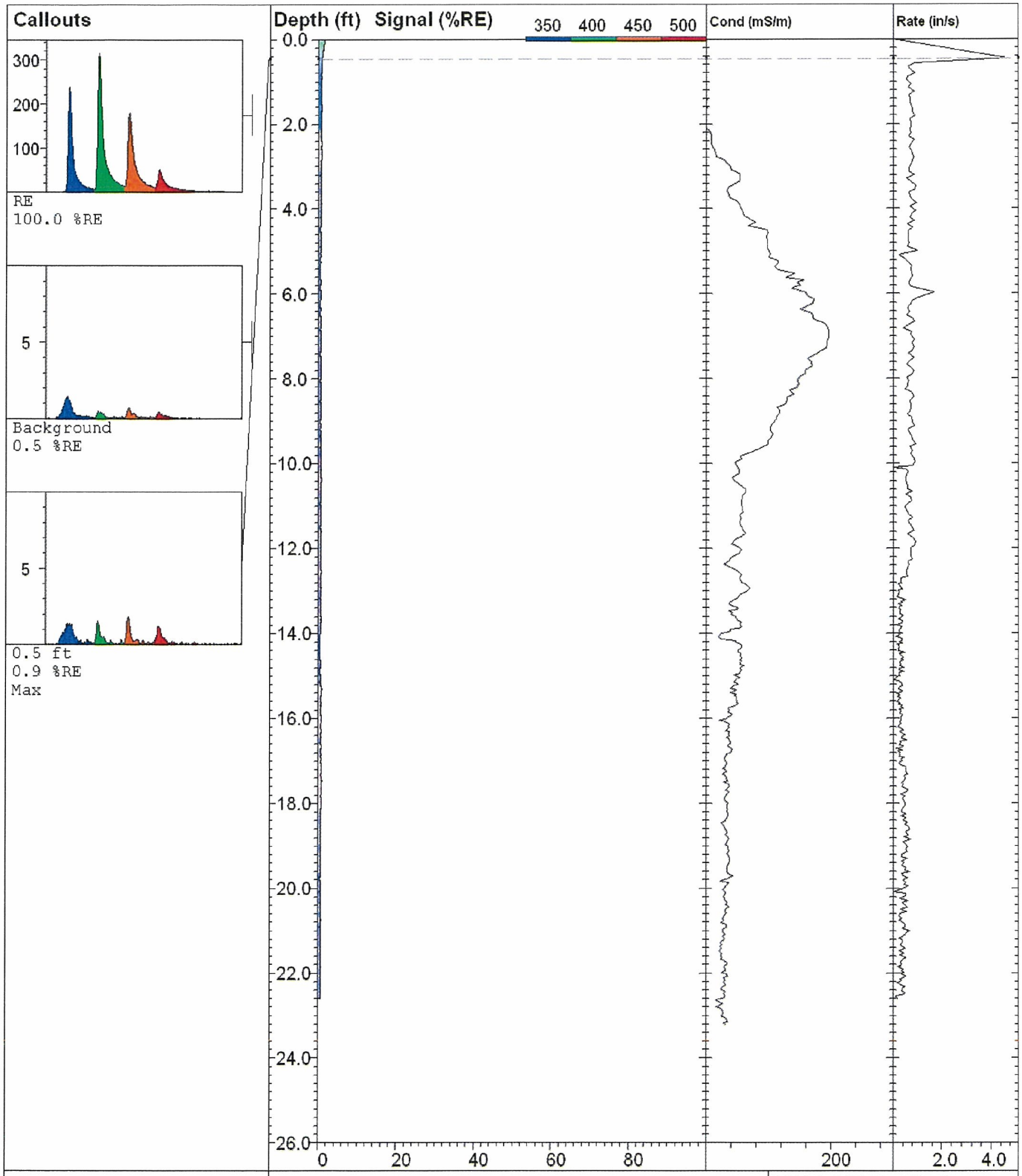
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.784 / ?** | *Final depth:* **6.86 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.116 / 0D** | *Max signal:* **5.6 % @ 0.00 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-13 14:09 EDT** |

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# LIF-86-008

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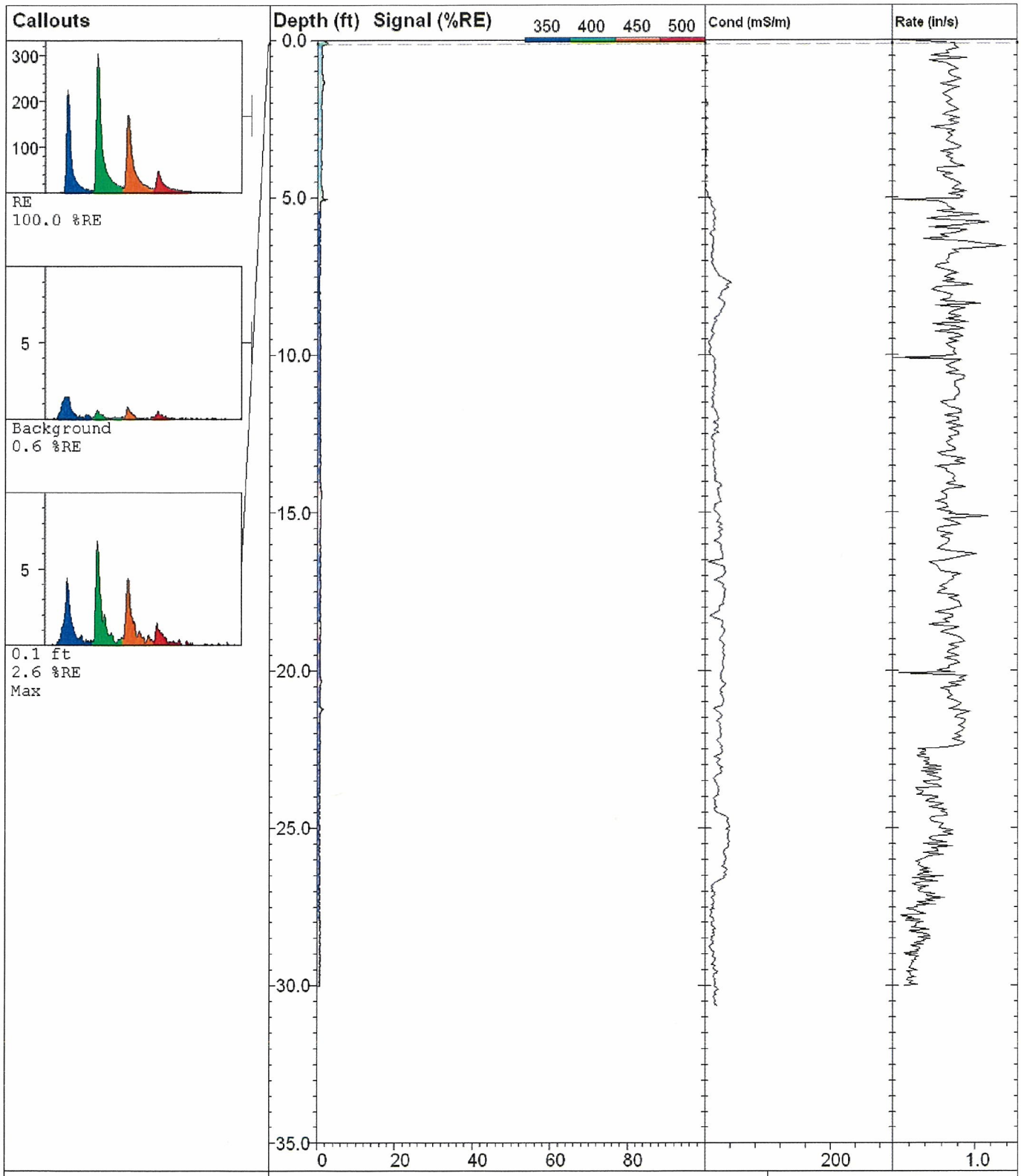
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.590 / ?** | *Final depth:* **22.59 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.994 / 0D** | *Max signal:* **1.6 % @ 0.01 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-14 11:31 EDT** |

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# LIF-86-009

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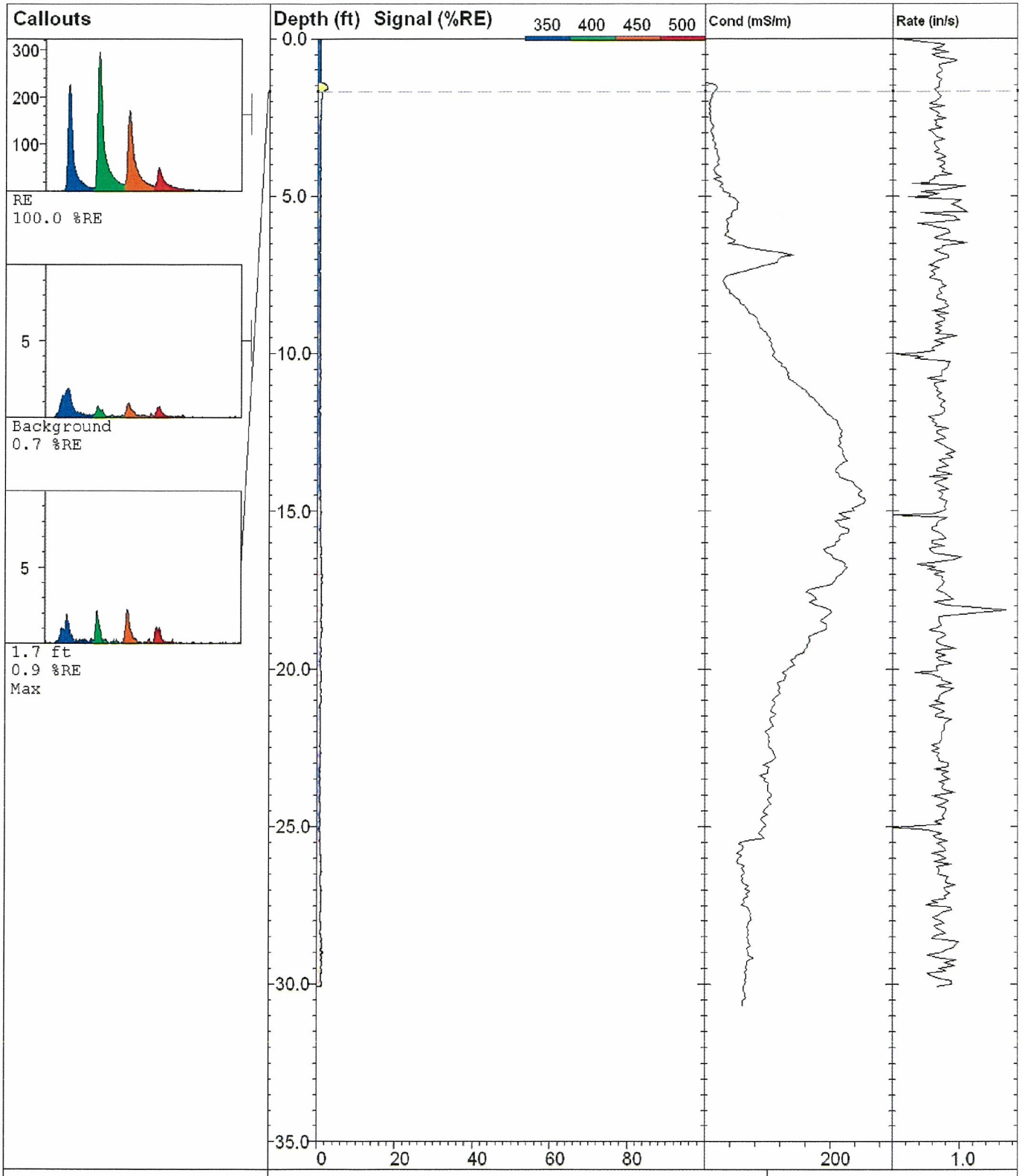
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.590 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.40.994 / 0D** | *Max signal:* **2.6 % @ 0.10 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-14 13:53 EDT** |

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# LIF-83-032

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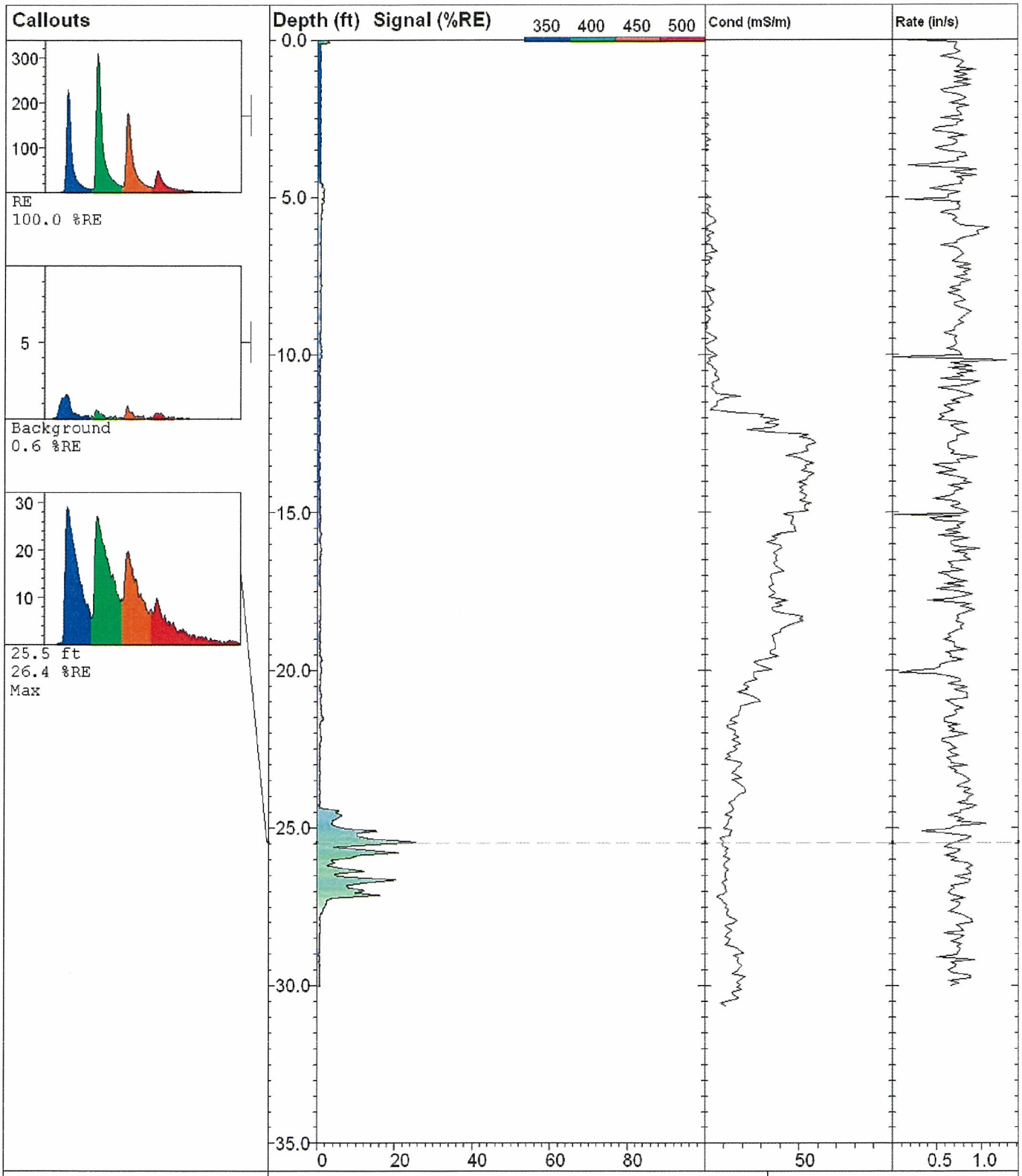
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.868 / ?** | *Final depth:* **30.07 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.191 / 0D** | *Max signal:* **2.4 % @ 1.61 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-14 09:54 EDT** |

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# LIF-40-030

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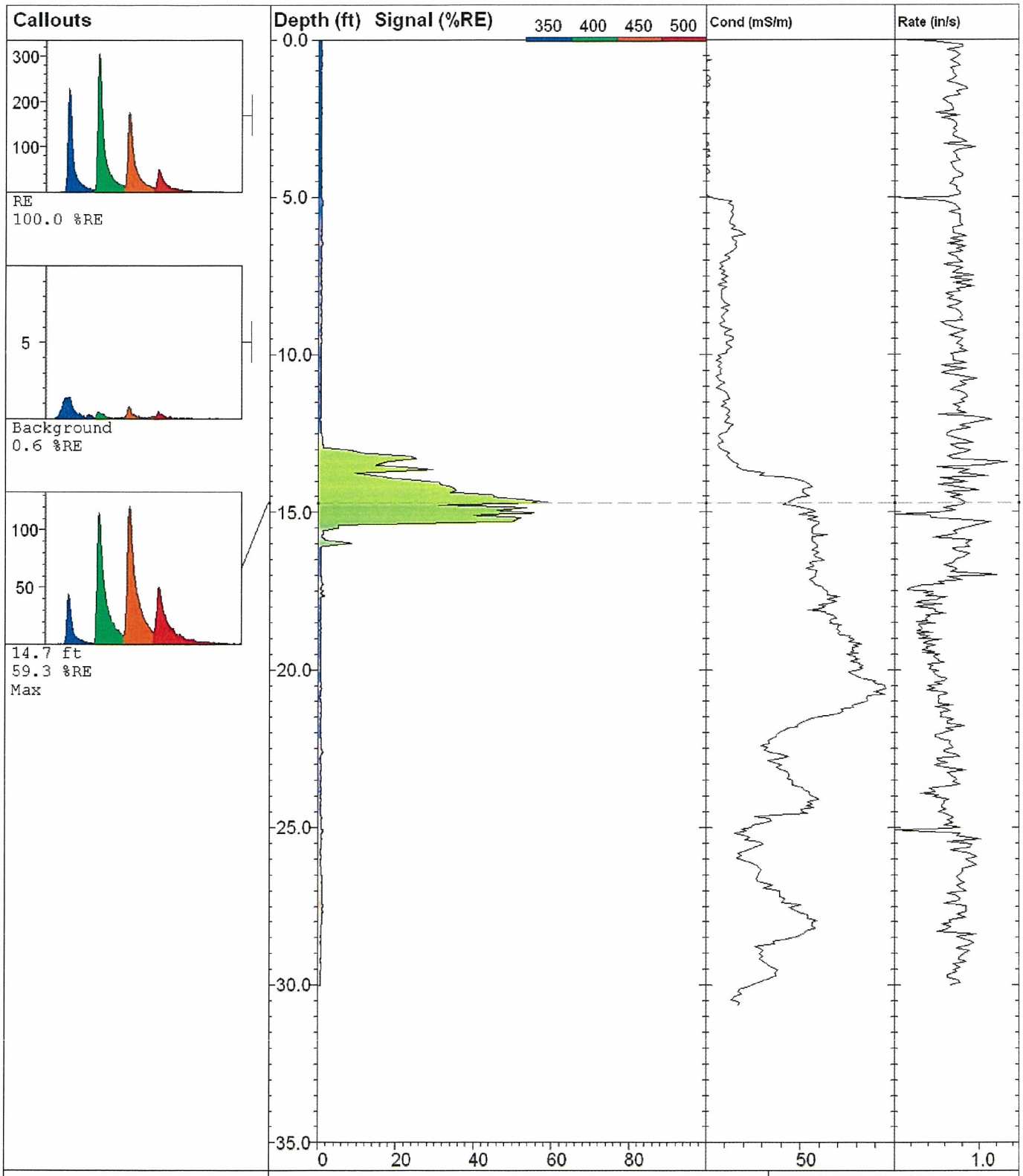
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.371 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.073 / 0D** | *Max signal:* **26.4 % @ 25.46 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-17 10:21 EDT** |




| | | |
|---|---|---|
| **LIF-40-031** | | **UVOST By Dakota** www.DakotaTechnologies.com |
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.357 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.066 / 0D** | *Max signal:* **59.3 % @ 14.69 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-17 10:54 EDT** |

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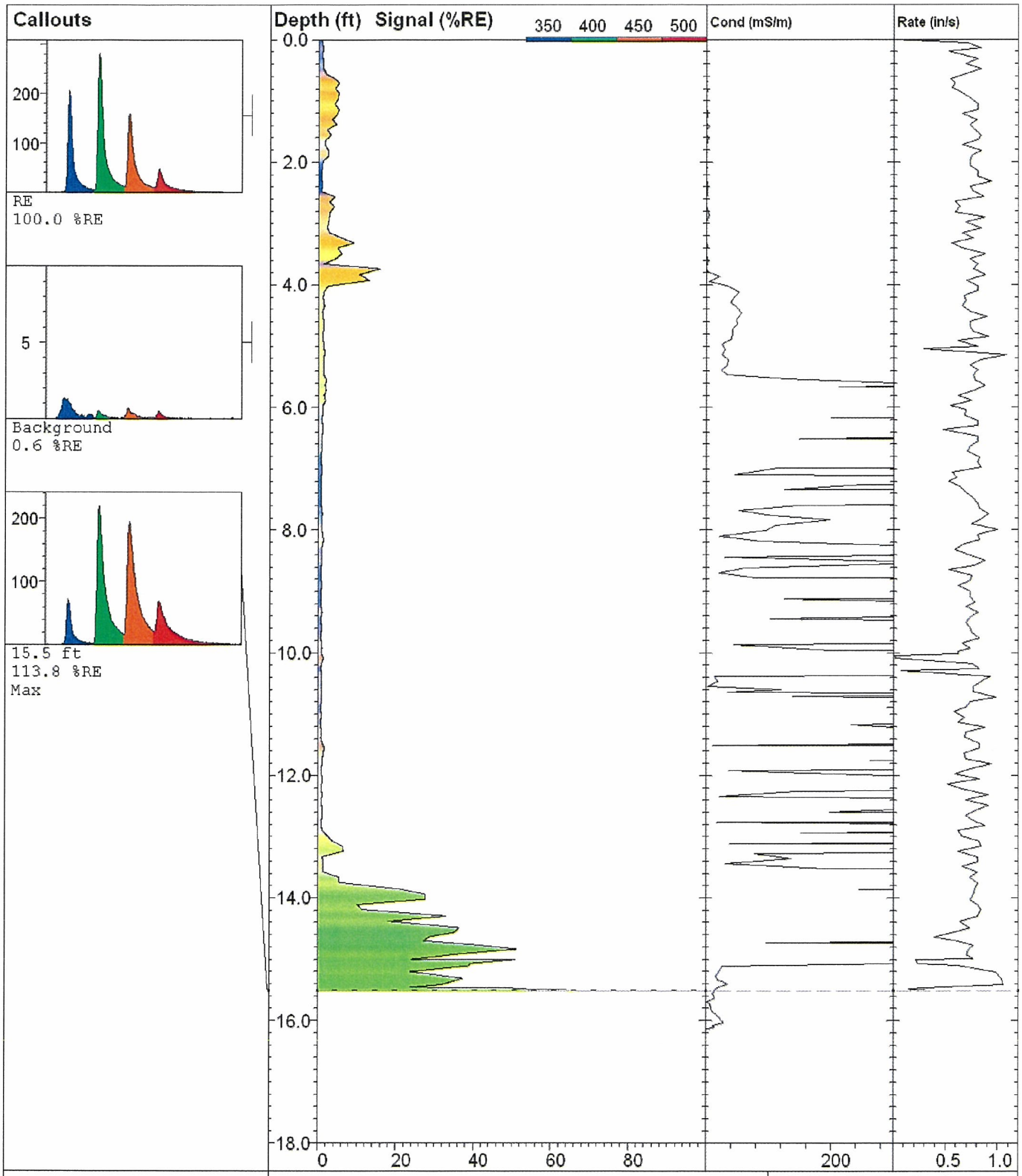


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# LIF-16-027

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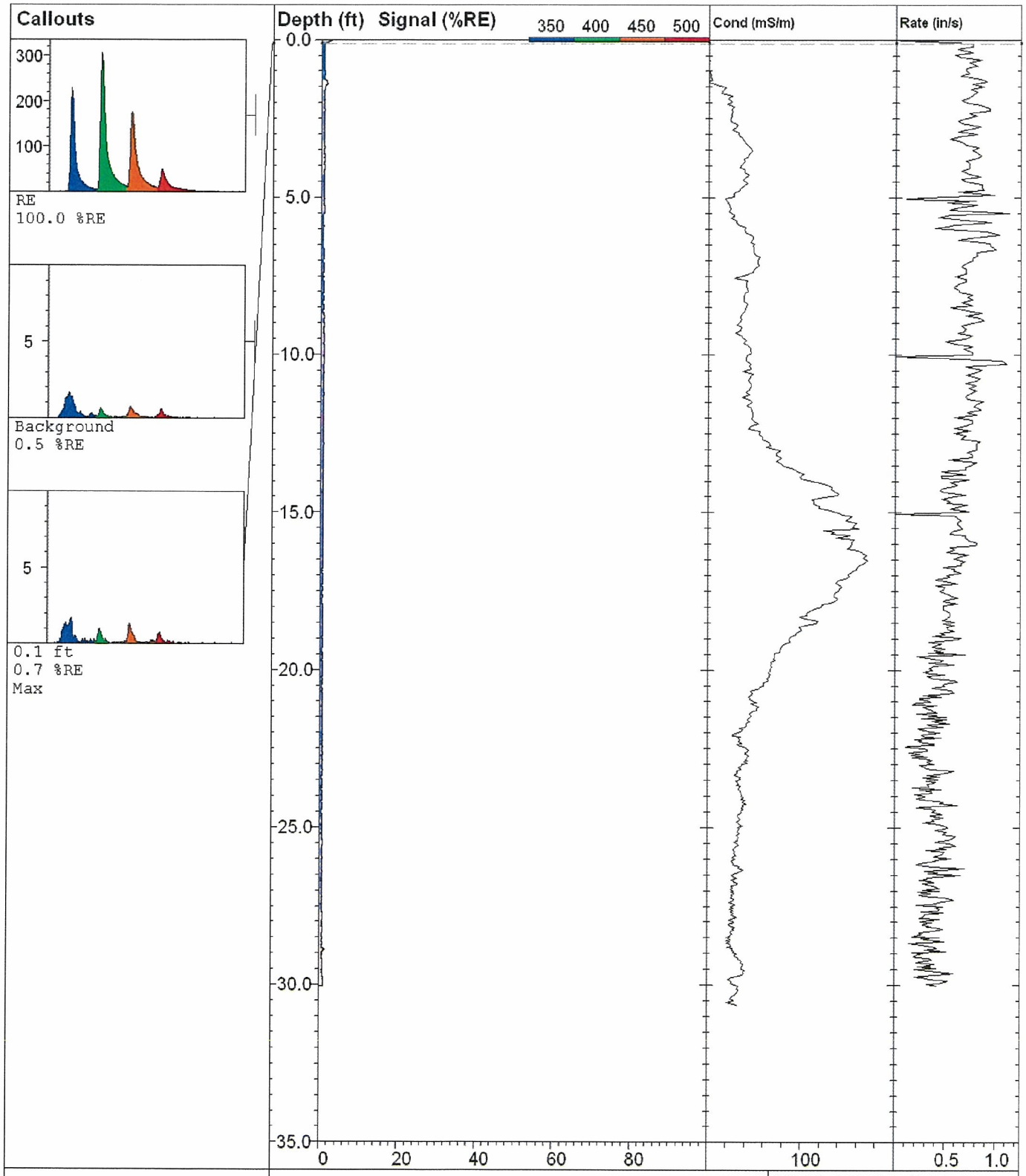
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.245 / ?** | *Final depth:* **15.51 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.073 / 0D** | *Max signal:* **113.8 % @ 15.51 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-17 14:47 EDT** |

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# LIF-16-025

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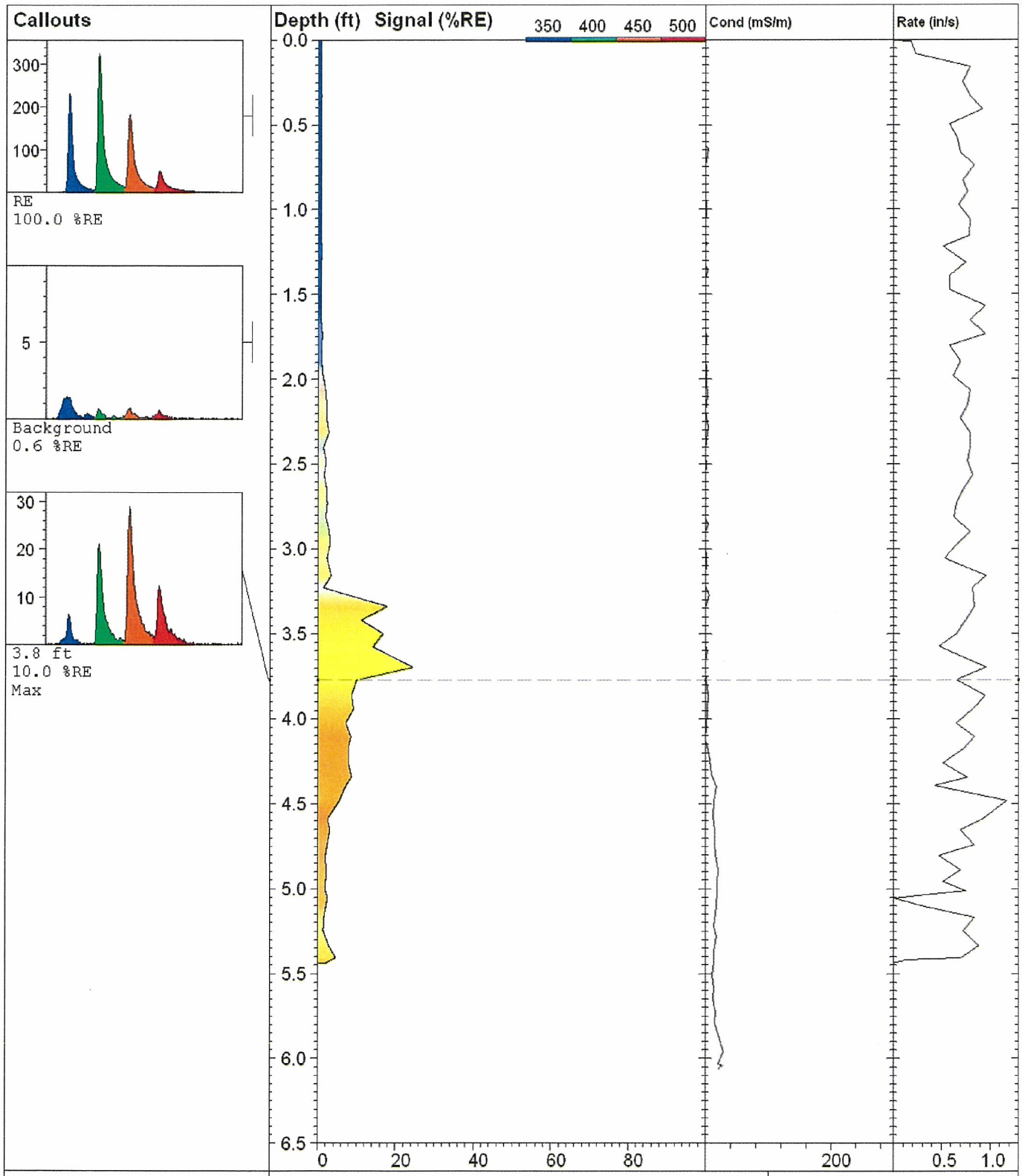
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.232 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.038 / 0D** | *Max signal:* **2.6 % @ 0.03 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-17 12:04 EDT** |

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# LIF-16-026

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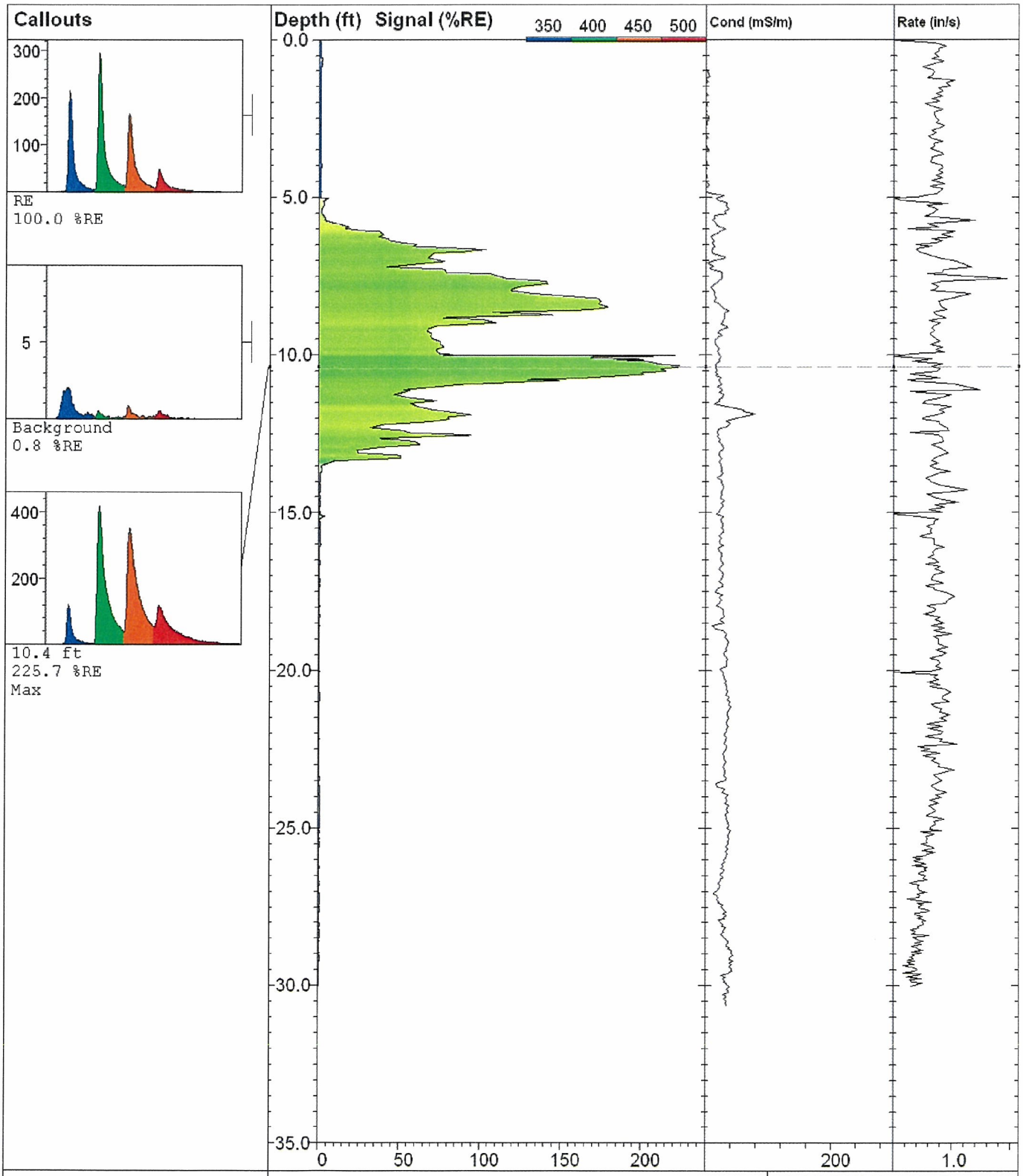
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.230 / ?** | *Final depth:* **5.44 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.113 / 0D** | *Max signal:* **24.5 % @ 3.70 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-17 14:23 EDT** |

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# LIF-16-027

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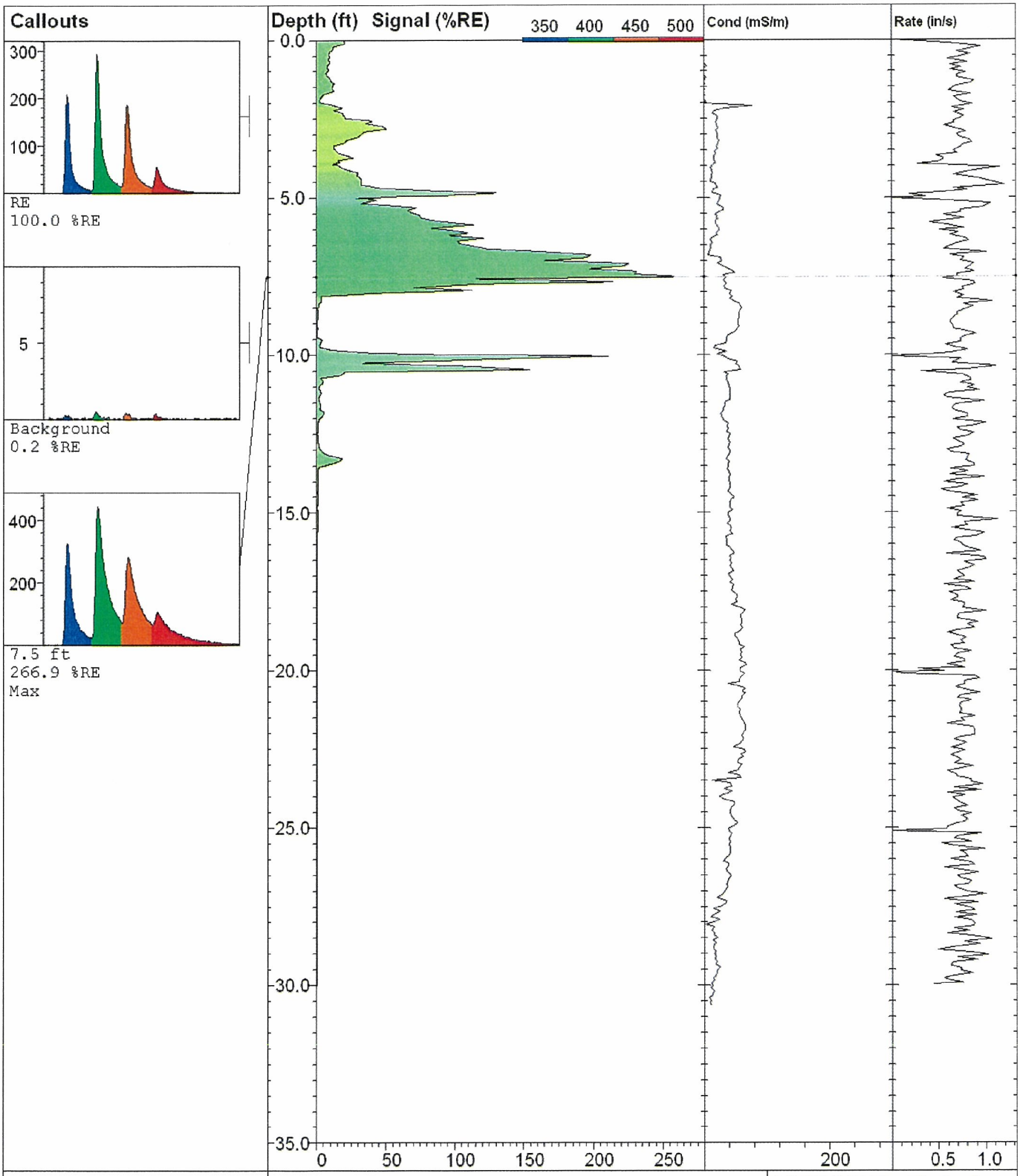
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.226 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.064 / 0D** | *Max signal:* **225.7 % @ 10.36 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-17 15:46 EDT** |

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# LIF-83-033

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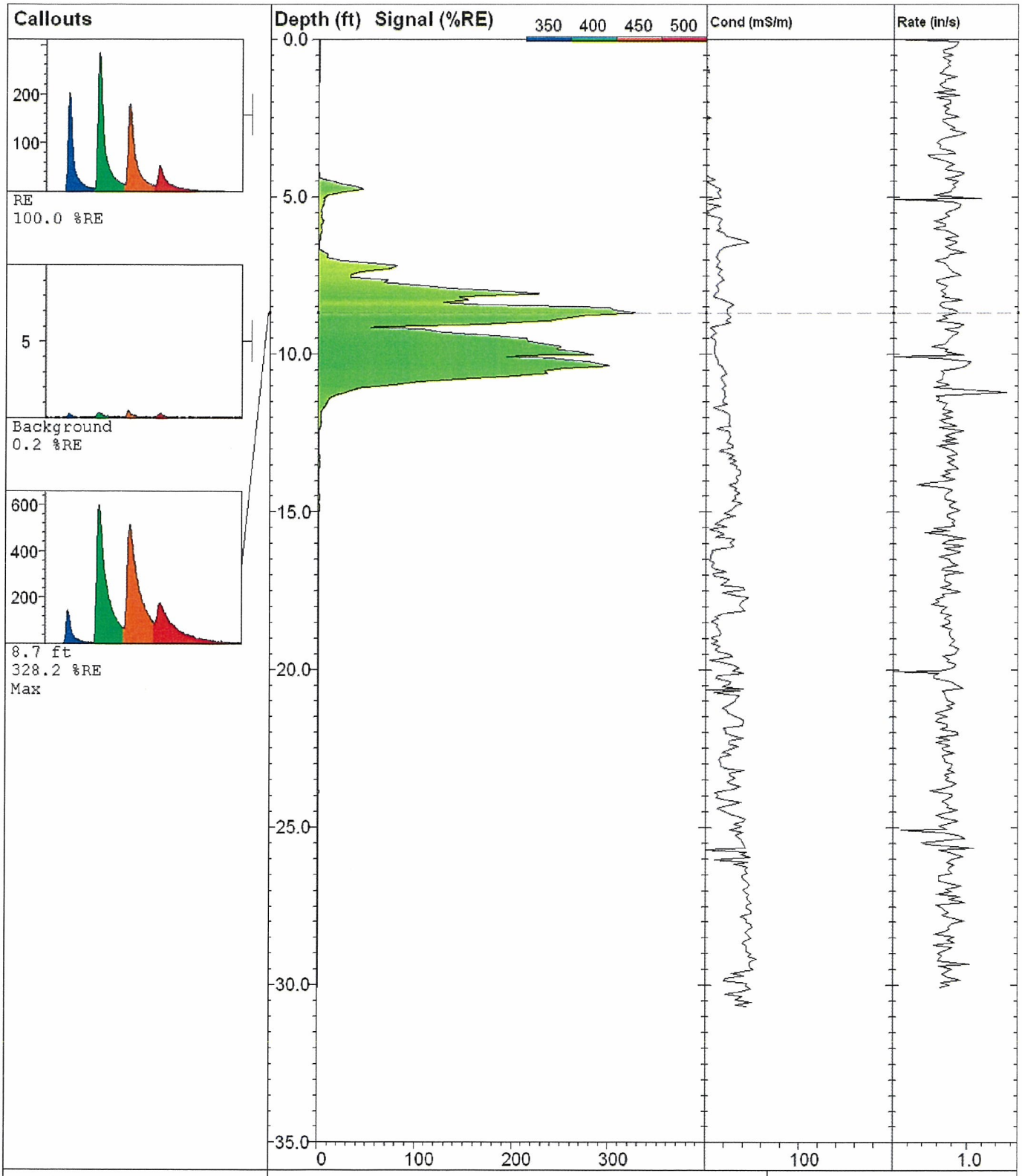
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.947 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.034 / 0D** | *Max signal:* **266.9 % @ 7.52 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 15:53 EDT** |

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# LIF-83-034

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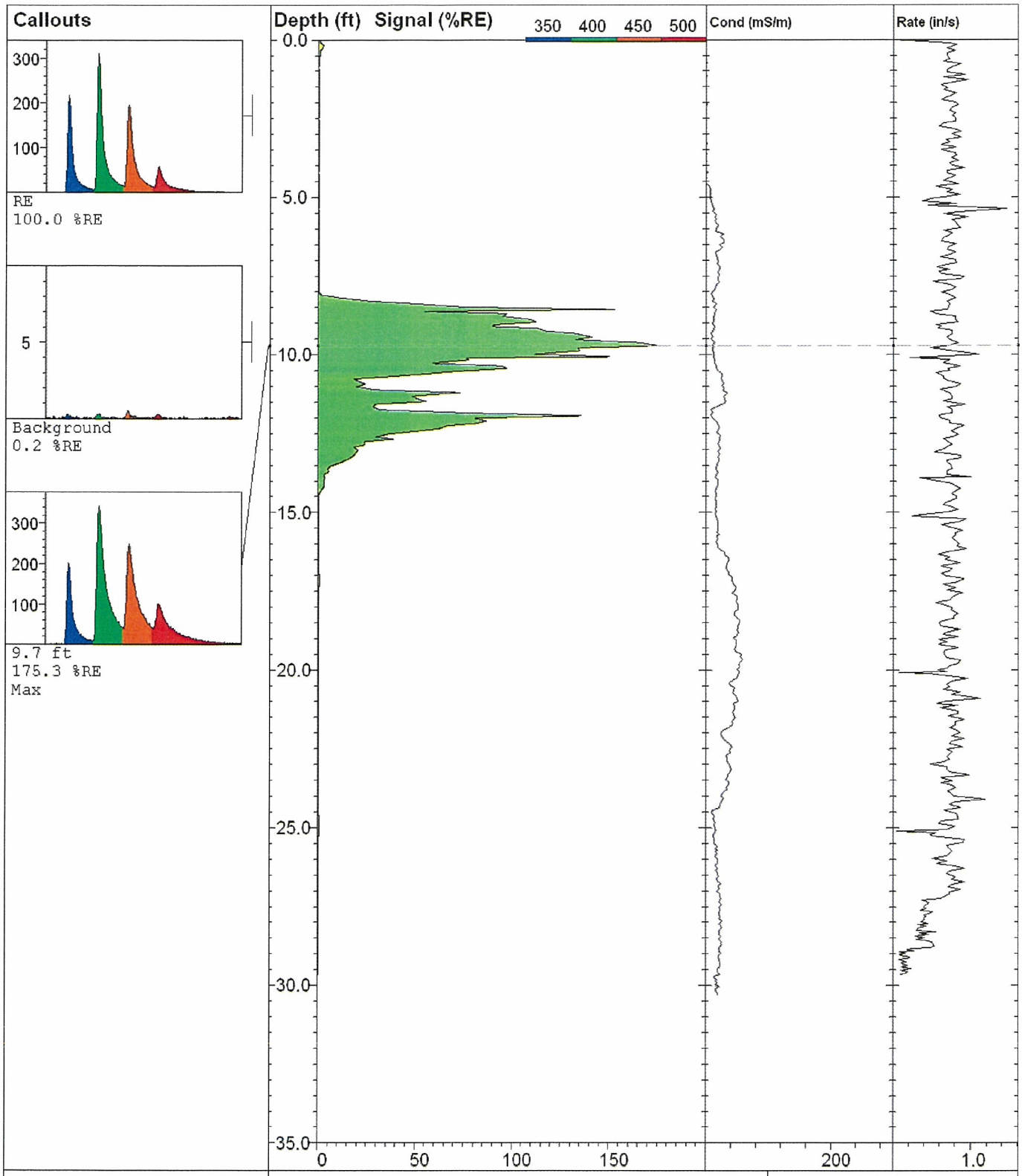
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.840 / ?** | *Final depth:* **30.07 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.216 / 0D** | *Max signal:* **328.2 % @ 8.68 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 16:29 EDT** |

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# LIF-03-007

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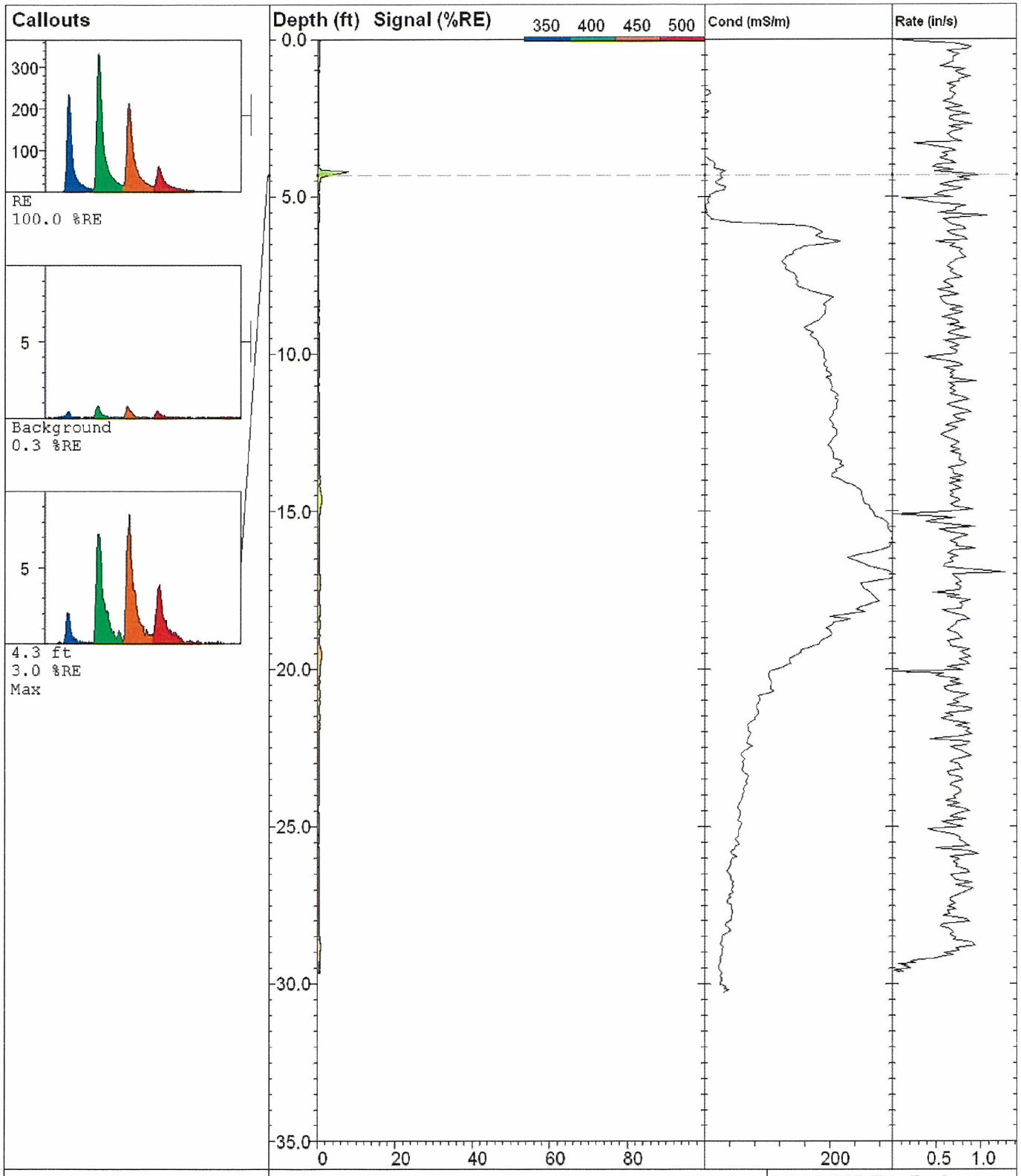
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.947 / ?** | *Final depth:* **29.66 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.034 / 0D** | *Max signal:* **175.3 % @ 9.71 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 15:02 EDT** |

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# LIF-05-015

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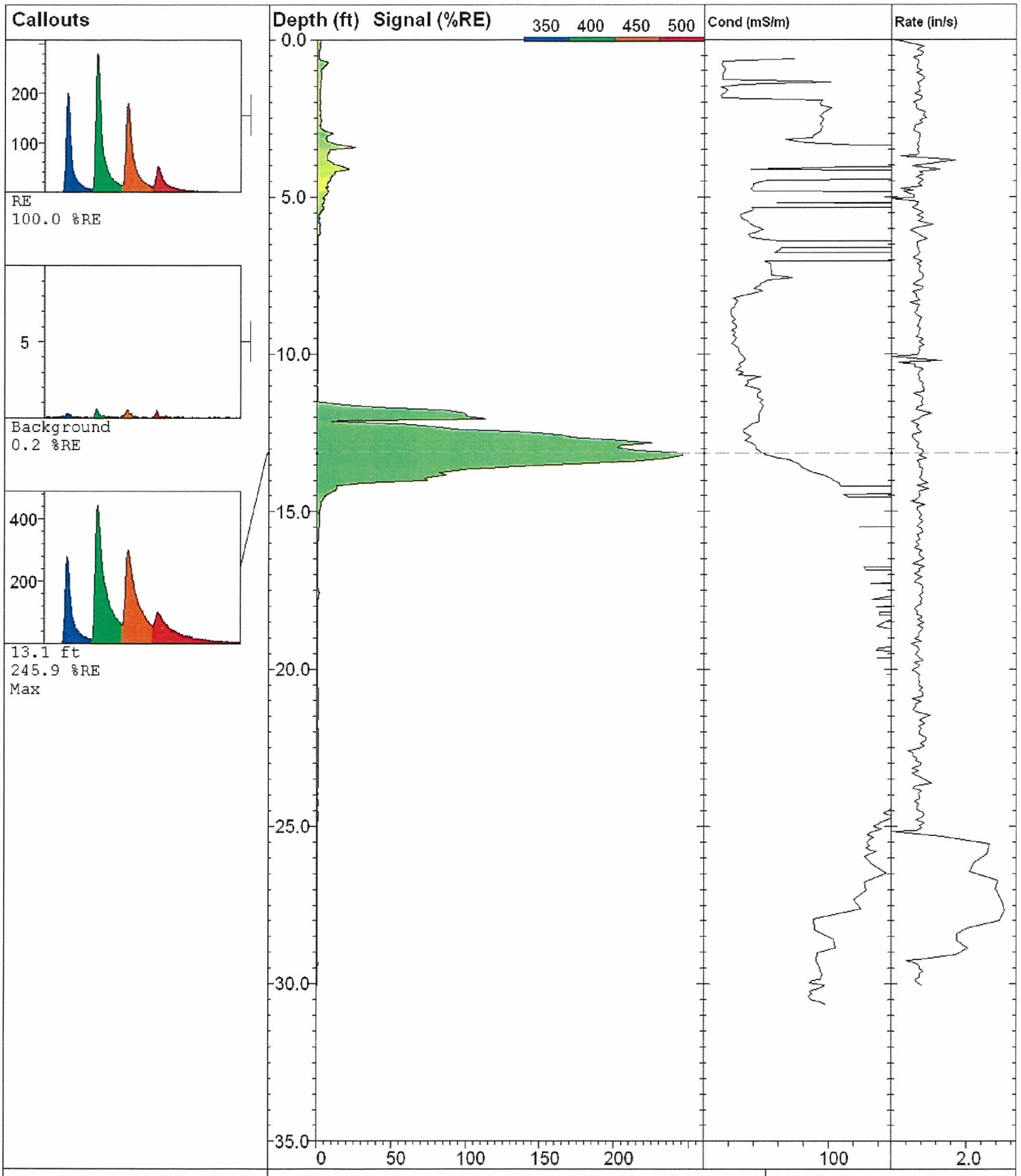
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.044 / ?** | *Final depth:* **29.66 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.055 / 0D** | *Max signal:* **8.0 % @ 4.21 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 10:02 EDT** |

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# LIF-05-016

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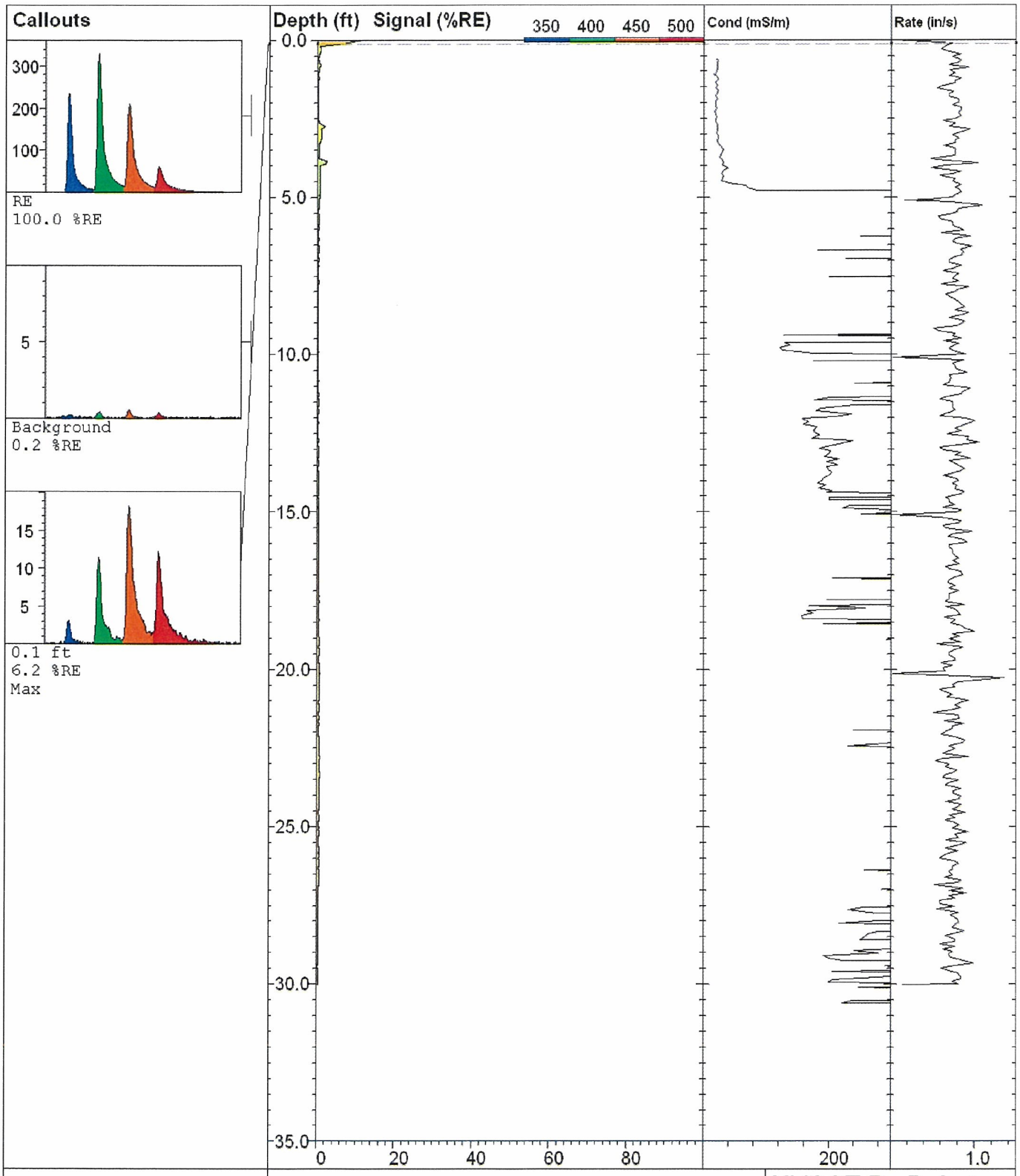
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.053 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.055 / 0D** | *Max signal:* **245.9 % @ 13.14 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 10:42 EDT** |

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# LIF-05-017

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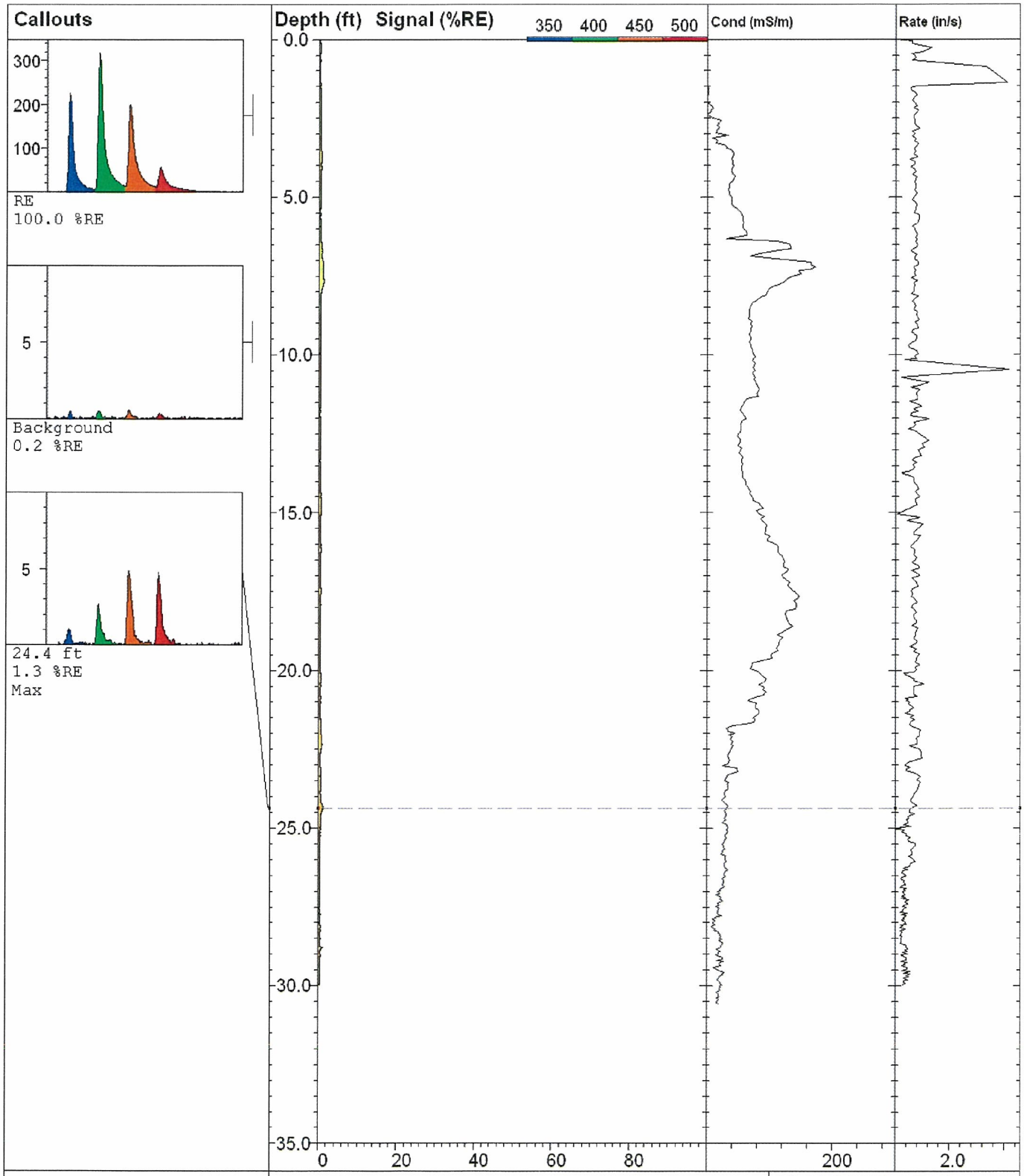
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.136 / ?** | *Final depth:* **30.02 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.152 / 0D** | *Max signal:* **11.4 % @ 0.00 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 11:16 EDT** |

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# LIF-05-018

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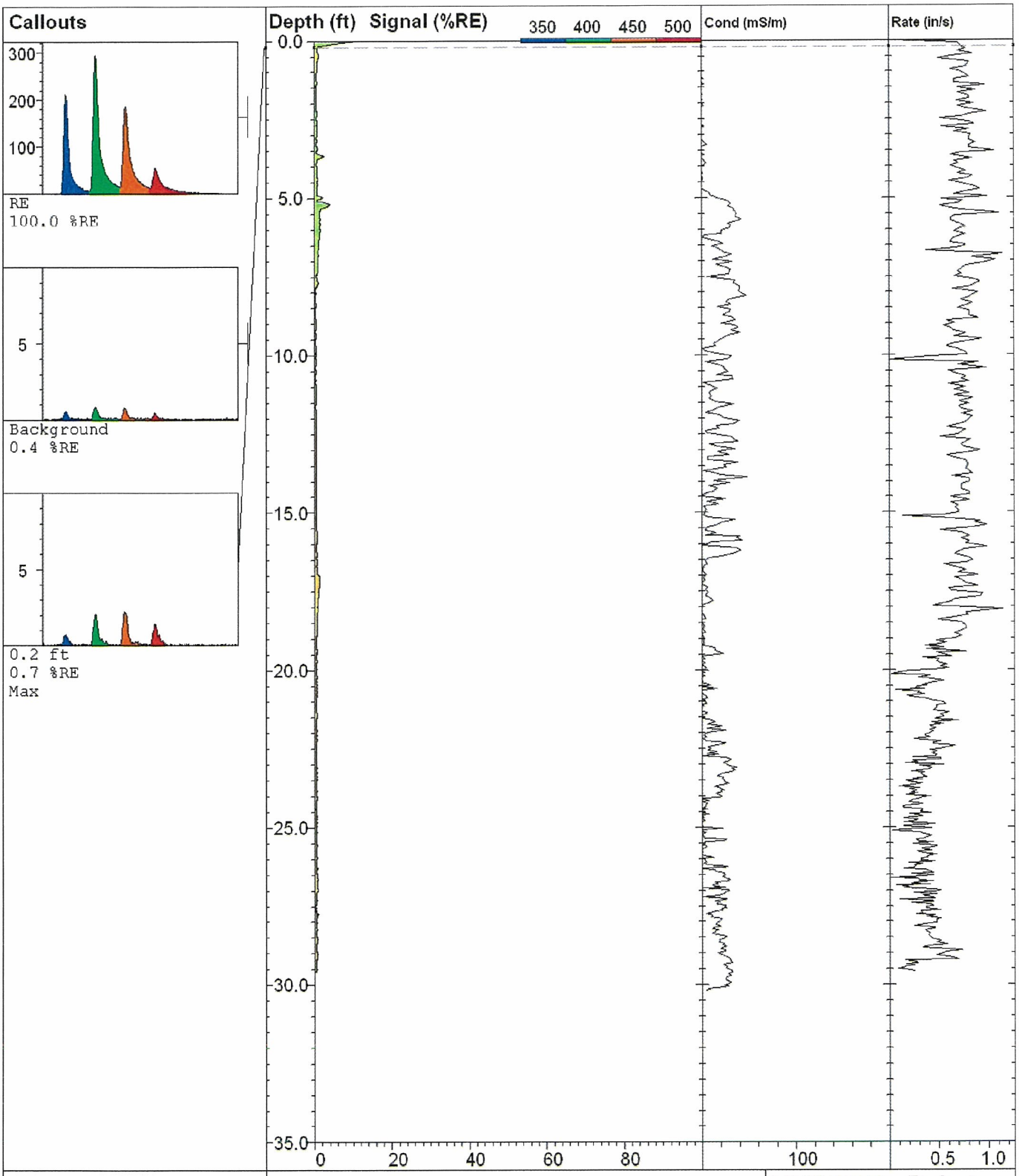
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.3.014 / ?** | *Final depth:* **29.97 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.179 / 0D** | *Max signal:* **1.3 % @ 24.36 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-18 13:57 EDT** |

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# LIF-83-036

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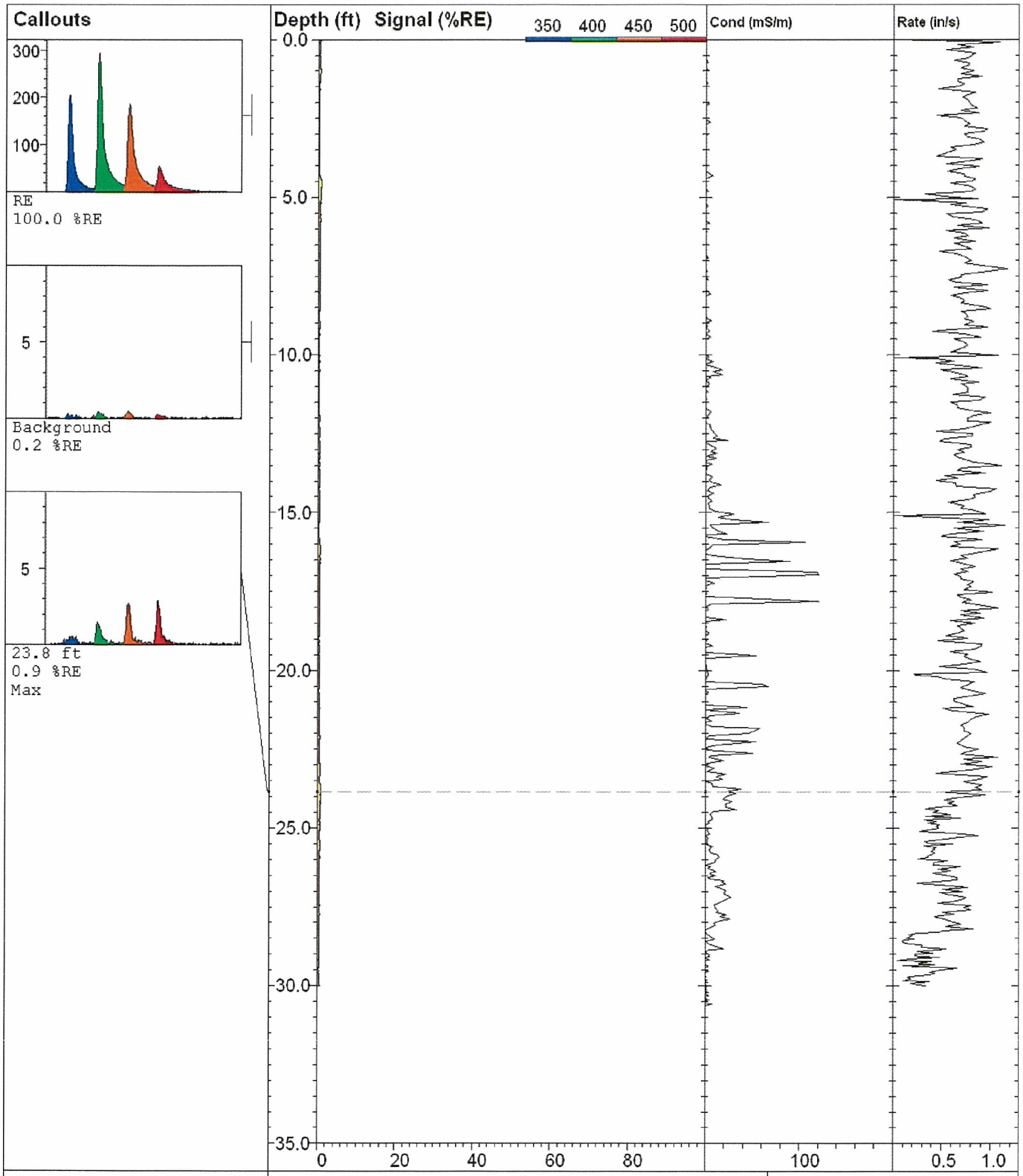
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.577 / ?** | *Final depth:* **29.58 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.139 / 0D** | *Max signal:* **12.1 % @ 0.01 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-19 09:45 EDT** |

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# LIF-83-037

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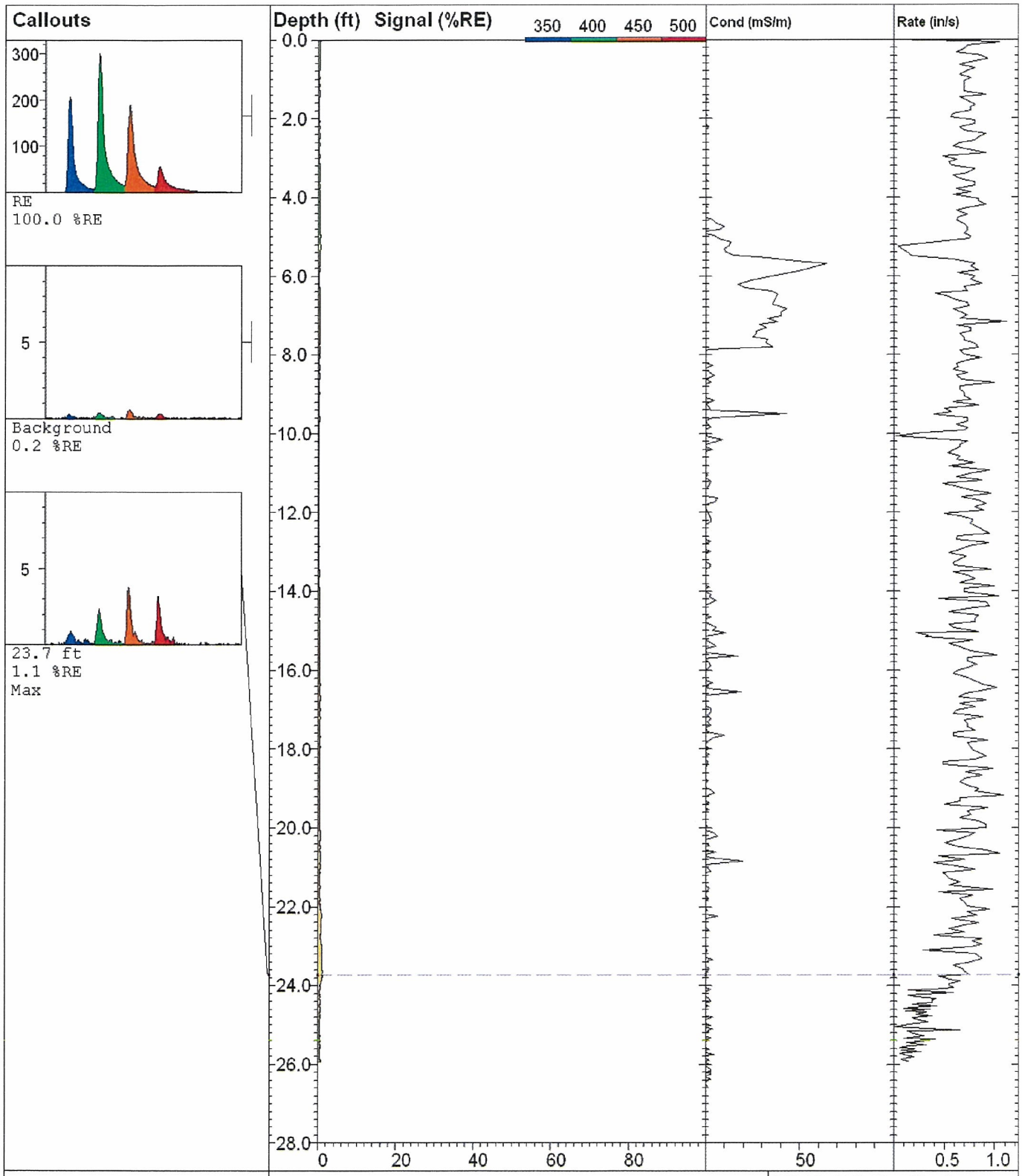
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.708 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.070 / 0D** | *Max signal:* **0.9 % @ 23.85 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-19 10:44 EDT** |

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# LIF-83-038

**UVOST By Dakota**

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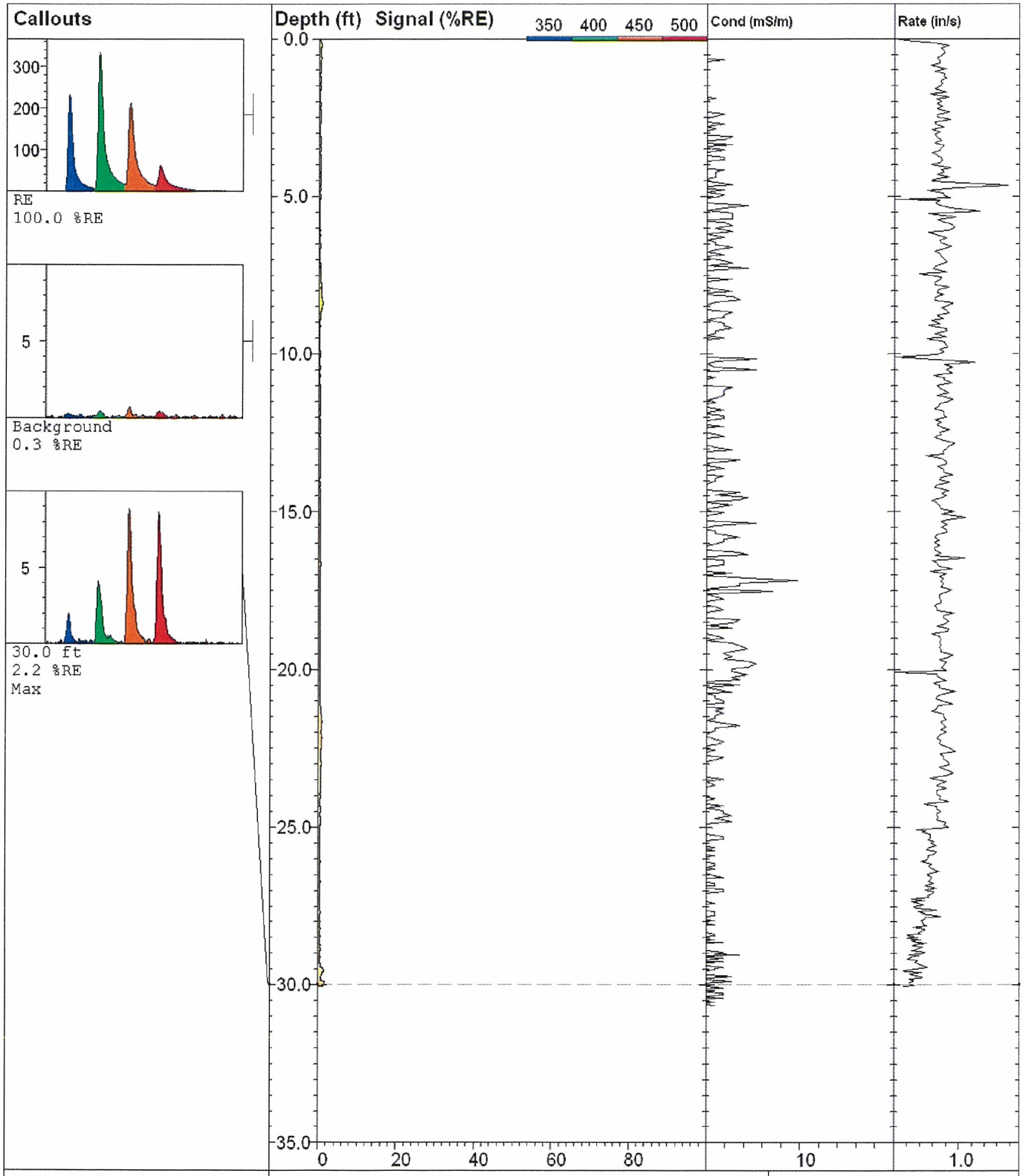
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.666 / ?** | *Final depth:* **25.94 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.059 / 0D** | *Max signal:* **1.2 % @ 23.64 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-19 11:56 EDT** |

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# LIF-03-008

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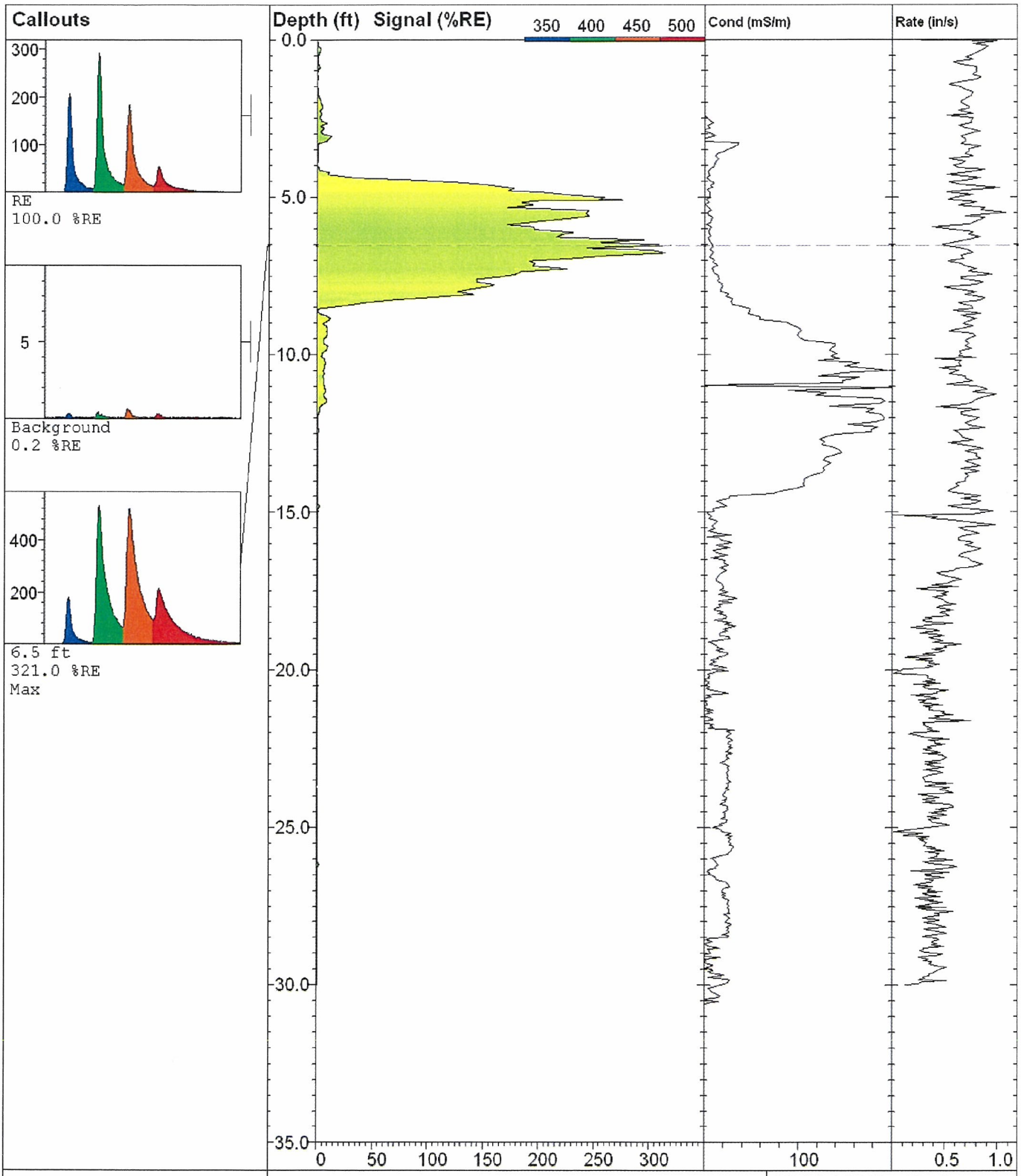
| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.666 / ?** | *Final depth:* **30.04 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.059 / 0D** | *Max signal:* **2.2 % @ 29.98 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-19 13:38 EDT** |

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# LIF-83-035

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| | | |
|---|---|---|
| *Site:* **Racer Buick City - Flint** | *Latitude / Datum:* **43.2.594 / ?** | *Final depth:* **30.01 ft** |
| *Client:* **Arcadis** | *Longitude / Fix:* **83.41.108 / 0D** | *Max signal:* **321.0 % @ 6.54 ft** |
| *Job:* | *Operator/Unit:* **Jonathan W./UVOST1021** | *Date & Time:* **2012-09-19 09:08 EDT** |

ARCADIS

**Appendix B**

AOI 09-B System Construction Drawings and Weekly Progress Reports

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Infrastructure, environment, facilities

**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #1

**Period:** 07/09/12 through 07/13/12

Project Work Performed:

- Completed initial site walk with field personnel.
- Completed mobilization of personnel, equipment and set up of support facilities.
- Completed utility clearance activities, including third party GPR and electromagnetic utility locate surveying.
- Staked MPE well locations and painted pipe chase and building locations.
- Installed road closure and detour signage for the work to be completed in Hamilton Avenue in accordance with City Permits.
- Completed concrete/asphalt cutting for the utility trench in Hamilton Avenue and on-Site. Excavated overlying concrete and soil and staged onsite for offsite disposal.
- Completed pressure testing and installation of the sanitary discharge pipe and installed electrical and gas conduits.
- Installed rigid foam insulation, utility warning tape and backfilled and compacted the utility trenches.
- Completed installation of discharge piping in the sanitary sewer located in Hamilton Avenue and reopened the road to traffic.

Work Projected Next Week:

- Complete loading, transportation and disposal of excavated soil, concrete, asphalt and debris.
- Begin pipe chase construction and pipe installation.
- Install onsite utility rack between the treatment building and the oxidizer.
- Begin restoring onsite disturbed areas (resurfacing with new concrete).

Action Items/Safety:

- No incidents or near misses have occurred to date.

***Excavator removing overlying asphalt from the utility trench in Hamilton Avenue.***

***Air knifing discharge pipe trench alignment in Hamilton Avenue.***

***View of the utility trench after electric/gas conduits and sanitary discharge pipe were installed.***

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**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #2

**Period:** 07/16/12 through 07/20/12

Project Work Performed:

- Began restoration activities, including backfilling, soil compaction and installation of new concrete in the onsite areas disturbed by the utility trench.
- Began installation of unistrut pipe racks along piping alignment.
- Began welding, pressure testing and installation of HDPE pipe for above ground pipe runs.

Work Projected Next Week:

- Continue pipe chase construction, pipe installation and pressure testing.
- Complete installation of concrete in the proposed location of the treatment building.
- Installation of the electrical panel structure and conduit for the treatment system.

Action Items/Safety:

- Issues arising with disposal at EQ have lead to profiling the waste through Waste Management. Upon completion of the profile process the waste will be properly disposed. Currently the waste is contained and protected onsite.

***Installing backfill and completing vibratory compaction within the utility trench.***

***Installing concrete over the utility trench (elevated concrete pad to level the building shown in foreground).***

***View of utility trench where new concrete was installed.***

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**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #3

**Period:** 07/23/12 through 07/27/12

Project Work Performed:

- Completed installation of new concrete in the areas disturbed by the utility trench.
- Continued installation of unistrut pipe racks along piping alignment.
- Began pipe chase construction activities (installation of wood forms, fill sand, OSB board, rigid insulation, 21AA gravel cover, etc.).
- Continued welding, pressure testing and installation of HDPE pipe.
- Completed installation of electrical panels, meter stand and electrical conduit for the treatment building and oxidizer.
- Scheduled delivery of treatment building, oxidizer tank and stack for Wednesday, August 8.
- Began installation of concrete pads at MPE well locations.

Work Projected Next Week:

- Continue pipe chase construction, pipe installation and pressure testing.
- Complete installation of concrete in the proposed location of the treatment building.

Action Items/Safety:

- Delivery of the treatment building, oxidizer, and stack is scheduled to arrive onsite in the morning on Wednesday, August 8.
- ARCADIS is providing additional information and analytical data to Waste Management in order to obtain an approved waste profile.

***View of 1.5" HDPE piping within the pipe chase, facing north.***

***Installing 21AA crushed gravel over top of the pipe chase.***

***View of the electrical panel and meter base located just east of the proposed treatment building location.***

***Newly install concrete around an MPE well.***

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**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #4

**Period:** 07/30/12 through 08/03/12

Project Work Performed:

- Completed installation of concrete at the location of the treatment building.
- Continued installation of unistrut pipe racks along piping alignment.
- Continued pipe chase construction activities (installation of wood forms, fill sand, OSB board, rigid insulation, 21AA gravel cover, etc.).
- Continued welding, pressure testing and installation of HDPE pipe.
- Completed installation of concrete pads at MPE well locations.
- Labeled and prepared well vaults for installation.

Work Projected Next Week:

- Continue pipe chase construction, pipe installation and pressure testing.
- Delivery and placement of the treatment building, oxidizer and stack using a crane.
- Begin connecting utilities and MPE piping to the treatment building and oxidizer.

Action Items/Safety:

- Delivery of the treatment building, oxidizer, and stack is scheduled to arrive onsite in the morning on Wednesday, August 8.
- ARCADIS is awaiting the completion of contracting to dispose of the soil generated onsite.

***Construction of wood forms on the pipe chase.***

***View of pipe chase (east of the building, three levels high).***

***View of pipe chase containing 1 HDPE pipe.***

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**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #5

**Period:** 08/04/12 through 08/10/12

Project Work Performed:

- Continued installation of unistrut pipe racks along piping alignment.
- Continued pipe chase construction activities (installation of wood forms, fill sand, OSB board, rigid insulation, 21AA gravel cover, etc.).
- Continued welding, pressure testing and installation of HDPE pipe.
- Placed treatment building and thermal oxidizer onsite with a crane and leveled. Completed installation of roof vents, oil/water separator vent and SVE vent.

*View of pipe chase, facing east.*

Work Projected Next Week:

- Complete installation HDPE pipe connections to the treatment building and complete additional pressure testing.
- Complete pipe chase construction activities.
- Complete MPE wellhead connections and installation of vaults. Install tamper-proof bolts on vault lids.
- Complete installation of site chain link security fencing. Repair existing damaged chain link fence on the northern portion of the Site.
- Meet with City of Flint building inspector to determine electrical connection requirements.
- Address sanitary sewer discharge connection to the City of Flint sanitary sewer.

*Crane placing the treatment building onsite.*

Action Items/Safety:

- The City of Flint has not approved the sanitary sewer manhole connection. The City has provided requirements for the connection. RACER, Young's and ARCADIS are working through the issue.

*View of the treatment building and thermal oxidizer after they were placed and leveled.*

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**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #6

**Period:** 08/13/12 through 08/19/12

Project Work Performed:

- Continued installation of unistrut pipe racks along piping alignment.
- Continued pipe chase construction activities (installation of wood forms, fill sand, OSB board, rigid insulation, 21AA gravel cover, etc.).
- Continued welding, pressure testing and installation of HDPE pipe.
- Began installation HDPE pipe fittings and transitions to the treatment building and completed additional pressure testing.
- Transported stockpiled soils offsite to Waste Management's disposal facility in Lennon, MI.
- Continued installation of MPE wellhead connections and installation of vaults.
- Installed fence posts for the security fence.

Work Projected Next Week:

- Complete installation HDPE pipe connections to the treatment building and complete additional pressure testing.
- Complete pipe chase construction activities.
- Complete MPE wellhead connections and installation of vaults. Install tamper-proof bolts on vault lids.
- Complete installation of chain link security fencing. Repair existing damaged chain link fence on the northern portion of the Site.
- Remove existing sanitary sewer discharge connection to the City of Flint sanitary sewer and reinstall per City of Flint requirements (scheduled for 8/21/12).

Action Items/Safety:

- The City of Flint electrical inspector is currently on sick leave and is scheduled to be back to work on 8/20. Young's will follow up with the City on 8/20 to get the inspection scheduled.

***View of HDPE pressure testing of Zone 400.***

***View of Zone 400 HDPE connections on the back of the treatment building.***

***View of the treatment building and flame oxidizer , facing north.***

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**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #7

**Period:** 08/20/12 through 08/24/12

Project Work Performed:

- Completed installation of the sanitary sewer discharge connection to the sanitary sewer and reinstalled per City of Flint requirements.
- Completed installation of unistrut pipe racks and wood form construction.
- Completed welding, pressure testing and installation of HDPE pipe.
- Completed installation of HDPE pipe fittings and transitions to the treatment building.
- Completed installation of MPE wellhead connections and installation of vaults.
- Completed installation of the Site security fence.

Work Projected Next Week:

- Complete installation of 21AA stone cover on pipe chase areas.
- Complete installation of piping from the treatment building to the oxidizer and product storage tank.
- Complete installation and activation of the treatment building alarm system.

Action Items/Safety:

- The City of Flint electrical inspector approved the rough in installation and final electrical connections at the Site on 8/20 and 8/27, respectively.
- ARCADIS and Young's are waiting for Consumers Energy to complete the natural gas connection to the Site. Once the natural gas has been connected, Young's will restore the concrete sidewalk in the Hamilton Ave. Right-Of-Way.

***View of the north side of the treatment building.***

***View of the completed chain link security fence, facing northwest.***

***View of the MPE pipe chase in the eastern portion of the Site.***

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Infrastructure, environment, facilities

**RACER Trust – Buick City**
**AOI-09-B Treatment System**
**Construction Project**
**Flint, MI**

## Weekly Construction Progress Report #8

**Period:** 08/27/12 through 09/12/12

Project Work Performed:

- Completed installation of 21AA stone cover over the pipe runs.
- Completed installation of the electrical connection to the building. The City of Flint electrical inspector approved the final install.
- Completed installation and activation of the treatment building alarm system. CSSI no longer has personnel on Site providing security services (but they will respond if the alarm system is triggered).
- Completed vent connections from the air stripper and MPE vents to the flame oxidizer.
- Completed installation of the product tank and completed the associated piping and electrical connections.
- Completed site cleanup activities.

Work Projected Next Week:

- No activities scheduled. Currently scheduling with Consumers Energy to make the natural gas connection to the flame oxidizer.

Action Items/Safety:

- ARCADIS received communication from Consumers Energy regarding installation of the natural gas connection on 9/6/12. Consumers indicated they will try to expedite the installation schedule for our site and will notify ARCADIS when it has been scheduled.
- Once the natural gas has been connected, Young's will restore the concrete sidewalk in the Hamilton Ave. Right-Of-Way.
- Young's has ordered a new flow meter with a transponder per City of Flint requirements (expected to arrive on 9/19/12) and will install the flow meter once it is received.

***View of south side of the treatment building with the product tank installed in the foreground.***

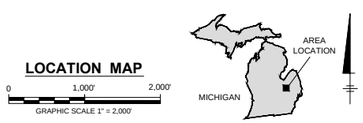
***View of the pipe connections from the MPE vent and air stripper to the flame oxidizer.***

AS-BUILT DRAWINGS

# RACER TRUST
# AOI 09-B

## PIPE INSTALLATION AND SYSTEM CONNECTION

**FORMER NAO FLINT OPERATIONS SITE**
**902 EAST HAMILTON AVENUE**
**FLINT, GENESSE COUNTY, MI**




**DATE ISSUED**
**FEBRUARY 2013**

ARCADIS

ARCADIS G&M OF MICHIGAN, LLC.

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| 4 | PIPING PLAN |
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| 7 | TRENCH DETAILS |
| 8 | PIPING STUB-UP DETAILS |
| 9 | TREATMENT AREA DETAIL |
| 10 | PROCESS FLOW DIAGRAM |



CITY:WPB, FL DIV/GROUP:ENWFE30 DB:B.OLIVA LD:J.RICHARDS PIC:R.KAPPES PM:R.KAPPES TM:T.HAYS LYR:ON=*;OFF=*REF*
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## GENERAL LEGEND:

- PROPOSED ABOVE GROUND UTILITY
- PROPOSED UNDERGROUND UTILITY
- EXISTING ABOVE GROUND UTILITY LETTER(S) DENOTE SERVICE AND/OR SIZE
- EXISTING UNDERGROUND UTILITY
- PROPERTY BOUNDARY
- DITCH OR SWALE
- FENCE
- RAILROAD
- 350 EXISTING CONTOUR
- 350 PROPOSED CONTOUR
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- RAILROAD TRACK
- STORM SEWER
- FIRE PIPING
- PROCESS PIPING
- SANITARY SEWER
- WATER PIPING AND VALVES
- GAS LINE
- RETAINING WALL
- NEW MULTI PHASE EXTRACTION PIPING IN TRENCH

## SYMBOLS

- UTILITY POLE
- MANHOLE
- CATCH BASIN
- LIGHT POLE
- BOLLARD
- SIGNAGE
- VACUUM
- TELEPHONE
- PIEZOMETER
- SOIL BORING/SAMPLE
- MONITORING WELL
- DEEP MONITORING WELL
- VERTICAL VAPOR EXTRACTION WELL
- HORIZONTAL VAPOR EXTRACTION WELL
- AIR SPARGING WELL
- DUAL/MULTI PHASE EXTRACTION WELL
- VAPOR MONITORING WELL
- RECOVERY WELL
- PILOT TEST MONITORING WELL
- TREE/SHRUBS
- HISTORICAL MONITORING WELL
- EXTRACTION WELL
- CATCH BASIN

## MECHANICAL LEGEND:

- PIPE CONNECTION
- CROSS CONNECTION
- TEE CONNECTION
- ELBOW CONNECTION
- REDUCER
- ELBOW DOWN
- UNION
- UNION WITH ORIFICE
- CAMLOCK / QUICK DISCONNECT
- FLANGE CONNECTION
- CHECK VALVE
- GATE VALVE
- BALL VALVE
- BALL VALVE NORMALLY CLOSED
- BUTTERFLY VALVE
- PRESSURE CONTROL VALVE/ REGULATOR
- RELIEF VALVE
- SOLENOID VALVE
- S.C. SAMPLE CONNECTION/ PORT
- COUPLING, COMPRESSION TYPE
- PRESSURE/ VACUUM GAUGE
- FLOW METER
- THREADED CAP
- HDPE/PVC CONNECTOR
- RECIPROCATING COMPRESSOR
- ROTARY VANE COMPRESSOR
- SCREW COMMPRESSOR
- ROTARY-LOBE BLOWER
- ROTARY-CLAW COMPRESSOR
- CENTRIFUGAL FAN OR REGENERATIVE BLOWER
- LIQUID RING PUMP
- CENTRIFUGAL PUMP
- FILTER

## ARCHITECTURAL & STRUCTURAL LEGEND:

- UNDISTURBED SOIL
- CONCRETE
- COMPACTED BACKFILL
- WOOD
- CLEAN SAND
- GRASSED AREA

## ABBREVIATIONS:

(SUBSTITUTE FOR "X" IN UTILITY LINES)

| | | |
|---|---|---|
| A | = | COMPRESSED AIR |
| D | = | DIESEL FUEL |
| E | = | ELECTRIC CABLE |
| FI | = | FLOW INDICATOR |
| G | = | GASOLINE |
| LE | = | LEVEL ELEMENT |
| LSH | = | LEVEL SWITCH HIGH |
| LSHH | = | LEVEL SWITCH HIGH HIGH |
| LSL | = | LEVEL SWITCH LOW |
| NC | = | NORMALLY CLOSED |
| NG | = | NATURAL GAS |
| PI | = | PRESSURE INDICATOR |
| PR | = | PRESSURE REGULATOR |
| PSL | = | PRESSURE SWITCH LOW |
| PW | = | POTABLE WATER |
| R | = | RECOVERY SYSTEM |
| SS | = | SANITARY SEWER |
| SW | = | STORMWATER |
| T | = | TELEPHONE |
| TI | = | TEMPERATURE INDICATOR |
| TSH | = | TEMPERATURE SWITCH HIGH |
| V | = | VAPOR/VENT |
| VI | = | VACUUM INDICATOR |
| VSL | = | VACUUM SWITCH LOW |
| W | = | WATER MAIN |

## SECTION OR DETAIL SYMBOLS

### DRAWING WHERE SECTION OR DETAIL IS TAKEN

THE NUMBER IN THE UPPER HALF OF THE CIRCLE IS THE SECTION OR DETAIL NUMBER. THE BOTTOM HALF OF THE CIRCLE IS THE DRAWING NUMBER WHERE THE SECTION OR DETAIL CAN BE FOUND.

**SECTION** X/X-X
SCALE: X"=X'-X"

**DETAIL** X/X-X
SCALE: X"=X'-X"

### DRAWING WHERE SECTION OR DETAIL IS SHOWN

THIS IS SHOWN UNDER EACH SECTION OR DETAIL. THE NUMBER IN THE UPPER HALF OF THE CIRCLE IS THE SECTION OR DETAIL NUMBER. THE NUMBER IN THE BOTTOM HALF OF THE CIRCLE IS THE NUMBER WHERE THE SECTION OR DETAIL WAS TAKEN.

## ELECTRICAL LEGEND:

- XXX CONTROL/INSTRUMENT IN-LINE
- XXX LOCAL MOUNT
- XXX REMOTE MOUNT
- XXX SOFTWARE FUNCTION
- I SYSTEM INTERLOCK-FUNCTION EXPLAINED IN ADJACENT TEXT.
- S/1 SPECIALTY FITTING, REFER TO NOTES OR SPECIFICATIONS

| CONTROL/INSTRUMENT LABELS | | |
|---|---|---|
| LETTER | 1st | OTHER |
| A | – | ALARM |
| C | – | CONTROL |
| E | VOLTAGE | ELEMENT |
| F | FLOW | – |
| H | – | HIGH |
| I | CURRENT | INDICATOR |
| K | TIME | – |
| L | LEVEL | LOW |
| P | PRESSURE | – |
| Q | – | TOTALIZE |
| R | – | REGULATOR |
| S | SAFETY | SWITCH |
| T | TEMPERATURE | TRANSMIT |

Professional Engineer's
**EDWARD COTE, PE**

| P.E.'s Number | State | Date Signed |
|---|---|---|
| 28482 | MI | |

NOT TO SCALE

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

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|---|---|---|---|---|
| 1 | 7/22/11 | Issued for Blds | | |

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Project Mgr. C.P.
Designed by E.C.
Drawn by T.T.
Checked by J.S.

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ARCADIS G&M OF MICHIGAN, LLC.

RACER TRUST, NAO FLINT OPERATIONS SITE • 902 EAST HAMILTON AVE, FLINT MICHIGAN
AS-BUILT DRAWINGS

# LEGEND

–

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013

ARCADIS
520 S. Main Street
SUITE 2400
AKRON, OHIO 44311
TEL. 330.374.1320

1

CITY: WPB, FL DIV/GROUP: ENVWFE30 DB: B.OLIVA LD: J.RICHARDS PIC: R.KAPPES PM: R.KAPPES TM: T.HAYS LYRON: *OFF*REF* PAGESETUP: — PLOTSTYLETABLE: PLTCONT.CTB PLOTTED: 3/13/2013 2:05 PM BY: RICHARDS, JIM
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## SCOPE OF WORK:

1. ALL WORK DESCRIBED IN THESE DRAWINGS/SPECIFICATIONS SHALL BE PERFORMED ON BEHALF OF MOTORS LIQUIDATION COMPANY.
2. THE CONTRACTOR SHOULD VISIT THE SITE AND EXAMINE ALL OF THE PHYSICAL CONDITIONS THAT AFFECT THE FINAL BID PRICE.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY FIELD MEASUREMENTS TO VERIFY THE ABILITY TO EXECUTE THE WORK IN ACCORDANCE WITH THIS SCOPE OF WORK AND DRAWINGS. NO ADDITIONS OR REVISIONS TO THE BID OR CONTRACT PRICE WILL BE PERMITTED BASED ON EXISTING CONDITIONS.
4. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT, UNLESS OTHERWISE STATED, NECESSARY TO PERFORM THIS WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL TRADE PERMITS, AND APPROVALS NECESSARY TO PERFORM THIS WORK.
6. ALL INFORMATION PRESENTED IN THIS REQUEST REGARDING THE SITE IS CONFIDENTIAL.
7. WHILE CONSTRUCTION ACTIVITIES ARE UNDER WAY AT LEAST ONE CONTRACTOR, FOREMAN, OR CREW SUPERVISOR SHALL BE PRESENT AT THE JOB SITE AT ALL TIMES.
8. CONSTRUCTION OF A MULTI–PHASE EXTRACTION (MPE) REMEDIATION SYSTEM INCLUDING ALL EXCAVATION, CONCRETE WORK, ASPHALT WORK, FURNISHING AND INSTALLATION OF PIPING FROM THE WELL POINTS TO THE PROPOSED LOCATION OF THE TREATMENT BUILDING IN THE NORTHEAST CORNER.
9. FURNISH AND INSTALL WELL VAULTS, MECHANICAL PIPING, AND APPURTENANCES FOR TWENTY (29) MPE WELLS.
10. FURNISH AND INSTALL MPE CONVEYANCE PIPING, FITTINGS, VALVES, AND GAUGES.
    A. CONNECT THE PIPING FROM EACH MPE WELL TO THE MANIFOLD IN AREA.
    B. PLACE AND INSTALL THE REQUIRED VALVES, GAUGES, PIPING AND FITTINGS FOR EACH WELLHEAD.
    C. PLACE AND INSTALL ALL MPE MANHOLES (TYP OF 29).
11. CONTRACTOR SHALL LABEL AND IDENTIFY ALL ABOVE GROUND ELECTRICAL, MPE (VAPOR & GROUNDWATER) PIPING AS TO ITS CONTENTS (I.E. POWER, ETC.) AND DIRECTION OF FLOW. ALL MPE (VAPOR & GROUNDWATER) PIPING SHALL BE LABELED AND IDENTIFIED BY WELL NUMBER (E.G., MPEW–1, MPEW–2, ETC.).
12. THE CONTRACTOR SHALL SEGREGATE ALL EXCAVATED/DEMOLITION MATERIALS INTO TWO CATEGORIES: CONCRETE/ASPHALT/METAL MATERIAL AND SOIL MATERIAL. CONCRETE/ASPHALT/METAL MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR. SOIL MATERIAL WILL BE RETURNED TO THE EXCAVATION TO THE EXTENT POSSIBLE. SOILS THAT ARE VISIBLY STAINED OR ODOROUS SHALL BE CHARACTERIZED BY ARCADIS PERSONNEL AND DISPOSED BY THE CONTRACTOR AS DIRECTED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
13. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING LOCATION OF ALL UTILITIES WITHIN AREA AFFECTED BY CONSTRUCTION. COPIES OF PRINTS OBTAINED OR LOCATIONS PROVIDED TO CONTRACTOR WITH RESPECT TO UTILITIES SHALL BE SUPPLIED TO THE ENGINEER WITH A RECORD SET OF DRAWINGS AT COMPLETION OF CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN THE UTILITY LOCATION AND THE CONSTRUCTION DRAWINGS, CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
14. CONTRACTOR SHALL EITHER TRENCH AND ROUTE PIPING BELOW, OR CORE THROUGH THE RETAINING WALL WHERE TRENCH CROSSES RETAINING WALL, AT THE DIRECTION OF THE ENGINEER AND BASED ON SITE CONDITIONS.
15. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH ALL INFORMATION REQUIRED TO COMPLETE A SET OF "RECORD" DRAWINGS BY KEEPING A RECORD SET OF DAILY PROGRESSION OF WORK.
16. UNLESS OTHERWISE NOTED, ALL AREAS DISTURBED BY THIS WORK SHALL BE RESTORED TO ORIGINAL CONDITION.
17. CONTRACTOR TO PROTECT AND PRESERVE ALL EXISTING FEATURES (I.E. MONITORING WELLS, EQUIPMENT, ETC.) WITHIN AREAS AFFECTED BY CONSTRUCTION. DAMAGE SUSTAINED TO AN EXISTING FEATURE SHALL BE REPAIRED/REPLACED AT CONTRACTOR'S EXPENSE.
18. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS.
19. UNLESS OTHERWISE INDICATED HEREIN, ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL FURNISH, AT NO COST TO THE ENGINEER, ALL LABOR AND MATERIALS NECESSARY TO CORRECT PROBLEMS DUE TO FAULTY WORKMANSHIP OR MATERIALS.
20. OTHER CONSTRUCTION ACTIVITIES MAY BE TAKING PLACE CONCURRENTLY WITH THIS PROJECT. THE CONTRACTOR SHALL CONSULT WITH THE VARIOUS PARTIES AND SHALL COORDINATE SCHEDULES.
21. THE INFORMATION SHOWN ON THE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
22. PIPE ROUTING SHOWN FOR CONSTRUCTION LAYOUT PURPOSES ONLY. ACTUAL ROUTING TO BE FIELD DETERMINED AND IS SUBJECT TO ENGINEER'S APPROVAL.
23. CONTRACTOR SHALL CAP ALL UNCONNECTED PIPES AND MAKE ALL NECESSARY CONNECTIONS TO WELL VAULTS.
24. EXCAVATIONS SHALL BE KEPT FREE FROM STANDING WATER.
25. CONTRACTOR SHALL NOTIFY THE ENGINEER AT THE COMPLETION OF EXCAVATIONS AND TRENCHING TO ALLOW FOR INSPECTIONS.
26. CONTRACTOR SHALL PROVIDE APPROPRIATE SAFETY BARRICADES AROUND TRENCHING AND EXCAVATION TO PREVENT ACCIDENTS OR UNAUTHORIZED ENTRY.
27. MATERIALS SHALL NOT BE PLACED ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN ICE OR FROST.
28. CONTRACTOR SHALL PLACE A STRIP(S) OF UTILITY WARNING TAPE SPACED AT 18 INCHES ON CENTER IN ALL TRENCHED AREAS. THIS TAPE SHALL CONTAIN A WIRE FOR METAL DETECTION OR HAVE AN ALUMINUM CORE. TAPE SHALL BE PLACED AT A DEPTH OF 12 INCHES BELOW THE SUBBASE IN PAVED AREAS.

## SCOPE OF WORK, CONTINUED:

29. ALL CONCRETE AND PAVEMENT CUTS ARE TO BE SMOOTH EDGE SAW CUTS BY CIRCULAR SAW BLADES.
30. SURVEY NOTE: MAP FEATURES BASED ON SURVEY PREPARED BY BMJ, INC. DATED APRIL 2001.
31. ALL FINISHED PRODUCT PIPING/VENTING ISOLATED WITH #12 GROUNDING WIRE CONNECTED TO SITE GROUND.

PIPE AND VALVE MATERIALS

1. PIPE MATERIALS SHALL INCLUDE PRIMARILY POLYVINYL CHLORIDE (PVC), AND HIGH DENSITY POLYETHYLENE (HDPE). PIPING MATERIALS ARE IDENTIFIED ON THE PIPING AND INSTRUMENTATION DIAGRAM. ADDITIONAL SPECIFICATIONS ARE IDENTIFIED BELOW.
2. POLYVINYL CHLORIDE (PVC) PIPING SHALL BE SCHEDULE 80. JOINTS BETWEEN PVC PIPE LENGTHS AND FITTINGS SHALL BE SOLVENT TYPE BONDS UNLESS OTHERWISE SPECIFIED. SOLVENT SHALL BE AS SPECIFIED IN ASTM D–2564. SOLVENT WELDED JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM D–2855.
3. HDPE PIPING SHAL BE SDR–11.
4. ALL HDPE 90/45 DEGREE TO BE "SWEEP" FITTINGS.

ABOVE–GROUND PIPING INSTALLATION

1. THE CONTRACTOR SHALL PROVIDE ADEQUATE PIPE SUPPORTS FOR BOTH HORIZONTAL AND VERTICALLY–MOUNTED PIPES.
2. THE PIPING SHALL BE POSITIONED TO MINIMIZE TRIPPING HAZARDS AND MAINTAIN HEAD CLEARANCE WHERE POSSIBLE (8' MINIMUM).
3. PRESSURE GAUGES AND OTHER INSTRUMENTATION SHALL BE INSTALLED IN LOCATIONS THAT ARE EASILY READABLE AND ACCESSIBLE FOR MAINTENANCE.
4. THE EXACT LOCATIONS OF DRAINS, VENTS, SAMPLE TAPS, AND PRESSURE GAUGES SHALL BE DETERMINED BY THE ENGINEER (ARCADIS) IN THE FIELD DURING CONSTRUCTION. ALL PIPING SHALL BE EASILY DRAINED.

SITE RESTORATION

1. RESTORE TO THEIR ORIGINAL CONDITION ALL PAVEMENT, CURBING, WALKWAYS, LANDSCAPING, ETC., DISTURBED, DAMAGED, OR DESTROYED DURING THE PERFORMANCE OF THIS SCOPE OF WORK.
2. PROMPTLY REMOVE AND PROPERLY DISPOSE OF ALL RUBBLE AND CONSTRUCTION DEBRIS CREATED DURING THE EXECUTION OF THIS SCOPE OF WORK.
3. COORDINATION OF SOIL DISPOSAL WILL BE CONDUCTED BY THE ENGINEER IN THE FIELD. ALL SOIL MUST BE PROPERLY STORED UNTIL DISPOSAL OF SOIL WILL BE REMOVED FROM THE SITE BY USING A LICENSED WASTE HAULER AND HAULED TO A UPS AUTHORIZED AND PERMITTED DISPOSAL FACILITY.
4. THE REPLACEMENT OF SURFACES AT ANY TIME SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO REPAIR ANY DAMAGES CAUSED BY SETTLEMENT OR OTHER FAILURES.
5. THE PERMANENT AND FINAL REPAIRING OF ALL AREAS WHERE PAVEMENT HAS BEEN REMOVED, DISTURBED, SETTLED, OR DAMAGED AS A RESULT OF THIS SCOPE OF WORK SHALL BE REPAIRED AND REPLACED BY THE CONTRACTOR WITH NEW AND SIMILAR SUB–BASE AND PAVEMENT, EXCEPT AS OTHERWISE NOTED HEREIN.

PIPE TESTING

1. PRIOR TO BACKFILLING TRENCHES ALL OF THE PIPING SHALL PASS A PRESSURE TEST AS SPECIFIED BELOW:
   - ALL MPE PIPING SHALL BE TESTED AT A PRESSURE OF AT LEAST 10 psig FOR A PERIOD OF NOT LESS THAN 30 MINUTES BEFORE AND AFTER BACKFILLING/COMPACTION ACTIVITIES.
   - PRESSURE TESTS TO BE WITNESSED BY ONSITE ARCADIS REPRESENTATIVE.
   - THE PRESSURE TESTS SHALL BE CONSIDERED ACCEPTABLE IF THE SPECIFIED TEST PRESSURE IS MAINTAINED FOR THE REQUIRED TEST DURATION WITHOUT A PRESSURE DROP EQUAL TO OR GREATER THAN 10% OF CONTROL PRESSURE.
   - IF THE PRESSURE TEST DOES NOT MEET THESE REQUIREMENTS, THE PRESSURE TESTS SHALL BE ACCEPTABLE ONLY IF APPROVED BY THE ENGINEER.
   - THE CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS OR REPLACEMENT OF DEFECTIVE PIPE AS DISCLOSED BY THE TESTING AND SHALL REPEAT THE TESTS UNTIL THE REQUIREMENTS ARE MET.

## GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS AND TO MAKE ARRANGEMENTS FOR ANY INSPECTIONS REQUIRED FROM ANY LOCAL, STATE, OR OTHER GOVERNING AGENCY RELATING TO THE CONSTRUCTION OF THE MULTI–PHASE EXTRACTION AND TREATMENT SYSTEM INCLUDING ALL EXCAVATION, CONCRETE WORK, ASPHALT WORK, AND ELECTRICAL WORK AS SPECIFIED IN THIS SCOPE OF WORK.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE SCOPE OF WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF AND SHALL PROVIDE THE NECESSARY PROTECTION TO PREVENT DAMAGE, INJURY, OR LOSS TO ALL EMPLOYEES ON THE WORK SITE AND ANY OTHER PERSONS WHO MAY BE AFFECTED THEREBY.
3. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF PUBLIC BODIES HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY, OR LOSS, INCLUDING, WITHOUT LIMITATION, THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (PL 91–596) AND UNDER SECTION 107 OF THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (PL 91–54) AND AMENDMENTS THERE TO. THE CONTRACTOR SHALL ERECT AND MAINTAIN AS REQUIRED BY THE CONDITIONS AND THE PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR THE EMPLOYEES' SAFETY AND PROTECTION WHICH INCLUDES ALL APPLICABLE RECOMMENDATIONS IN THE MANUAL OF ACCIDENT REVENTION BY THE ASSOCIATED GENERAL CONTRACTORS (AGC) OF AMERICA.
4. THE CONTRACTOR SHALL BE AWARE THAT CERTAIN SOILS AND GROUNDWATER SUBJECT TO THIS SCOPE OF WORK MAY CONTAIN HAZARDOUS CHEMICAL CONSTITUENTS. ALL MATERIALS EXCAVATED FROM THE SITE REQUIRE SPECIAL HANDLING PROCEDURES. ALL MATERIALS EXCAVATED AND REQUIRING OFF–SITE DISPOSAL SHALL BE TESTED AND HANDLED IN ACCORDANCE WITH INDIANA ADMINISTRATIVE CODE (IAC). PERSONAL PROTECTION HIGHER THAN A LEVEL D MAY BE REQUIRED IN PERFORMING A PORTION OR ALL OF THIS SCOPE OF WORK. NO SMOKING WILL BE PERMITTED AT ANY TIME ON THE FACILITY PROPERTY.
5. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO COMMENCING ON–SITE ACTIVITIES.
6. ALL ELECTRICAL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF NATIONAL FIRE PROTECTION ASSOCIATION–70 (NFPA–70); NATIONAL ELECTRICAL CODE (NEC); AND UPS BUILDING & PE ELECTRICAL STANDARDS.
7. THE WORK SHALL BE SUBJECT TO INSPECTION BY A REPRESENTATIVE OF THE NATIONAL BOARD OF FIRE UNDERWRITERS AND BY THE LOCAL AUTHORITIES HAVING JURISDICTION, AND ALL WORK SHALL PASS SUCH INSPECTION.
8. IN AREAS WHERE EXPLOSION–PROOF WORK IS REQUIRED OR SPECIFIED, ALL WORK SHALL MEET THE REQUIREMENTS OF THE NEC FOR CLASS 1 – DIVISION 1 OR CLASS 1 – DIVISION 2 LOCATIONS AS REQUIRED BY NFPA–30, FLAMMABLE LIQUIDS CODE. ALL ELECTRICAL EQUIPMENT AND DEVICES COVERED BY THIS SCOPE OF WORK SHALL BE MOUNTED A MINIMUM OF 18 INCHES ABOVE SLAB OR GRADE.
9. CONTRACTOR SHALL FURNISH AND PLACE PROPER GUARDS FOR PREVENTION OF ACCIDENTS, ALL TRENCH AND EXCAVATION SHORING, SCAFFOLDING, SHIELDING, DUCT/FUME PROTECTION, MECHANICAL/ELECTRICAL PROTECTION, SPECIAL GROUNDING, SAFETY RAILING, BARRIERS, OR OTHER SAFETY FEATURES REQUIRED TO SECURE THE SAFETY OF LIFE OR PROPERTY. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT LIGHTS INCLUDING THE POWER SUPPLY FOR THE LIGHTS DURING NIGHT HOURS TO SECURE SUCH PROTECTION.
10. UTILITIES SHOWN HEREON ARE APPROXIMATE AND BASED ON BEST AVAILABLE INFORMATION. CONTRACTORS SHALL VERIFY AND/OR DETERMINE THE LOCATIONS OF ALL EXISTING UTILITIES, ABOVE AND BELOW GROUND. ANY CONFLICTS WITH UTILITIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH ANY WORK ACTIVITIES.
11. INSTALL EQUIPMENT AND SYSTEMS IN NEAT AND PROFESSIONAL MANNER: ALIGN, LEVEL, AND ADJUST FOR SATISFACTORY OPERATION. INSTALL SO THAT EQUIPMENT AND PARTS ARE EASILY ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE, AND REPAIR. DEVIATIONS FROM INDICATED ARRANGEMENTS ARE SUBJECT TO REVIEW AND APPROVAL FROM ENGINEER PRIOR TO INSTALLATION.
12. WHEN RESURFACING WITH CONCRETE, A MINIMUM OF A 6–INCH THICK, 4,000 POUNDS PER SQUARE INCH (psi) REINFORCED CONCRETE SHALL BE USED OVER 6–INCHES OF CONCRETE SLURRY. REINFORCING SHALL BE NO. 4 REBAR TIED TO AN EXISTING SLAB, STAGGERED ON EACH SIDE OF THE TRENCH ON 18–INCH CENTERS PLACED AT MID–HEIGHT. FOR TRENCHES LESS THAN 3 FEET WIDE, A FIBER–REINFORCED MESH MAY BE SUBSTITUTED FOR REBAR. CONCRETE SHALL BE DOWELLED WHERE APPLICABLE CONCRETE MIX DESIGN SPEDIFICATIONS:
    - STRENGTH – 4,000 psi
    - AGGREGATE SIZE – c2 GRAVEL 3/4" TO 1"
    - CEMENT TYPE AND BAG MIX – TYPE 1 PORTLAND CEMENT
    - CURE TIME – 28 DAYS 90% CURE
    - MAX TURNS – 70 ROTATIONS
    - MAX TRAVEL TIME – HOT WEATHER 1 HOUR 15 MINUTES, COLD WEATHER 2 HOURS

Professional Engineer's
**EDWARD COTE, PE**

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| 1 | 7/22/11 | Issued for Blds | | |

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Project Mgr. C.P.
Designed by E.C.
Drawn by T.T.
Checked by J.S.

ARCADIS
ARCADIS G&M OF MICHIGAN, LLC.

RACER TRUST, NAO FLINT OPERATIONS SITE • 902 EAST HAMILTON AVE, FLINT MICHIGAN
AS-BUILT DRAWINGS

**SCOPE OF WORK AND GENERAL NOTES**

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013
ARCADIS
520 S. Main Street
SUITE 2400
AKRON, OHIO 44311
TEL. 330.374.1320

**2**

CITY: WPB, FL DIV/GROUP: ENVWFE30 DB: B.OLIVA LD: J.RICHARDS PIC: R.KAPPES PM: R.KAPPES TM: T.HAYS: LYRON=*OFF=*REF*
G:\ENVCAD\TAMPA\ACT\B0064410 Racer_MLC\2013\AS-BUILT\64410G01.dwg LAYOUT: 2 SAVED: 3/13/2013 2:07 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTCONT.CTB PLOTTED: 3/13/2013 2:07 PM BY: RICHARDS, JIM

LEGEND

E — EXISTING ELECTRICAL

U — EXISTING UNDERGROUND OBSTRUCTION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. GPR DATA PROVIDED IS FOR ONSITE PROPERTY ONLY.

Professional Engineer's
**EDWARD COTE, PE**

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0 80' 160'

GRAPHIC SCALE 1" = 80'

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# SITE PLAN

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013

ARCADIS
520 S. Main Street
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3

CITY: WPB, FL DIV/GROUP: ENWFE30 DB: B.OLIVA LD: J.RICHARDS PIC: R.KAPPES PM: R.KAPPES TM: T.HAYS: LYRON="OFF="REF" PAGESETUP: — PLOTSTYLETABLE: ACS-BW_ANALYTICAL.CTB PLOTTED: 3/13/2013 2:10 PM BY: RICHARDS, JIM
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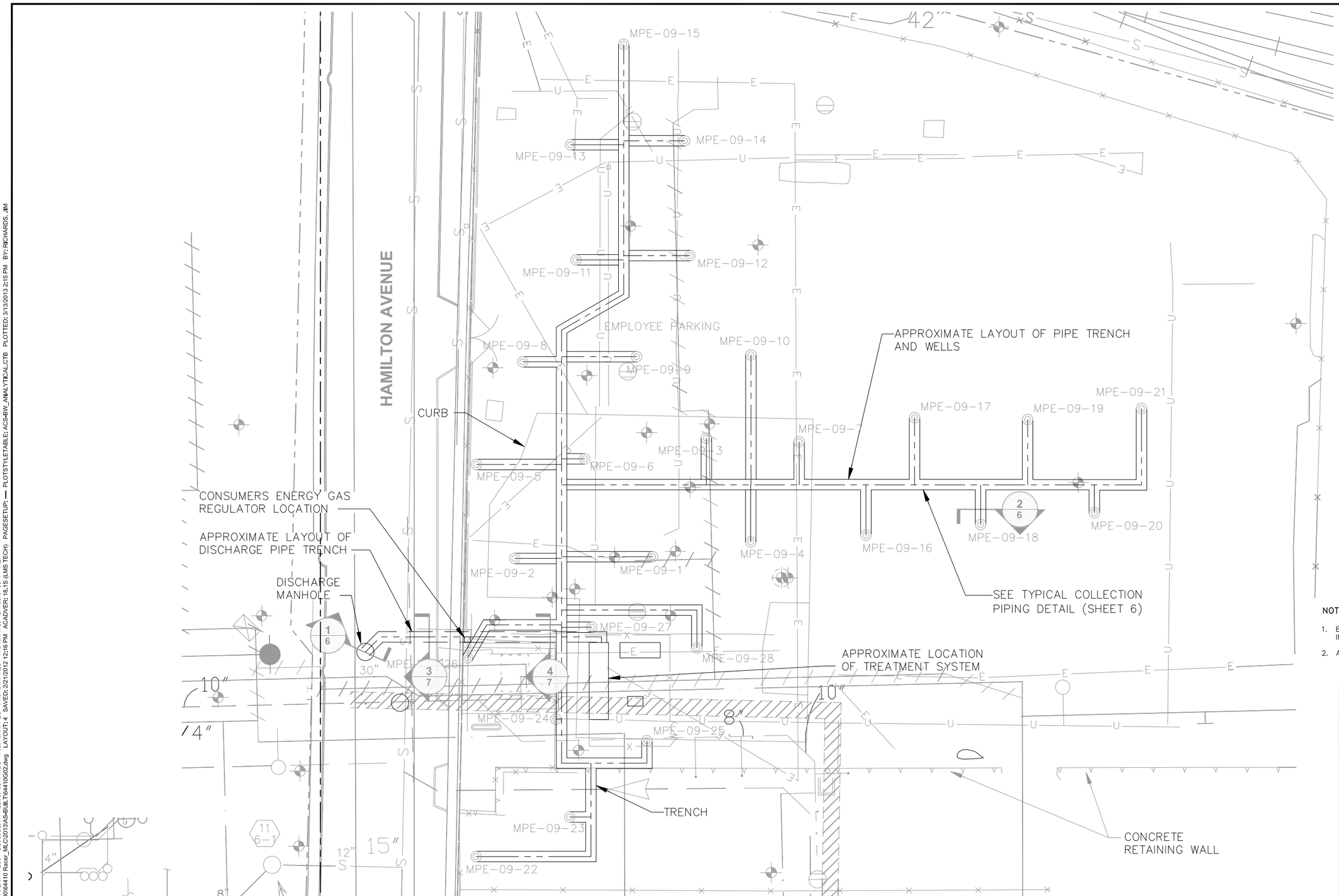


NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

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0 50' 100'

GRAPHIC SCALE 1"=50'

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Drawn by T.T.
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**PIPING PLAN**

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013

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**4**

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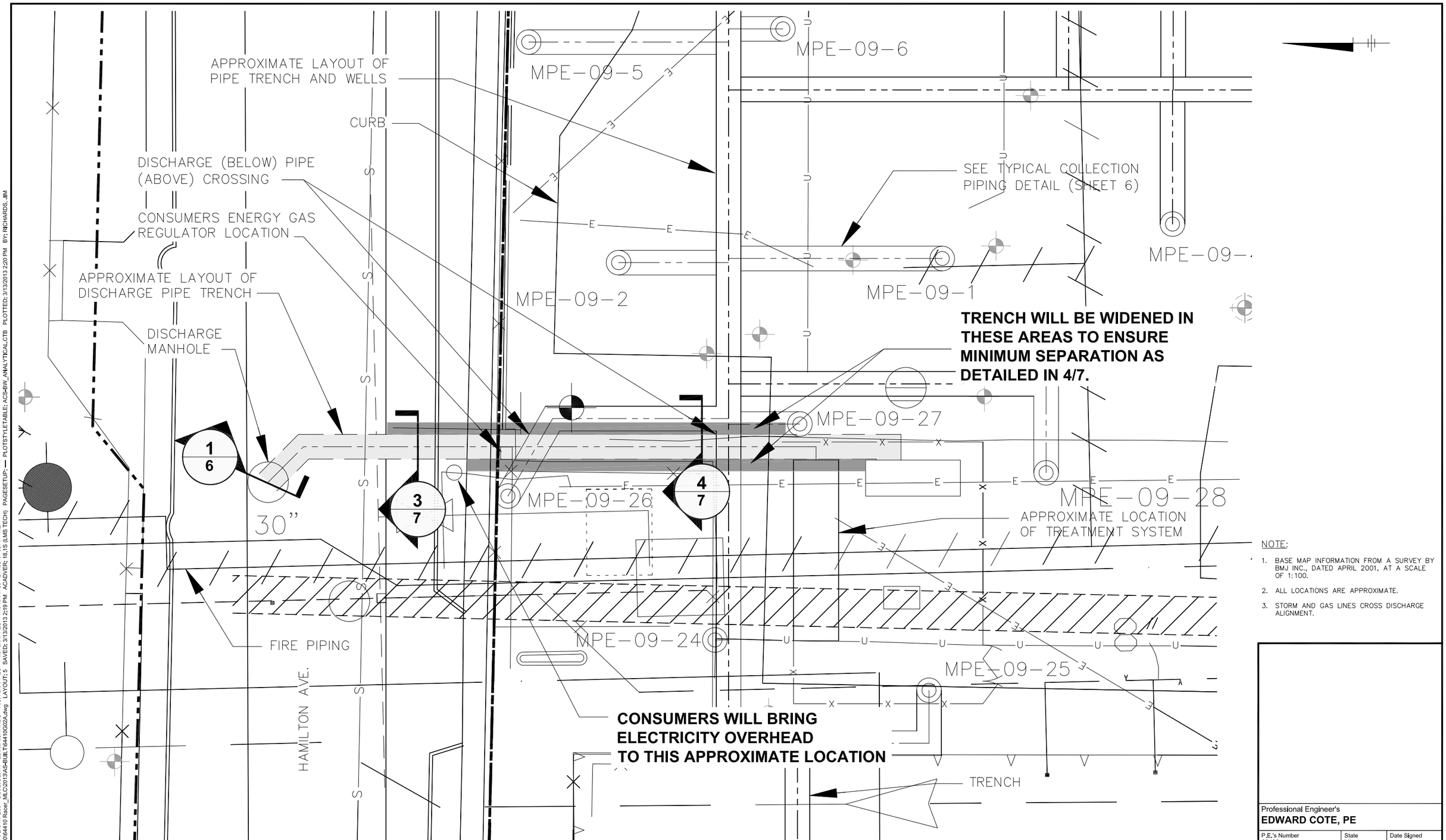


NOTE:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. STORM AND GAS LINES CROSS DISCHARGE ALIGNMENT.

Professional Engineer's
**EDWARD COTE, PE**

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0 20' 40'
GRAPHIC SCALE 1"=20'

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**DISCHARGE PIPE TRENCH**

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013

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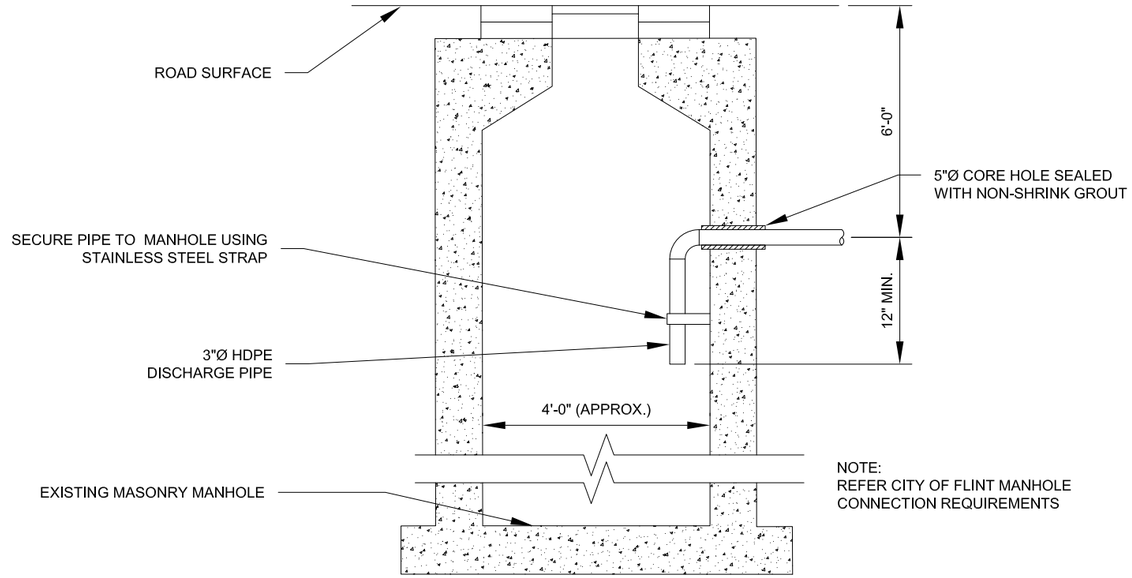
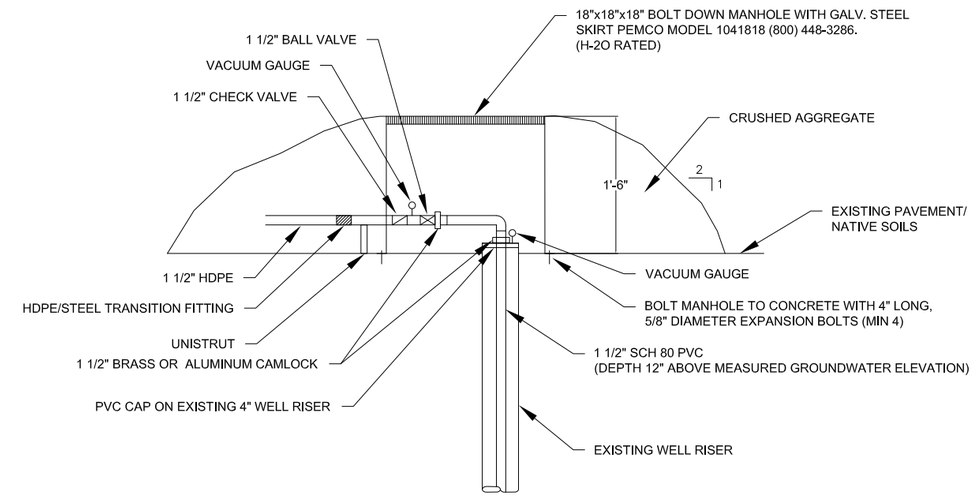
5

CITY: WPB, FL DIV/GROUP: ENV/FE30 DB: B.OLIVA LD: J.RICHARDS PIC: R.KAPPES PM: R.KAPPES TM: T.HAYS LYR:ON=*;OFF=*REF*
G:\ENV\CAD\TAMPA\ACT\B0064410 Racer_MLC\2013\AS-BUILT\64410G02A.dwg LAYOUT:5 SAVED: 3/13/2013 2:19 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACS-BW_ANALYTICAL.CTB PLOTTED: 3/13/2013 2:20 PM BY: RICHARDS, JIM



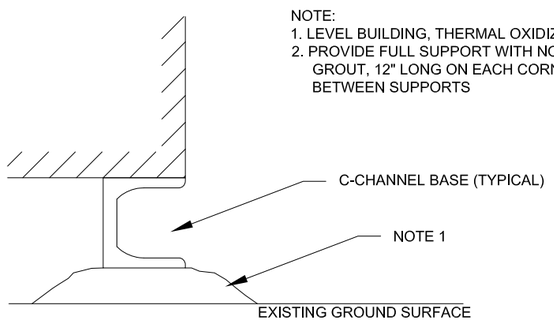

## 1/5 SANITARY MANHOLE CONNECTION DETAIL

NOT TO SCALE




## 2/4 WELLHEAD DETAIL

NOT TO SCALE




NOTE:
1. LEVEL BUILDING, THERMAL OXIDIZER, AND TANK
2. PROVIDE FULL SUPPORT WITH NON-SHRINK, NON-METALLIC GROUT, 12" LONG ON EACH CORNER WITH 4'-0" SPACE BETWEEN SUPPORTS

## BUILDING AND EQUIPMENT LEVELING

NOT TO SCALE

Professional Engineer's
**EDWARD COTE, PE**

| P.E.'s Number | State | Date Signed |
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Checked by J.S.

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**DPE WELL AND MANHOLE DETAILS**

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013

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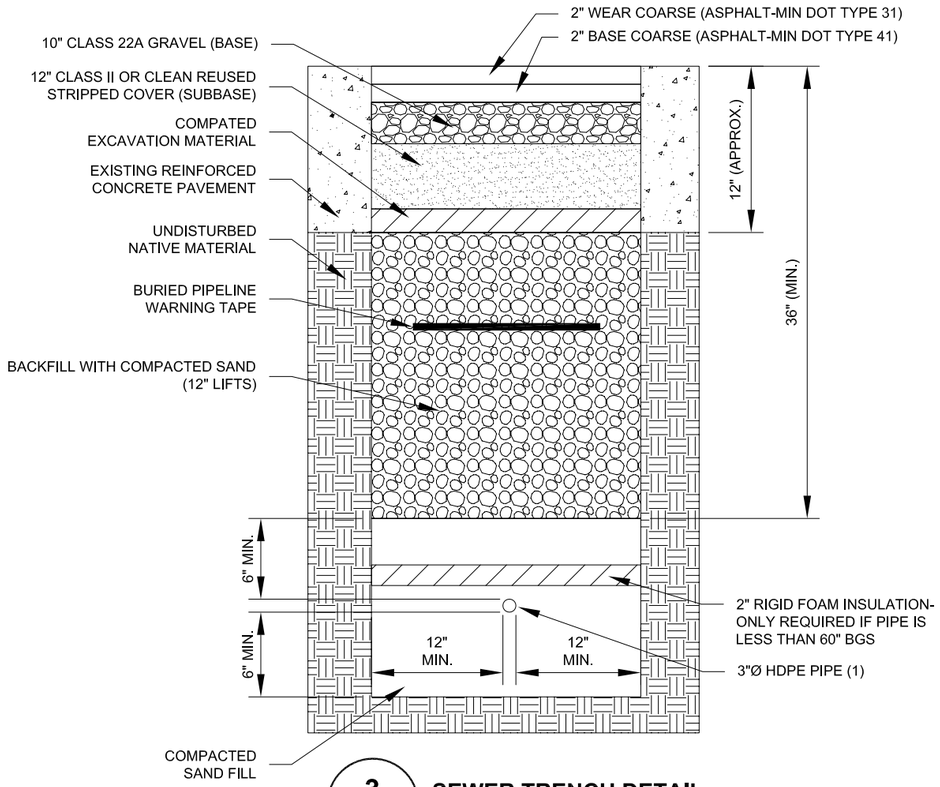
G:\ENVCAD\TAMPA\ACT\B0064410 Racer_MI\C2013\AS-BUILT\64410C03.dwg LAYOUT: 6 SAVED: 3/13/2013 2:56 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACS-BW_ANALYTICAL.CTB PLOTTED: 3/14/2013 12:49 PM BY: RICHARDS, JIM

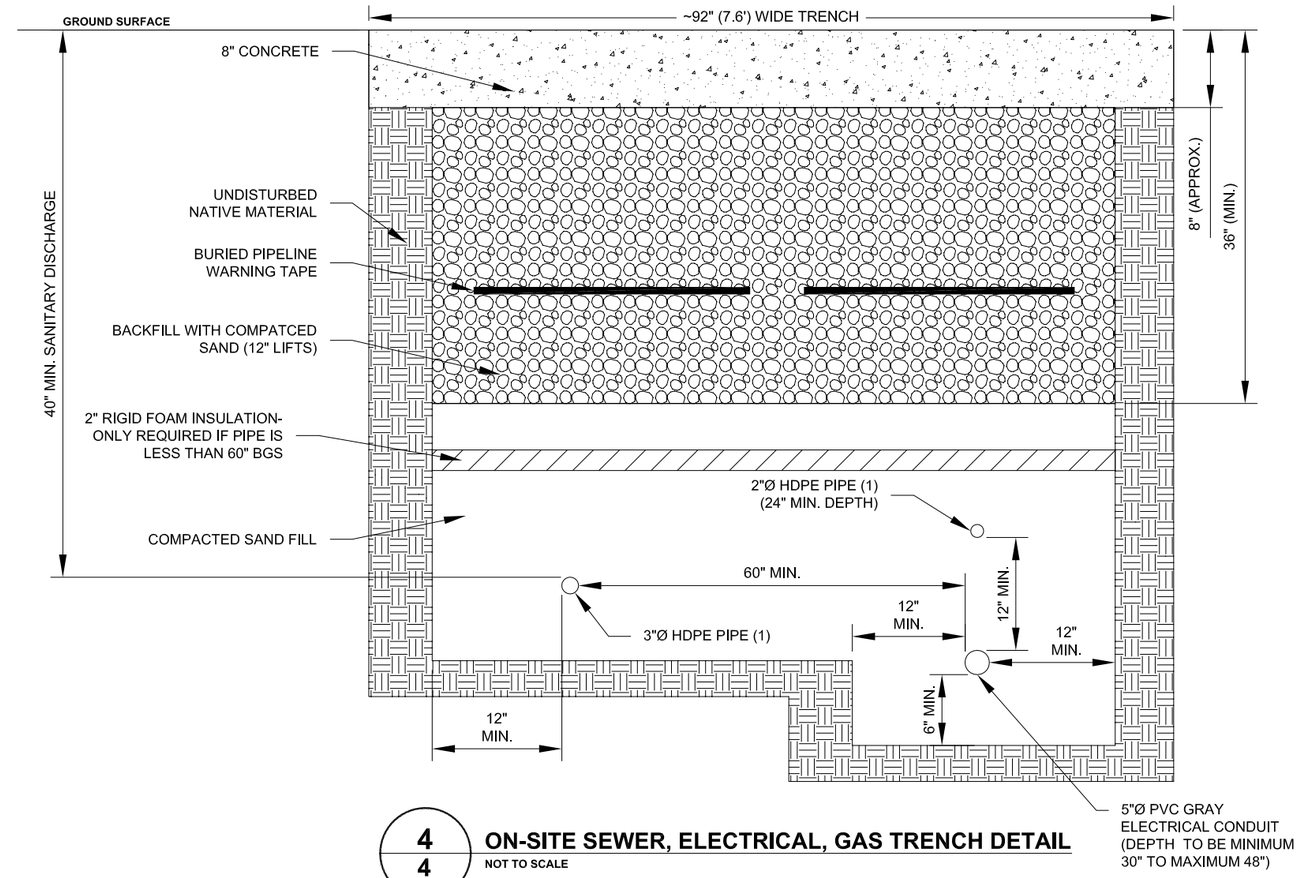



**3/4 SEWER TRENCH DETAIL**

NOT TO SCALE

**NOTE:**

1. **REPLACEMENT OF ROADWAY SHALL COMPLY WITH CITY REQUIREMENTS.**




**4/4 ON-SITE SEWER, ELECTRICAL, GAS TRENCH DETAIL**

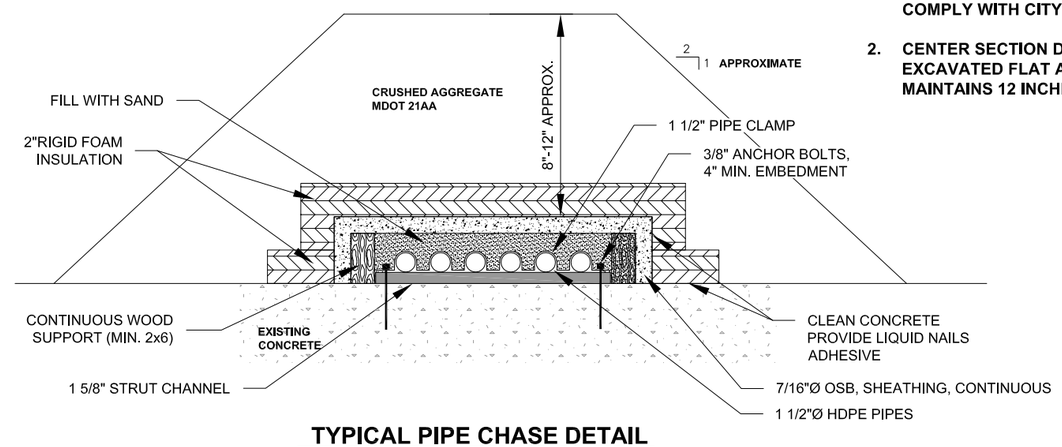
NOT TO SCALE

**NOTE:**

1. **REPLACEMENT OF SIDEWALK SHALL COMPLY WITH CITY REQUIREMENTS.**
2. **CENTER SECTION DOES NOT HAVE TO BE EXCAVATED FLAT AS LONG AS PIPING MAINTAINS 12 INCHES FROM SIDEWALL**

**NOTE:**

1. **PROVIDE STRUT CHANNEL SUPPORT WITHIN 4' OF EACH WELL AND EVERY 25'.**
2. **PROVIDE NOMINAL 2"x4" SUPPORT EVERY 5' UNDER HDPE PIPE.**
3. **FILL VOID SPACE ALL AROUND PIPING WITH SAND.**
4. **DETAIL AS DRAWN IS FOR PIPING RUNS UP TO 6 HDPE PIPES. FOR GREATER NUMBER OF PIPES, PROVIDE ADDITIONAL STRUT CHANNEL ON TOP OF BOTTOM ROW AND ANCHOR BOLT TO CONCRETE**
5. **HPDE PIPES CAN BE GROUPED AND HELD IN PLACE WITH RIGID BRACKET.**




**TYPICAL PIPE CHASE DETAIL**

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**EDWARD COTE, PE**

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0 20' 40'

GRAPHIC SCALE 1" = 20'

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Drawn by T.T.
Checked by J.S.

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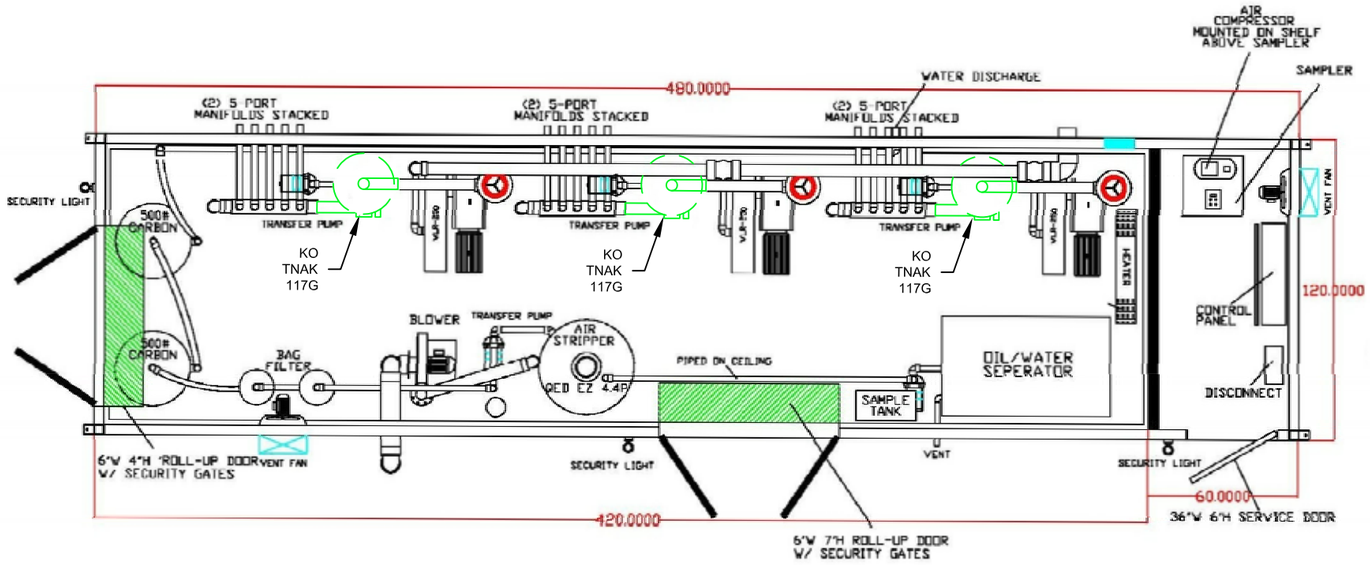
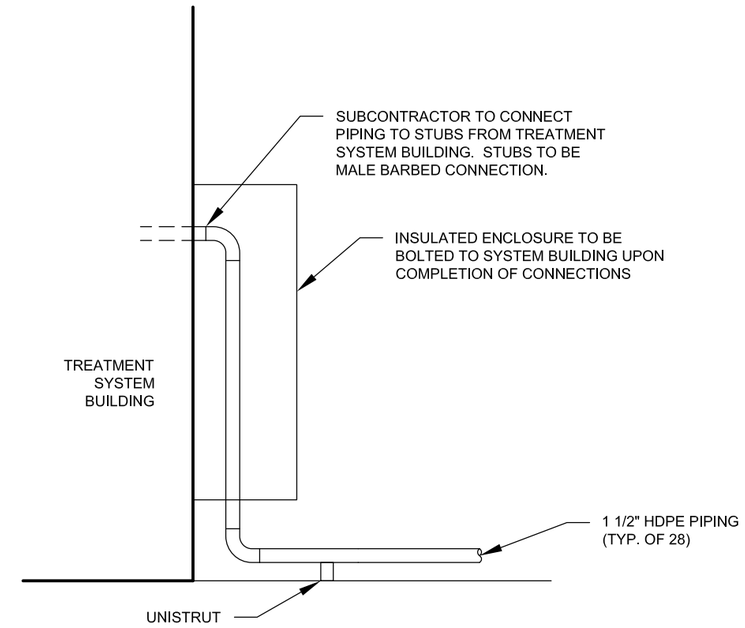



## 10'x40" BUILDING LAYOUT

NOT TO SCALE

NOTE:

- 4" WELDED CONTAINMENT LIP WELDED INSIDE ENTIRE TREATMENT AREA
- ALL WATER PIPE SCH 80 PVC
  ALL INLET AIR PIPE SCH 40 PVC




## PIPING CHASE

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**NOTES:**

1. **CONNECTION TO PIPING CAN BE COMPLETED WITH FLEXIBLE 1 1/2" PETROLEUM RESISTANT FLEX HOSE.**

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SCALE AS NOTED

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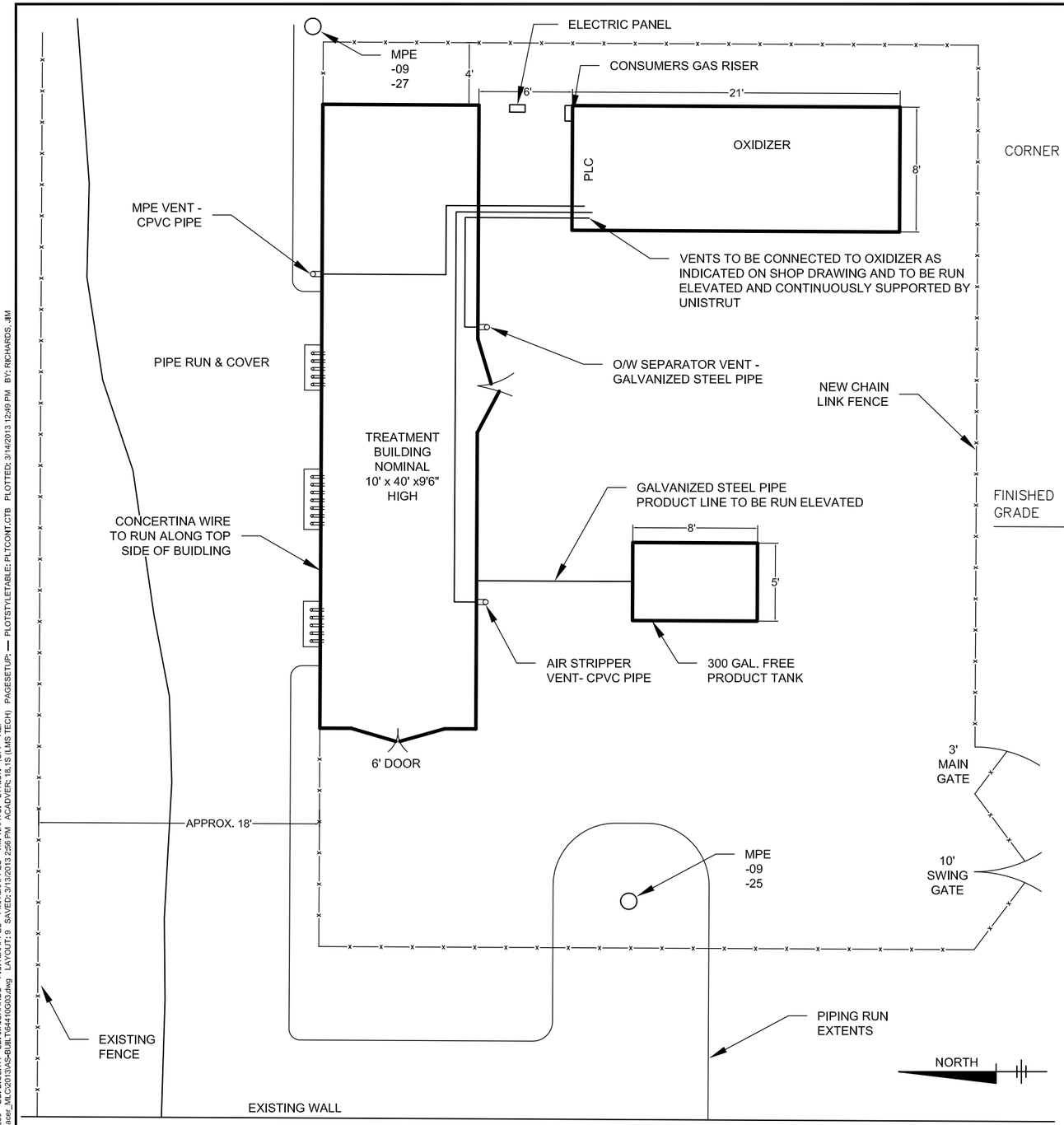
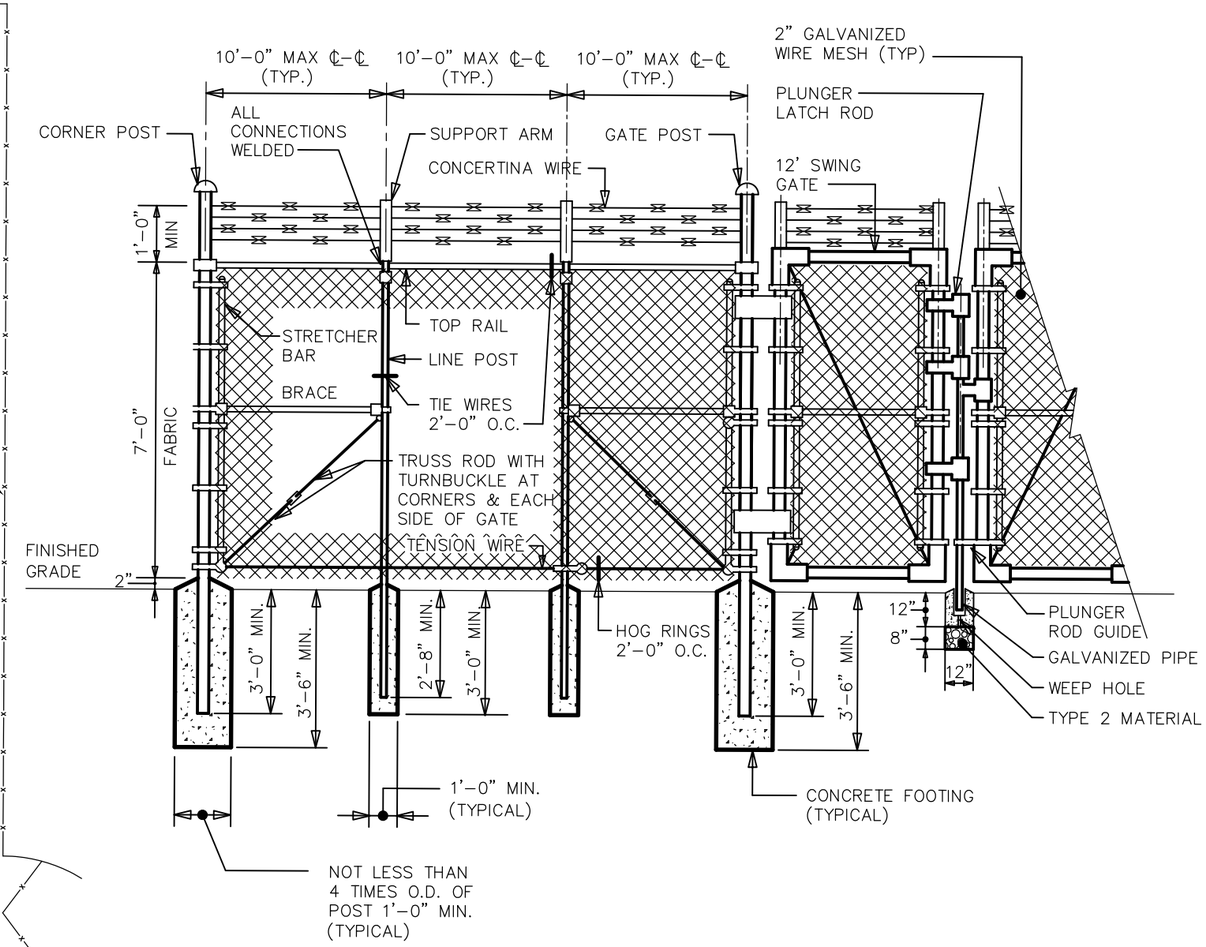



## TREATMENT EQUIPMENT PLAN

**SCALE 1/1/2" = 1'**




NOTE:

1. CONCRETE SHALL BE TAMPED & RODDED IN PLACE.

## TYPICAL CHAIN LINK FENCE DETAIL

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0 3' 6'
GRAPHIC SCALE 1" = 3'

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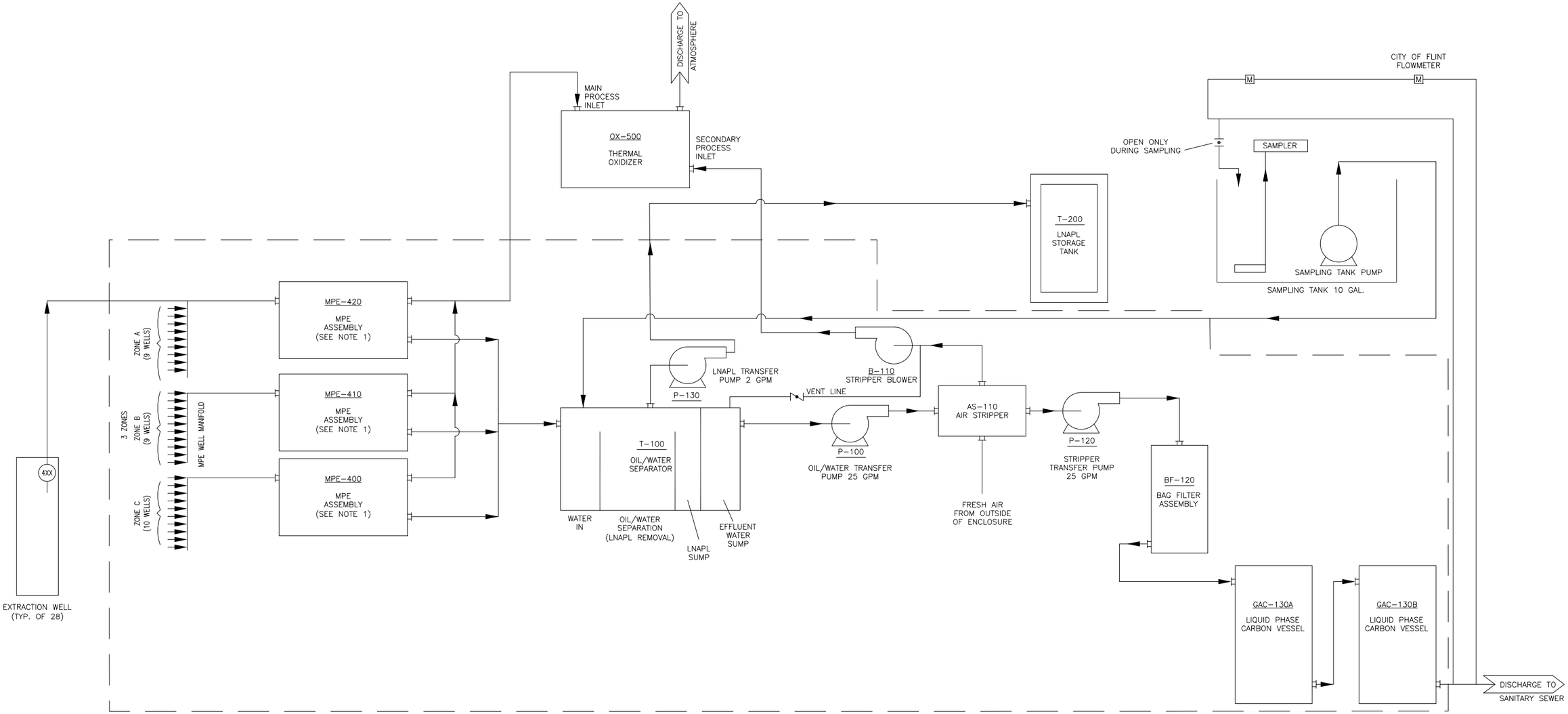


| EXTRACTION WELL MANIFOLD | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WELL NAME | MPE 1 | MPE 2 | MPE 22 | MPE 23 | MPE 24 | MPE 25 | MPE 26 | MPE 27 | MPE 28 | MPE 3 | MPE 4 | MPE 7 | MPE 10 | MPE 16 | MPE 17 | MPE 18 | MPE 19 | MPE 20 | MPE 21 | MPE 5 | MPE 6 | MPE 8 | MPE 9 | MPE 11 | MPE 12 | MPE 13 | MPE 14 | MPE 15 |
| UNIQUE ID 4XX | 01 | 02 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 05 | 06 | 07 | 08 | 16 | 17 | 18 | 19 | 20 | 21 | 03 | 04 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| MPE BLOWER NAME | 400 | | | | | | | | | 410 | | | | | | | | | | 420 | | | | | | | | |

| STREAM ID | 110 | 111 | 112 | 113 | 201 | 301 | 4XX | 45X | 501 | 502 | 503 | 504 | 505 | 51X |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIGN FLOW (GPM) | 4 | 4 | 4 | 4 | <0.1 | 4 | 1 | 1 | | | | | | |
| DESIGN FLOW (SCFM) | | | | | | | 35 | 35 | 100 | 310 | 310 | 210 | 210 | 35 |
| COMMENTS/ NOTES | | | | | 3, 4 | 3, 5, 6, 8 | 1 | 1, 2 | 6 | 7 | | | | 1 |

GPM – GALLONS PER MINUTE
SCFM – STANDARD CUBIC FEET PER MINUTE

NOTES:

1. MPE ASSEMBLY INCLUDES MOISTURE SEPARATOR, CONDENSATE TRANSFER PUMP, AND MPE BLOWER, TYPICAL OF 1 ASSEMBLY PER ZONE. SEE FIGURE 10.

GPM – GALLONS PER MINUTE
SCFM – STANDARD CUBIC FEET PER MINUTE

Professional Engineer's
**EDWARD COTE, PE**

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# PROCESS FLOW DIAGRAM

ARCADIS Project No. B0064410.2013.01402
Date FEBRUARY 2013

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ARCADIS

**Appendix C**

LNAPL Transmissivity Evaluation and Results Memorandum

ARCADIS U.S., Inc.
194 Forbes Road
Braintree
Massachusetts 02184
Tel 781 356 7300
Fax 781 356 2211

**MEMO**

To:
Chris Black, EPA

Copies:
Grant Trigger, RACER Trust
Dave Favero, RACER Trust
Micki Maki, ARCADIS
Chris Peters, ARCADIS

From:
Steven Gaito

Date:
February 14, 2013

ARCADIS Project No.:
B0064410.2012.00205

Subject:
LNAPL Transmissivity Evaluation and Results
RACER Trust, Buick City Site, Flint, Michigan

## Introduction

ARCADIS US, Inc. (ARCADIS) has prepared the following memo on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust presenting results of a Light Nonaqueous Phase Liquid (LNAPL) transmissivity evaluation at the Southend of the Buick City (Site) in Flint, Michigan. The LNAPL transmissivity results will be used to quantify relative LNAPL recoverability to focus LNAPL recovery efforts in areas that have higher recovery potential and to establish practical limits of recovery.

LNAPL baildown tests were completed at the Site in December 2011, March 2012, June 2012, and September 2012 in accordance with the Southend: Natural Source Zone Depletion and LNAPL Transmissivity Measurement Work Plan (Work Plan) (ARCADIS, 2011). Data from tests were analyzed using the American Petroleum Institute (API) LNAPL Transmissivity Spreadsheet Tool (API Tool) to calculate LNAPL transmissivity in the vertical interval of the observed LNAPL. As discussed in greater detail below, results of this evaluation show that LNAPL transmissivity at the Site ranges between 0.01 and 1.88 square feet per day ($ft^2$/day). The Interstate Technology and Regulatory Council (ITRC) published an LNAPL technical guidance document that established an LNAPL transmissivity range of 0.1 to 0.8 square feet per day ($ft^2$/day) as a lower-bound threshold where LNAPL recovery using hydraulic methods (e.g., LNAPL pumping, dual-phase extraction, LNAPL skimming) is not typically practicable.

## Background

LNAPL transmissivity can be used to assess the recoverability of LNAPL within an aquifer. LNAPL transmissivity is defined as the volumetric LNAPL flow rate per unit time under a unit hydraulic gradient, through a unit width of porous media is a function of LNAPL saturation, the intrinsic permeability of the aquifer materials in which LNAPL resides, the vertical extent of mobile LNAPL in the formation, and physical properties of the LNAPL itself, including viscosity, density, and LNAPL-water interfacial tension and are inherently factored into LNAPL transmissivity. LNAPL transmissivity measurements can be used to characterize relative LNAPL mobility and recoverability, but cannot predict ultimate recovery volumes.

An LNAPL baildown test is initiated by quickly removing LNAPL accumulated in a well, making it analogous to a groundwater rising-head slug test. The rate of LNAPL flow into the well is a function of soil and LNAPL properties discussed above and the magnitude of the initial hydraulic gradient toward the well developed during LNAPL removal. The baildown test response is influenced by the prevalent fluid levels at the time of testing. Multiple baildown tests may be required to describe the range of LNAPL transmissivity under different fluid level conditions due to heterogeneity in the subsurface.

The relative observed recovery data resulting from LNAPL baildown tests can be inspected to provide a qualitative sense of the recoverability of LNAPL. A short period for the LNAPL to recover to the approximate thickness measured prior to the test indicates favorable recoverability, whereas an extended period for LNAPL recovery points to poor recoverability.

LNAPL baildown tests that have sufficient LNAPL discharge into the well (recovery) can further be quantitatively analyzed to determine LNAPL transmissivity under the test conditions. The calculated LNAPL transmissivity can be utilized to quantitatively characterize the LNAPL bulk transport conditions on-Site and comparatively assess LNAPL recoverability. LNAPL recovery using hydraulic methods is typically not effective for areas where LNAPL transmissivity is less than 0.1 to 0.8 $ft^2$/day (ITRC 2009a).

## Test Methodology

Pre-test depth to air/LNAPL and LNAPL/groundwater interfaces are recorded using an oil/water interface probe prior to starting a baildown test. The baildown tests are initiated by evacuating LNAPL from a well using a peristaltic pump or bailer. The fluids removed from the well are collected in a graduated cylinder and the total volume of LNAPL and groundwater are documented. After LNAPL has been purged from the well to the extent practical, routine fluid level measurements are taken using the oil/water interface probe.

At sites where rapid recharge is expected the manual fluid level measurement approach may be augmented using a potentiometric surface data logger. Fluid level data are initially collected in short intervals, typically on the order of every minute, at test initiation and adjusted thereafter based on the test-specific rate of LNAPL recovery. This process is continued as long as it is viable or necessary based on field logistics and data quality objectives, respectively. A detailed description of baildown testing protocol was provided in the Work Plan. All monitoring wells were developed within one year of the initiation of the baildown testing program.

The Work Plan proposed conducting two baildown tests at each well during the first transmissivity event, followed by single baildown tests in the remaining three quarterly events, for a possible total of five tests per monitoring well. Two baildown tests were recommended during the first event to separate filter pack versus formation drainage in the event of rapidly responding wells. During the first event (December 2011) LNAPL thicknesses did not recharge quickly at several of the wells; therefore, two baildown tests were only performed at the wells which recharged quickly.

The Work Plan proposed baildown testing at fourteen wells during the initial event and that subsequent events would include all or a subset of these wells based on:

- the results of the initial testing;
- wells having a minimum thickness of 0.5 feet of LNAPL; and
- well screen interval is not submerged (LNAPL-water interface within the well screen interval).

## Data Analysis Methodology

Baildown tests are analyzed using different methods per ASTM standards, depending on prevailing hydrogeologic conditions during the time of testing and well construction details. At the Southend of the Site, where LNAPL and groundwater in the well were in contact with the well screen and LNAPL-bearing soils in the formation, unconfined analysis methods are used to determine LNAPL transmissivity values. The baildown tests were analyzed using a modified Bouwer and Rice (1976) slug test method by Lundy and Zimmerman (1996) and Huntley (2000), where feasible using the API LNAPL Transmissivity Spreadsheet Tool (API Tool, API 2012). Assumptions for this model include quasi-steady-state recharge to the well with rate dependent drawdown and no storage effects. Also, the ratio of change of LNAPL

drawdown to change in LNAPL thickness at the well is considered constant allowing the Bouwer and Rice method to be applied to a wide range of baildown tests.

## Results

Qualitative assessment of the LNAPL baildown test results suggests limited LNAPL transmissivity in all of the wells tested except RFI-40-072R. Outside of RFI-40-072R, LNAPL thicknesses did not recover to 90 percent of their respective initial values over periods of up to 50 hours. LNAPL transmissivity values for all wells where analysis was completed are presented in Table 1 in units of square feet per day ($ft^2$/day).

Summary of Baildown Testing

Of the 14 targeted monitoring wells, baildown tests were conducted at 11 wells. A total of 31 baildown tests were completed and LNAPL discharge from the formation during 17 of the tests was adequate to quantify the transmissivity. As shown on Table 1, transmissivity was calculated from baildown tests completed at six monitoring well locations. The following summary provides additional details regarding why tests were not able to be conducted during each event:

- December 2011 (4 wells): RFI-12-11D - the screen was submerged; RFI-16-08 - there was less than 0.5 feet of LNAPL present; and LIF-12-18 and LIF-40-004 were not located.

- March 2012 (8 wells): RFI-12-11D - the screen was submerged; and at RFI-02-15, RFI-02-19, and 31-7, RFI-12-35, RFI-16-08, RFI-40-02R, and LIF-40-004. -there was less than 0.5 feet of LNAPL present.

- After the first two events, the data was evaluated and seven wells were removed from the program because continued testing would not provide additional value for the following reasons: LNAPL was too viscous to accurately measure during testing at four wells (RFI-02-14, RFI-02-15, RFI-02-19, and RFI-12-09R), the well screen was submerged (RFI-12-11D), and the LNAPL discharge at 31-7 and RFI-04-02R was too low to quantify over the first two tests.

- June 2012 (3 wells, in addition to the wells removed as identified above): RFI-12-35, RFI-16-08, and LIF-40-004 - there was less than 0.5 feet of LNAPL present.

- September 2012 (2 wells in addition to the wells removed as identified above): LIF-40-004 - there was less than 0.5 feet of LNAPL present; and RFI-16-08 was not located.

Baildown Tests Not Quantified

Transmissivity was unable to be quantified in fourteen baildown tests at monitoring wells RFI-02-14, RFI-02-15, RFI-02-019, 31-7, RFI-09-40R, RFI-12-09R, RFI-12-23, LIF-12-018, and RFI-40-02R the following reasons (See Table 1 for additional information):

- The LNAPL at RFI-02-14, RFI-02-15, RFI-02-19, and RFI-12-09R was too viscous to accurately measure fluid levels during the test, so data was not collected or quantified.

- Tests at monitoring wells 31-7, RFI-09-40R, RFI-12-23, LIF-12-018, and RFI-40-02R had poor LNAPL discharge from the formation to the well, causing weak discharge to drawdown relationship and inability to line-fit data in the API Tool.

- The initial test at RFI-40-02R resulted in fluid levels increasing in elevation above pre-testing levels, invalidating the assumption of static equilibrium of free product and water in a well with fluid in the formation

Transmissivity Results

Transmissivity was quantified in seventeen baildown tests from six wells using the modified Bouwer-Rice Method with the API tool. The output from the API tool are included for each test in Appendix A.

Transmissivities quantified at monitoring wells LIF-12-018, RFI-09-40R, RFI-12-09R, and RFI-12-35 ranged from 0.01 to 0.1 $ft^2$/day, which is below the range of 0.1 to 0.8 $ft^2$/day, indicating that LNAPL is not practicable at these wells.

At RFI-12-23 transmissivity ranged from 0.2 to 0.4 $ft^2$/day indicating that the recovery is likely not practicable; however, during the final remedy selection other plume-specific knowledge and factors will be assessed to determine if hydraulic recovery is practicable.

The majority of tests completed at RFI-40-7R2 exceed the range of 0.1 to 0.8 $ft^2$/day suggested by the ITRC as the lower limit of practicable recoverability. This indicates that LNAPL recovery at this well is potentially practicable.

Qualitative assessment of the five wells where LNAPL transmissivity was unable to be quantified, RFI-02-14, RFI-02-15, RFI-02-19, 31-7, and RFI-40-02R, suggests hydraulic recovery of LNAPL is not practicable. Initial tests at monitoring wells RFI-02-14, 31-7, and RFI-40-02R had LNAPL recovery of 30 percent or less within 26 hours, and measured LNAPL thickness in RFI-02-14, RFI-02-15, RFI-02-19, 31-7, RFI-40-02R did not recover to pre-testing levels from December to March, or even later, indicating hydraulic recovery of LNAPL is not practicable.

Conclusions

The majority of the monitoring wells at the Southend of the Site exhibited minimal LNAPL discharge from the formation indicating that hydraulic LNAPL recovery is not practicable. Further, measured LNAPL thickness in several wells did not recover to pre-testing levels from December to March, or even later, indicating hydraulic recovery of LNAPL is not practicable.

Thirty-one LNAPL baildown tests were conducted at 11 monitoring wells located in the Southend. Seventeen baildown tests completed in six monitoring wells resulted in quantifiable LNAPL transmissivity values. Of these six monitoring wells where transmissivity could be quantified, the results from four wells indicated that LNAPL recovery is not practicable at these wells.

At monitoring well RFI-12-23 transmissivity results indicate that the recovery is likely not practicable; however, during final remedy selection other plume-specific knowledge and factors will be assessed to determine if hydraulic recovery is practicable.

Monitoring well RFI-40-7R2 exhibited transmissivity that indicates LNAPL recovery at this well may be practicable.

**References**

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ASTM, 2012. Standard Guide for Estimation of LNAPL Transmissivity, E 2856-12, ASTM International, West Conshohocken, PA.

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Kirkman, A.J., 2012, Refinement of Bouwer-Rice Baildown Test Analysis, AECOM Technical Services, Inc., 2012, National Ground Water Association, Ground Water Monitoring & Remediation

Lundy, D.A., and Zimmerman, L.M., 1996, Assessing recoverability of LNAPL plumes for recovery system conceptual design, In Proceedings of the 10th National Outdoor Action Conference and Expo, May 13-15, 1996, Las Vegas, Nevada: National Groundwater Association, 19-33.

# Tables

**Table 1**
**LNAPL Baildown Testing and Analysis Results**

**LNAPL Transmissivity Evaluation and Results**
**RACER Trust Buick City**
**Flint, MI**

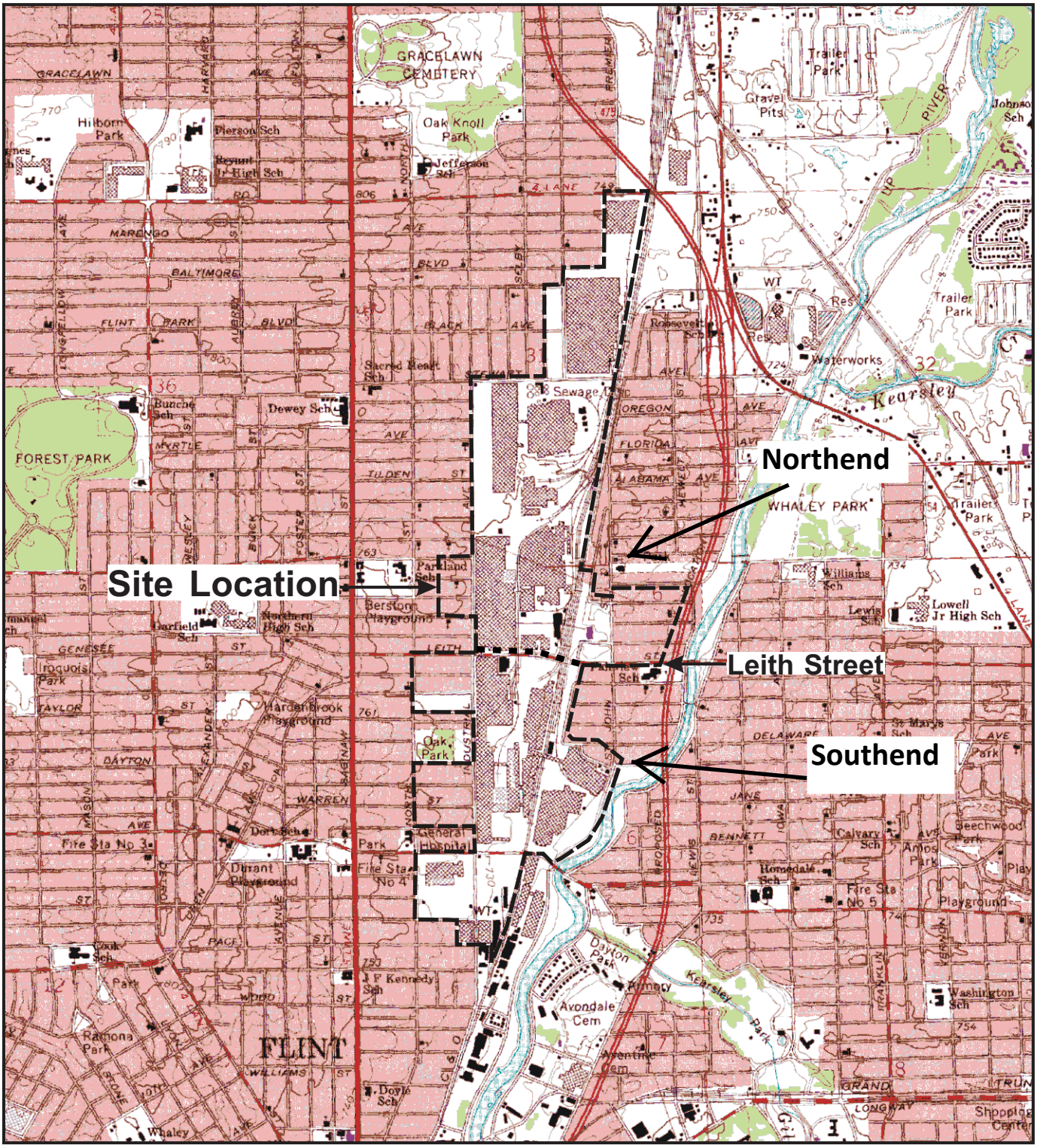
| Area | Test Well ID | Date of Baildown Test or Event | Initial LNAPL Thickness (ft) | Test Duration (min) | LNAPL Recovery During Test (ft) | LNAPL Transmissivity, $T_n$ ($ft^2$/day) |
|---|---|---|---|---|---|---|
| AOI 02-B: Hydraulic Oil Plume | RFI-02-14 | 12/19/2011 | 5.60 | >60 | - | NA[A] |
| | | 3/27/2012 | 3.42 | 1743 | 0.13 | NA[B] |
| | | 6/10/2012 | 1.43 | - | - | NT[C] |
| | | 9/19/2012 | NM | - | - | NT[C] |
| | RFI-02-15 | 12/19/2011 | 3.49 | >60 | - | NA[A] |
| | | 3/26/2012 | 0.00 | - | - | NT[D] |
| | | 6/10/2012 | 3.90 | - | - | NT[E] |
| | | 9/19/2012 | NM | - | - | NT[E] |
| | RFI-02-19 | 12/19/2011 | 1.92 | >60 | - | NA[A] |
| | | 3/26/2012 | 0.16 | - | - | NT[D] |
| | | 6/10/2012 | 1.70 | - | - | NT[E] |
| | | 9/19/2012 | NM | - | - | NT[E] |
| AOI 09-B: Gasoline Plume | 31-7 | 12/20/2011 | 1.19 | 1560 | 0 | NA[A] |
| | | 12/22/2011 | 0.37 | 360 | 0 | NA[A] |
| | | 3/29/2012 | 0.43 | - | - | NT[D] |
| | | 6/10/2012 | 0.56 | - | - | NT[D] |
| | | 9/19/2012 | NM | - | - | NT[G] |
| | RFI-09-40R | 12/20/2012 | 1.19 | 1571 | 0.74 | NA[H] |
| | | 12/21/2012 | 2.07 | 574 | 0.04 | NA[F] |
| | | 3/29/2012 | 2.64 | 179 | 0.20 | 0.01 |
| | | 6/12/2012 | 2.44 | 110 | 0.04 | NA[F] |
| | | 9/21/2012 | 1.81 | 131 | 0.06 | 0.03 |
| AOIs 12-A, B, & C: Hydraulic Oil Plumes | RFI-12-09R | 12/19/2011 | 4.31 | >60 | - | NA[A] |
| | | 3/29/2012 | 0.58 | 330 | 0.51 | 0.1 |
| | | 6/10/2012 | 0.49 | - | - | NT[H] |
| | | 9/19/2012 | 0.76 | - | - | NT[H] |
| | RFI-12-11D | 12/13/2011 | 1.22 | - | - | NT[J] |
| | | 3/28/2012 | 2.75 | - | - | NT[J] |
| | | 6/10/2012 | 4.48 | - | - | NT[J] |
| | | 9/19/2012 | NM | - | - | NT[K] |
| | RFI-12-23 | 12/19/2011 | 3.55 | 1835 | 1.25 | ***0.2*** |
| | | 12/21/2011 | 2.82 | 1530 | 1.02 | ***0.2*** |
| | | 3/28/2012 | 2.51 | 387 | 0.61 | ***0.4*** |
| | | 6/11/2012 | 1.81 | 1530 | 0.68 | NA[F] |
| | | 9/19/2012 | 1.68 | 2998 | 0.80 | 0.1 |
| | RFI-12-35 | 12/19/2011 | 1.45 | 1783 | 0.52 | 0.1 |
| | | 12/21/2011 | 1.11 | 1670 | 0.54 | 0.1 |
| | | 3/26/2012 | 0.36 | - | - | NT[D] |
| | | 6/10/2012 | 0.44 | - | - | NT[D] |
| | | 9/20/2012 | 0.83 | 1668 | 0.34 | 0.01 |
| | LIF-12-018 | 12/14/2011 | NM | - | - | NT[L] |
| | | 3/28/2012 | 3.11 | 172 | 0.2 | 0.1 |
| | | 6/11/2012 | 1.66 | 1620 | 0.02 | NA[F] |
| | | 9/19/2012 | 1.62 | 3036 | 0.11 | 0.1 |
| AOI 40-A,B and 16-C: Fuel Oil Plumes | RFI-40-7R2 | 12/19/2011 | 3.39 | 1543 | 2.18 | **1.6** |
| | | 12/21/2011 | 3.98 | 1810 | 2.7 | **1.3** |
| | | 3/27/2012 | 2.75 | 150 | 0.9 | 0.6 |
| | | 6/12/2012 | 3.01 | 248 | 0.79 | **1.9** |
| | | 9/20/2012 | 3.70 | 1563 | 2.8 | 0.5 |
| | RFI-16-08 | 12/14/2011 | 0.20 | - | - | NT[D] |
| | | 3/26/2012 | 0.02 | - | - | NT[D] |
| | | 6/10/2012 | 0.22 | - | - | NT[D] |
| | | 9/19/2012 | NM | - | - | NT[L] |
| | RFI-40-02R | 12/20/2011 | 1.87 | 1860 | 0.01 | NA[F] |
| | | 12/22/2011 | 0.35 | 180 | 0.02 | NA[F] |
| | | 3/26/2012 | 0.23 | - | - | NT[D] |
| | | 6/10/2012 | 0.36 | - | - | NT[D] |
| | | 9/19/2012 | NM | - | - | NT[G] |
| | LIF-04-004 | 12/14/2011 | NM | - | - | NT[L] |
| | | 3/26/2012 | 0.00 | - | - | NT[D] |
| | | 6/10/20112 | 0.04 | - | - | NT[D] |
| | | 9/19/2012 | 0.13 | - | - | NT[D] |

**Footnotes:**
A: LNAPL was too viscous to accurately measure fluid levels
B: Test was conducted using a transducer, however fluid levels were not accurately measured due to LNAPL viscosity
C: Additional testing was not considered feasible because of A and B.
D: Test not conducted because there was less than 0.5 feet of LNAPL in the monitoring well
E: Additional testing was not considered feasible because of A
F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation
G: Additional testing was not considered feasible because of F.
H: Fluid levels were outside of static conditions, which invalidates the assumptions of the analysis
I: Additional testing was not conducted because the LNAPL was too viscous to accurately measure fluid levels and in March a transducer was used, but transimissivity was minimal.
J: Well screen was below the LNAPL-groundwater interface, therefore not test conducted.
K: Additional testing was not considered feasible because of I.
L: Well was not located

**General Notes:**
LNAPL transmissivity determined from the modified Bouwer and Rice method.
**Bold and Shaded:** Transmissivity exceeds 0.1 to 0.8 $ft^2$/day lower criterion range for practicable hydraulic recovery of LNAPL (ITRC 2009a).
***Bold italics*** : Transmissivity within the 0.1 to 0.8 $ft^2$/day range indicating LNAPL is at the lower limit of practicable hydraulic LNAPL recovery.

**Acronyms and Abbreviations:**
ft = feet
LNAPL = light non-aqueous phase liquid
min = minute
NM = fluid level not measured. When in the final thickness column, the LNAPL was too viscous to accurately gauge to perform the baildown test
NA = Not analyzed
NT = Baildown test not conducted

# Figures




**REFERENCE:** Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'

**Approximate Scale: 1" = 2000'**

**Area Location**

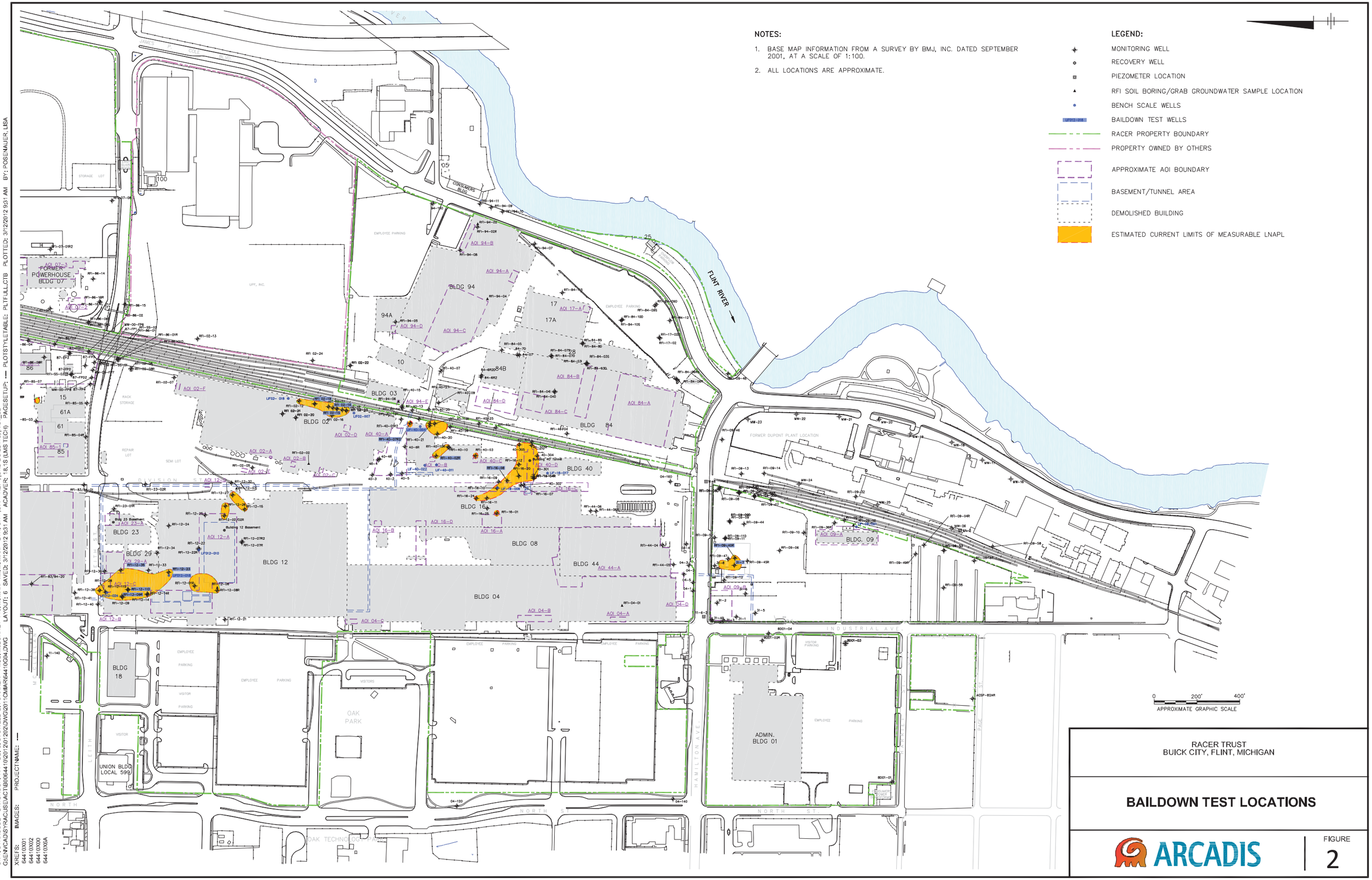
RACER TRUST
BUICK CITY - FLINT, MICHIGAN

**SITE LOCATION**

ARCADIS

FIGURE
**1**

05/07/2012 SYRACUSE, NY-ENV/CAD-DJHOWES
B0064410/4012/00104/CDR/64410N02.CDR




RACER TRUST
BUICK CITY, FLINT, MICHIGAN

**BAILDOWN TEST LOCATIONS**

ARCADIS

FIGURE
2

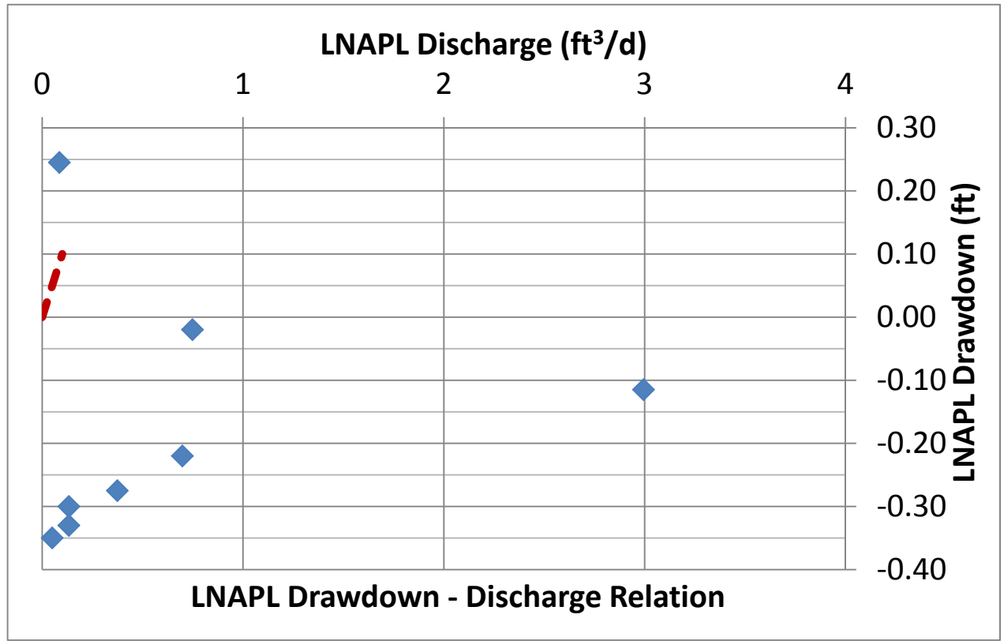
CITY:SYRACUSE DIV/GROUP:141 DB:G.STOWELL L.FORAKER PM:L.McBURNEY PIC:M.MAKI TM:M.MAKI LYR:ON=*;OFF=*REF* [SHD=BUILDING,HIST_SB G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\01\202\DWG\2011CMAR\64410G04.DWG LAYOUT: 6 SAVED: 3/12/2012 9:31 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/12/2012 9:31 AM BY: POSENAUER, LISA

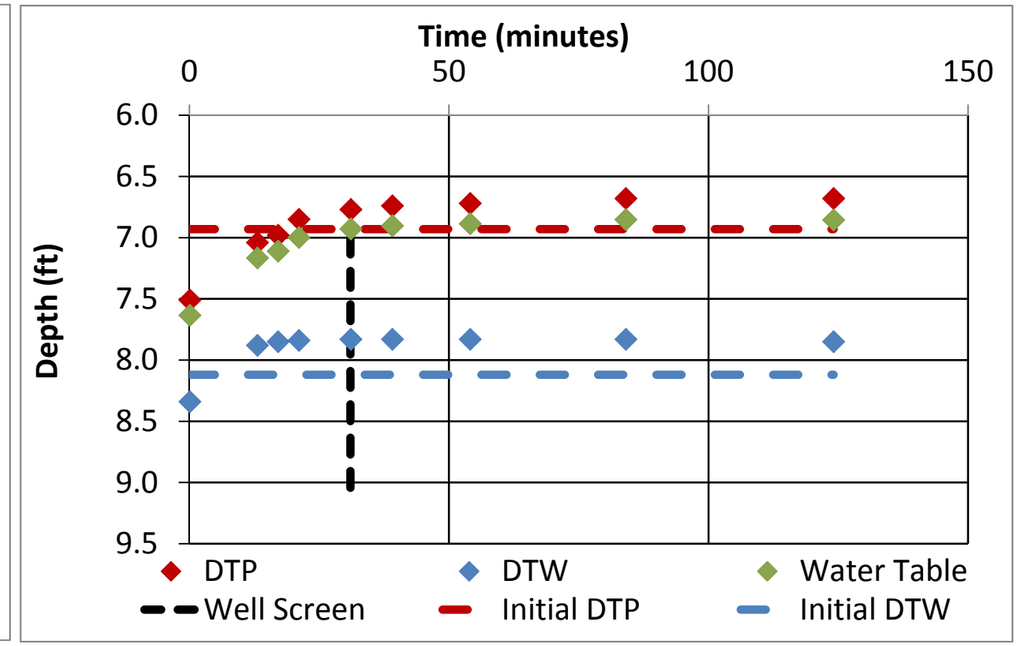
XREFS: 64410X01 64410X02 64410X00 64410X6A IMAGES: PROJECTNAME: ----

**Appendix A**

Baildown Testing API Tool Output

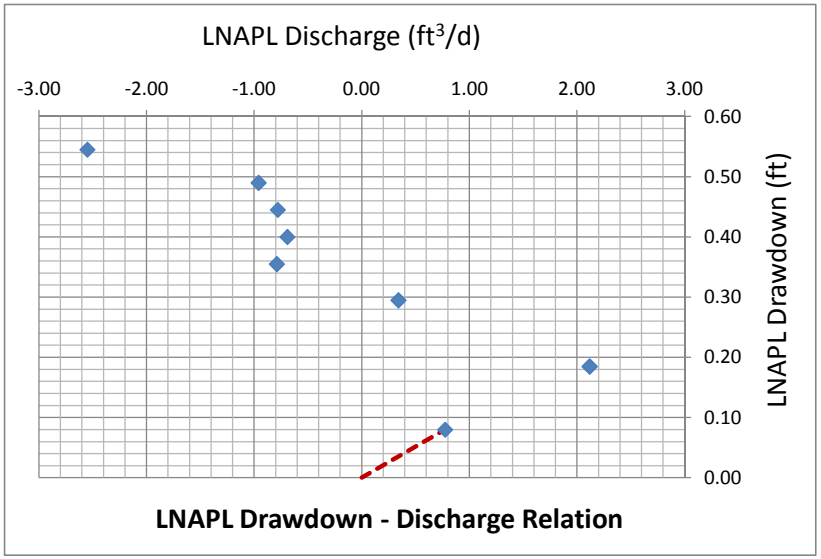
RFI-09-40R 12/20/2011

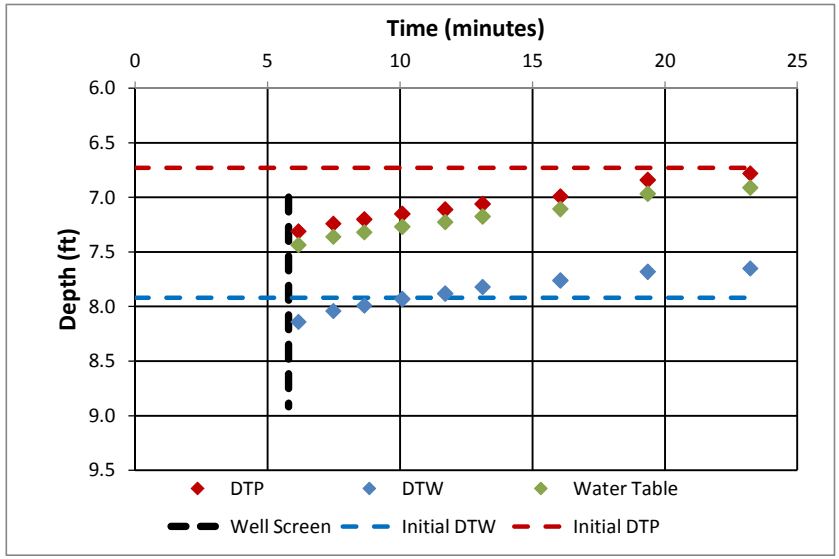



Test not quantified because:
H: Fluid levels were outside of static conditions, which invalidates the assumptions of the analysis

**RFI-09-40R 12/21/2012**

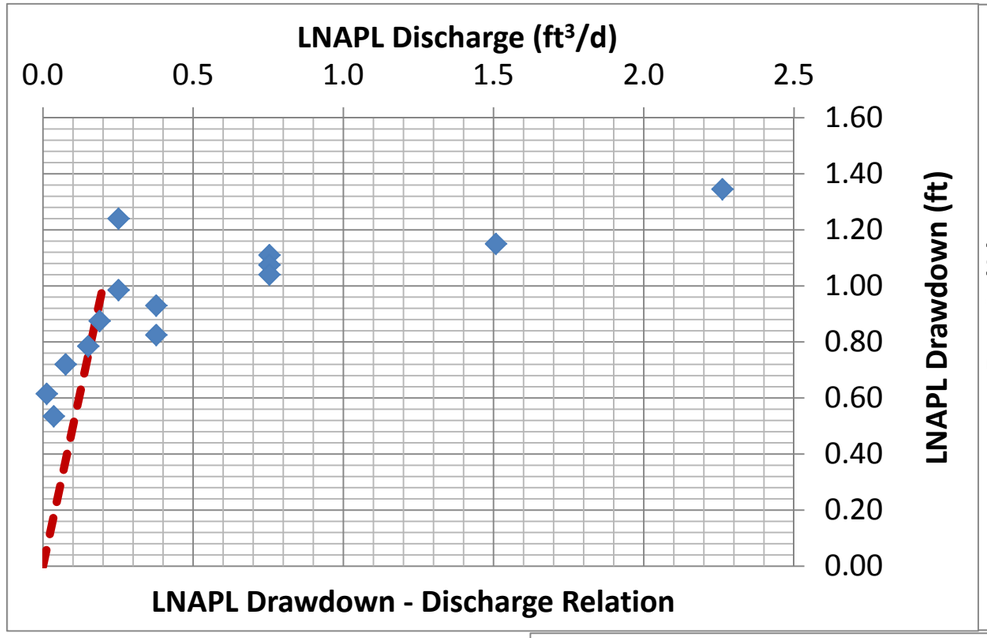


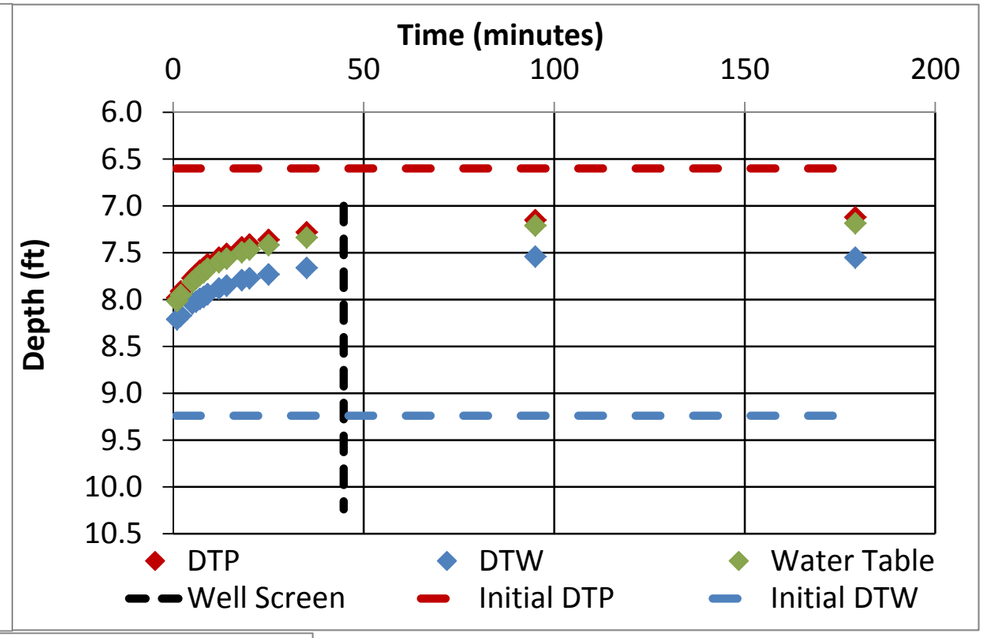



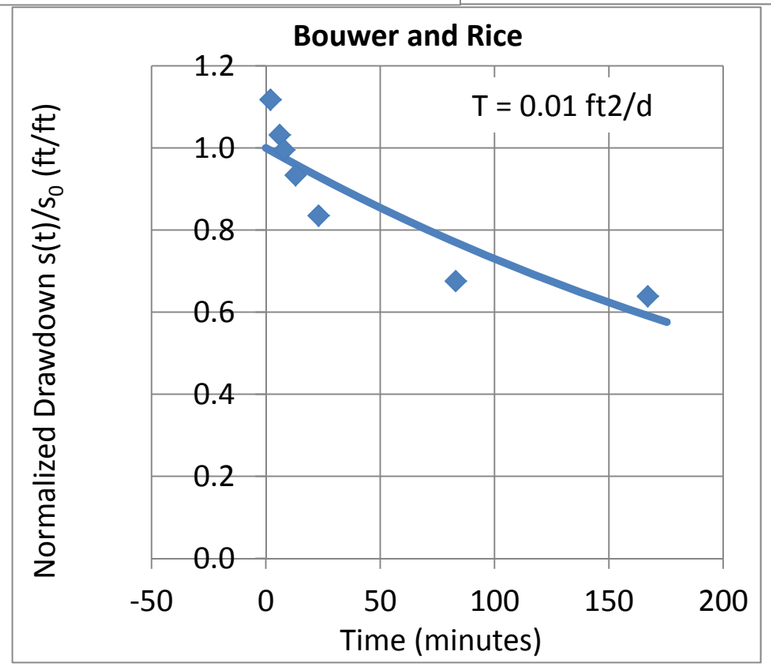

Test not quantified because:

F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation

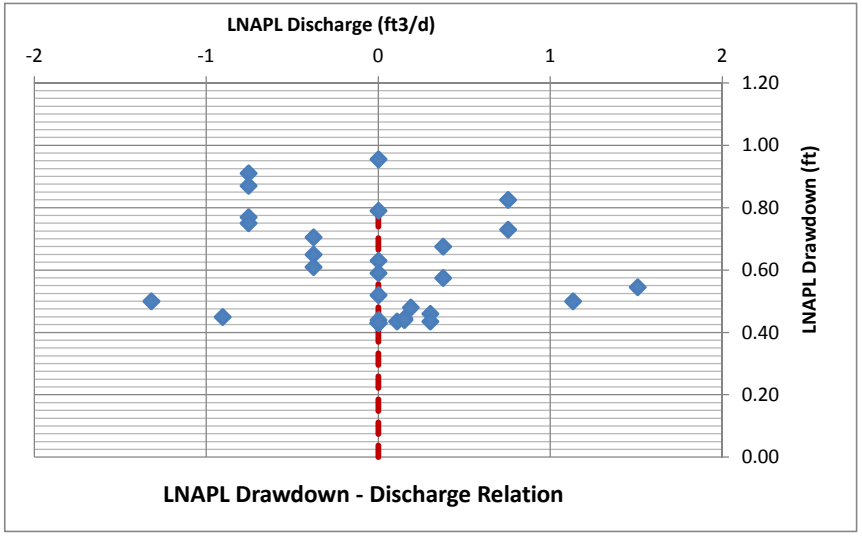
RFI-09-40R 03/29/2012

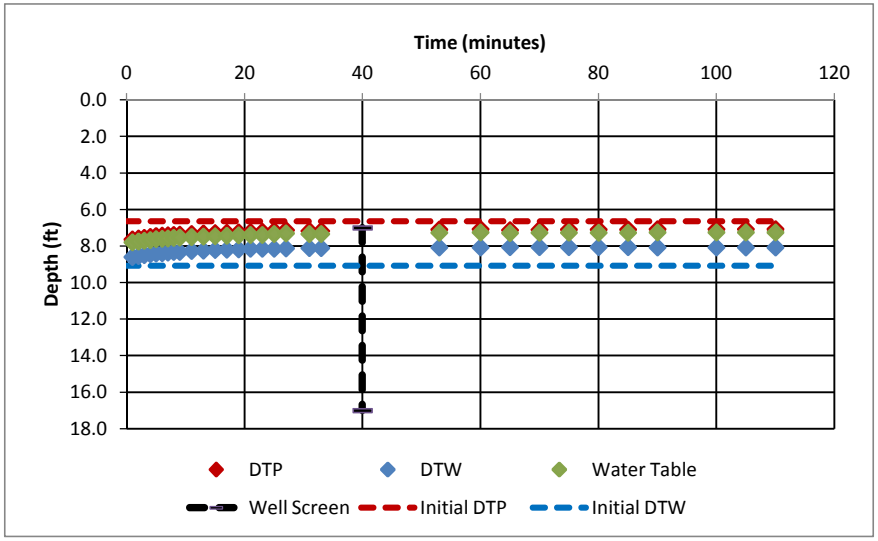


## RFI-09-40R 6/12/2012

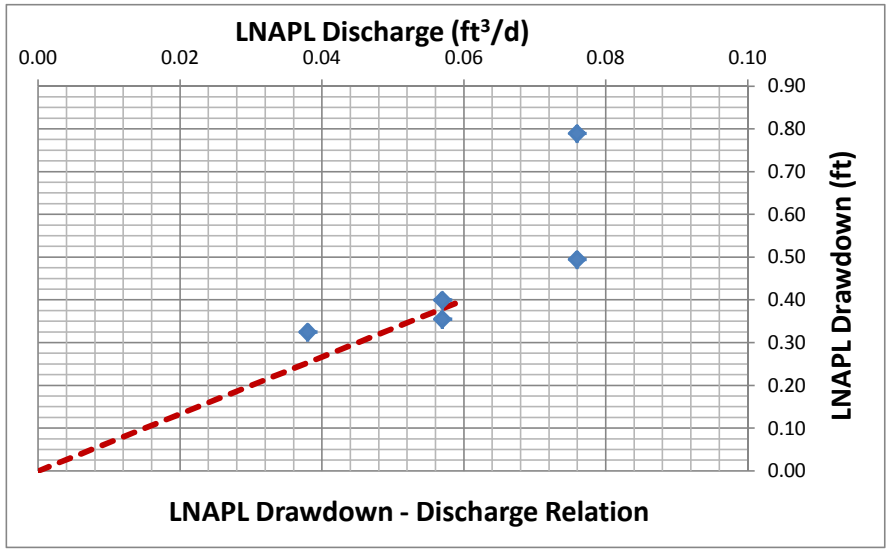


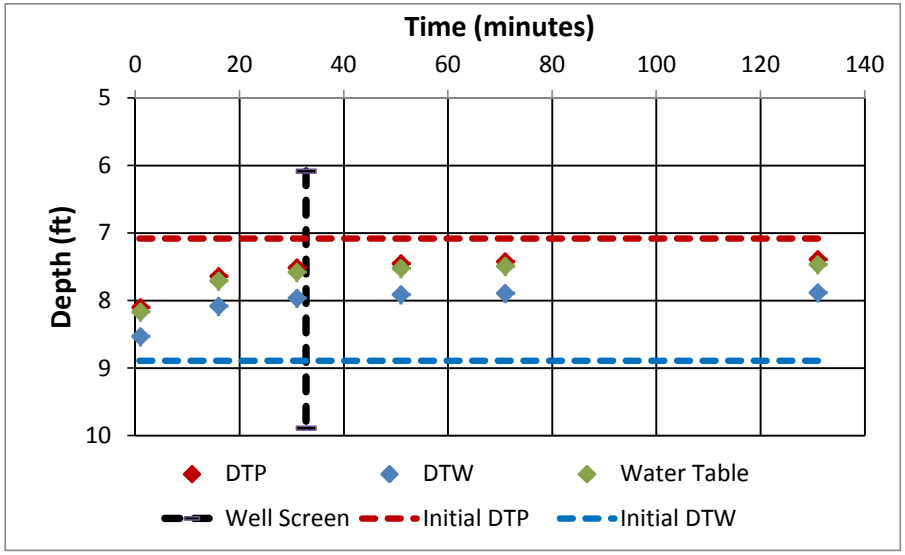



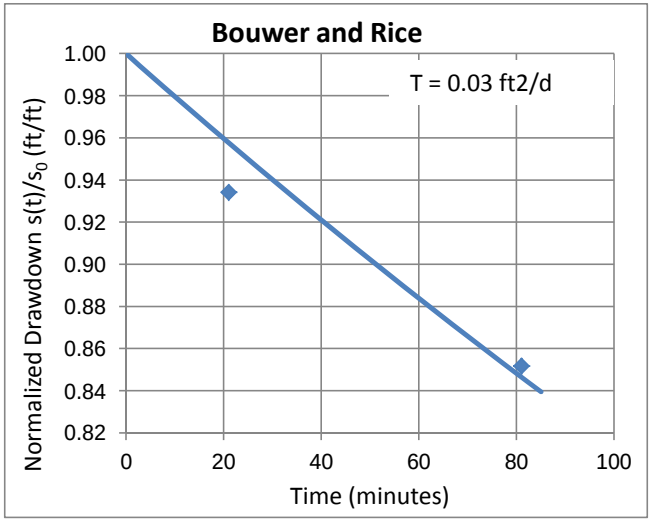

Test not quantified because:

F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation

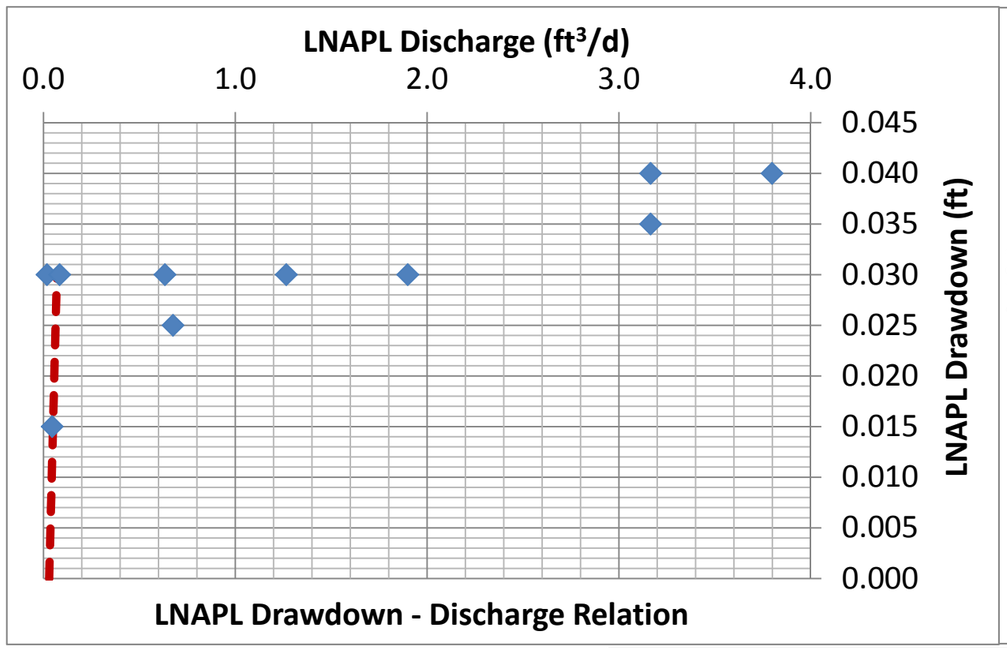
**RFI-09-40R 09/21/2012**

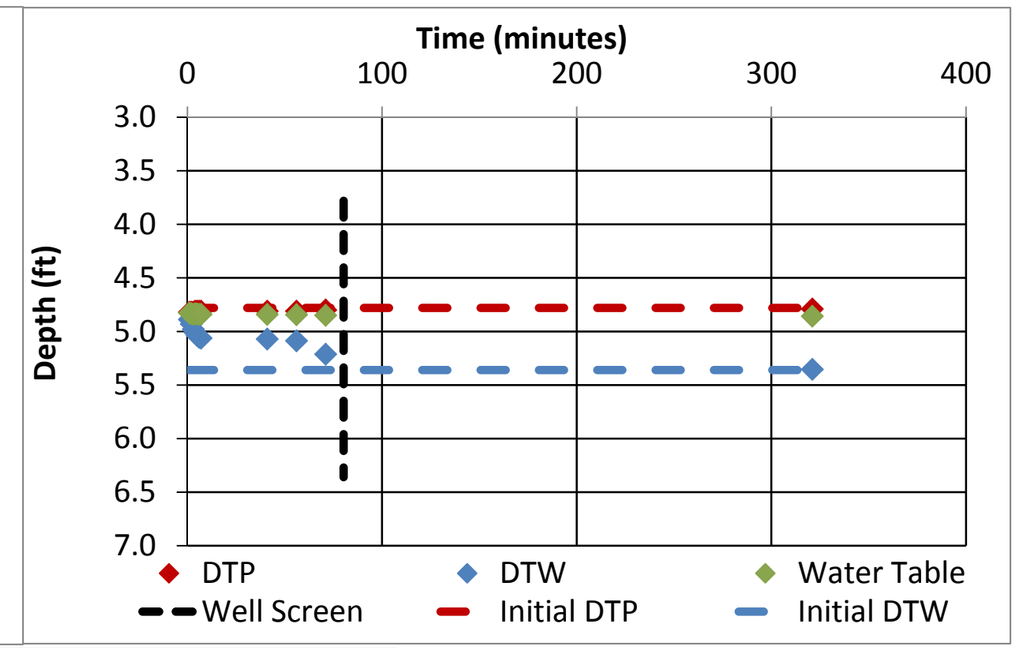


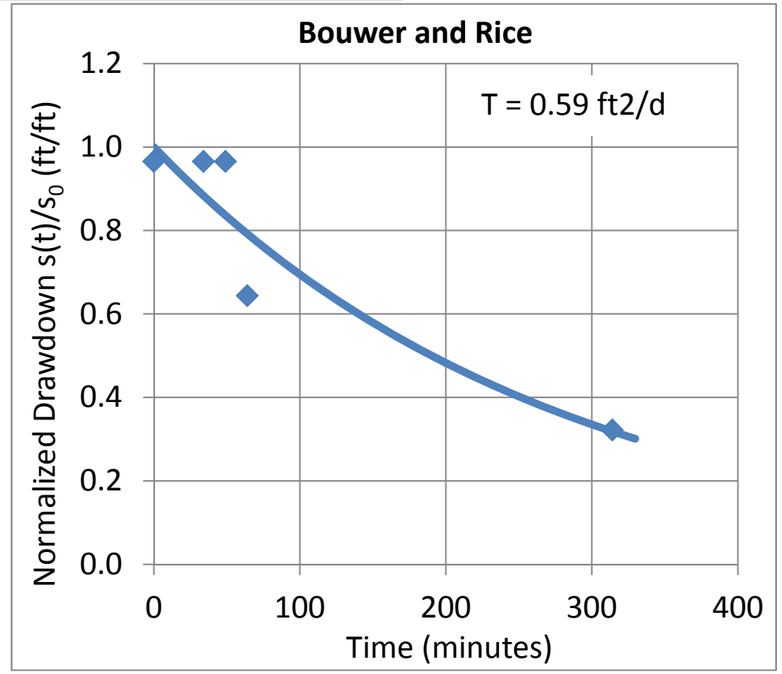



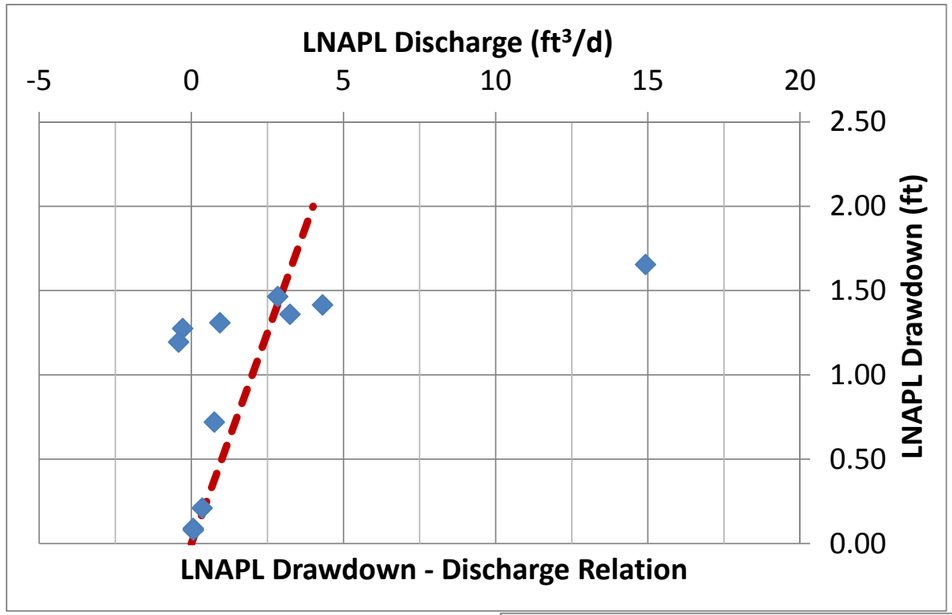
RFI-12-09R 03/29/2012

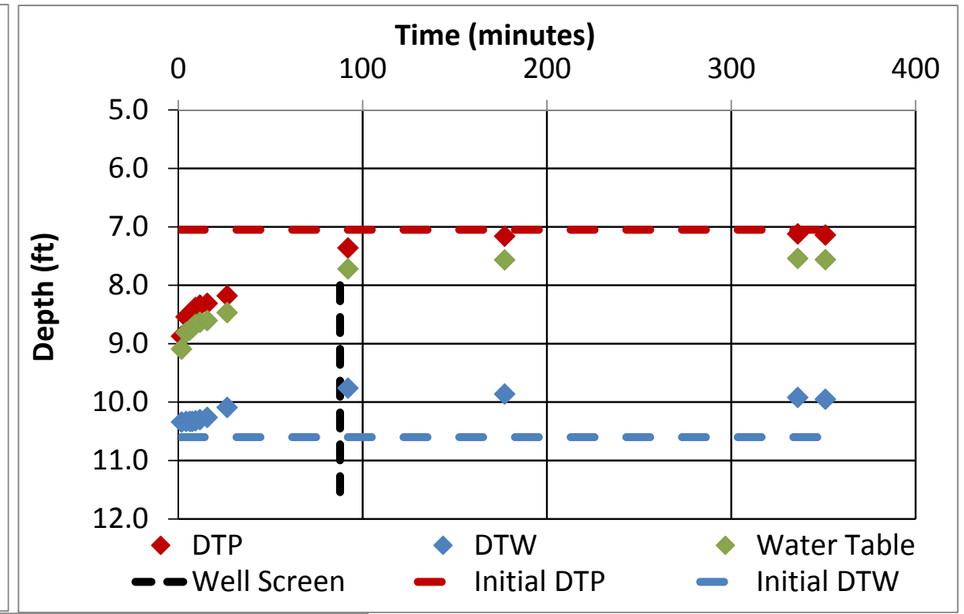


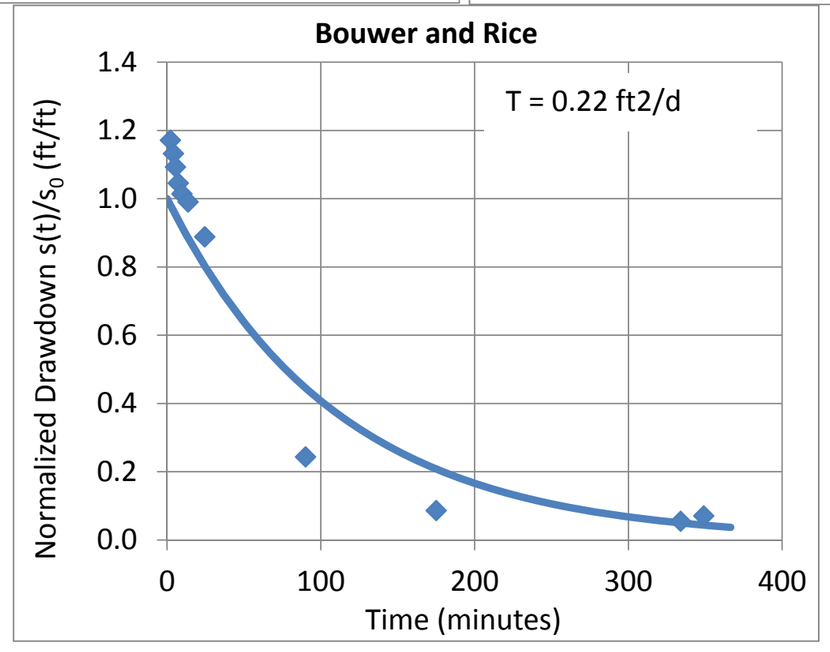



RFI-12-23 Test 1  12/19/2011



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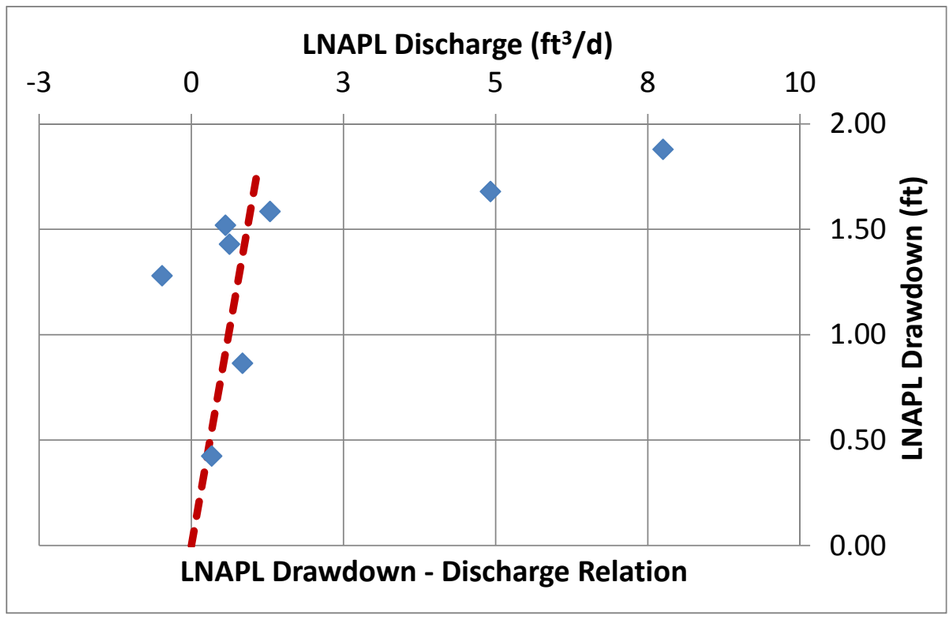


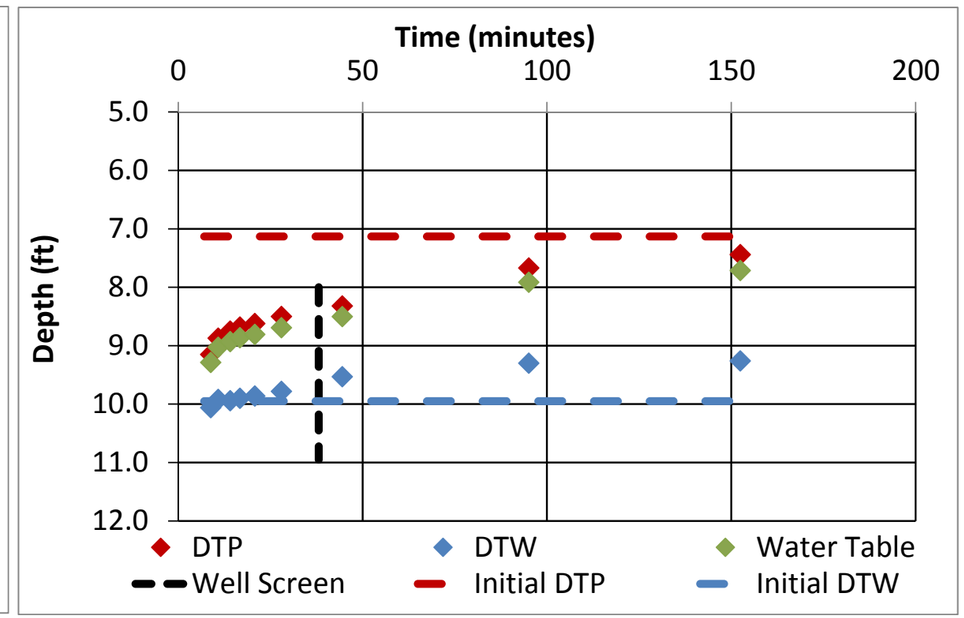


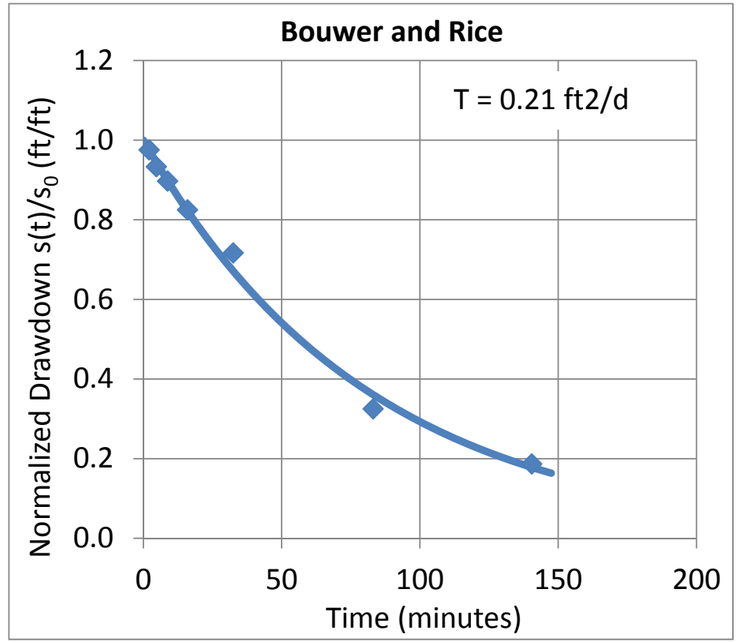

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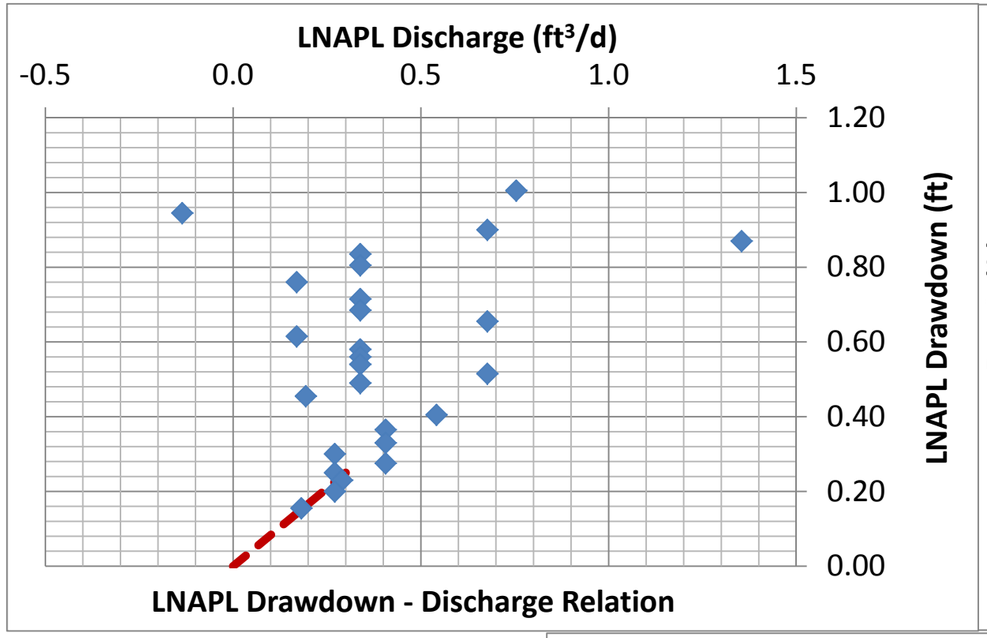


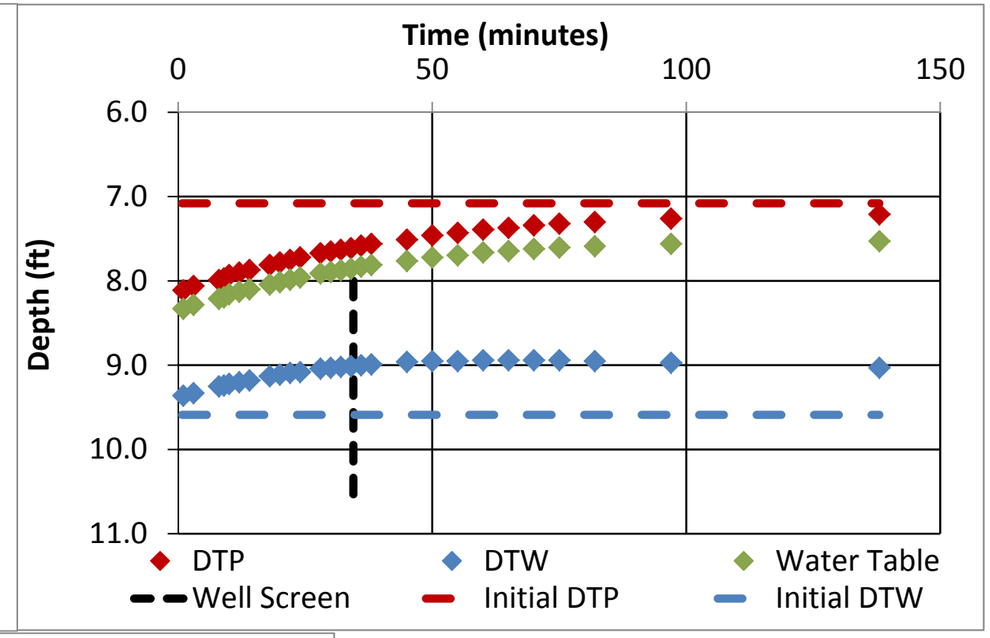


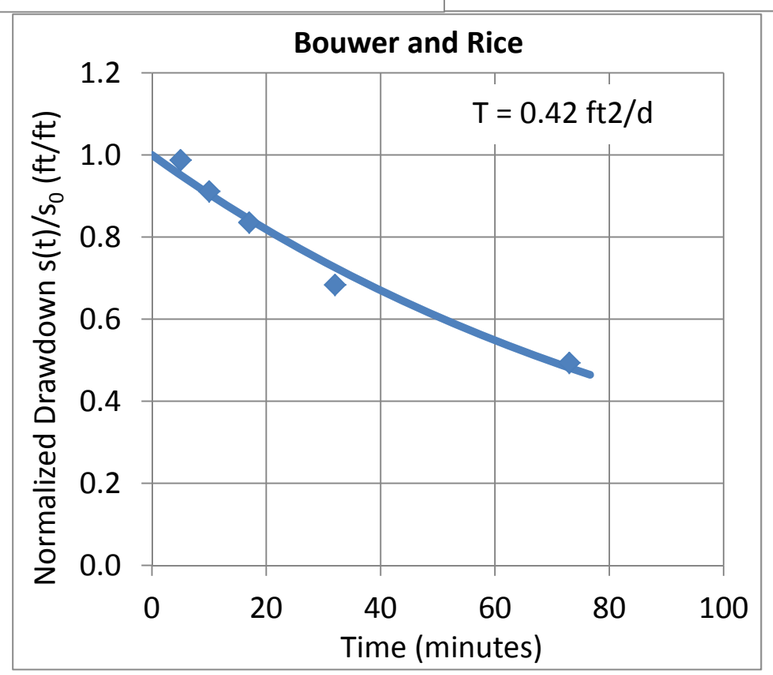

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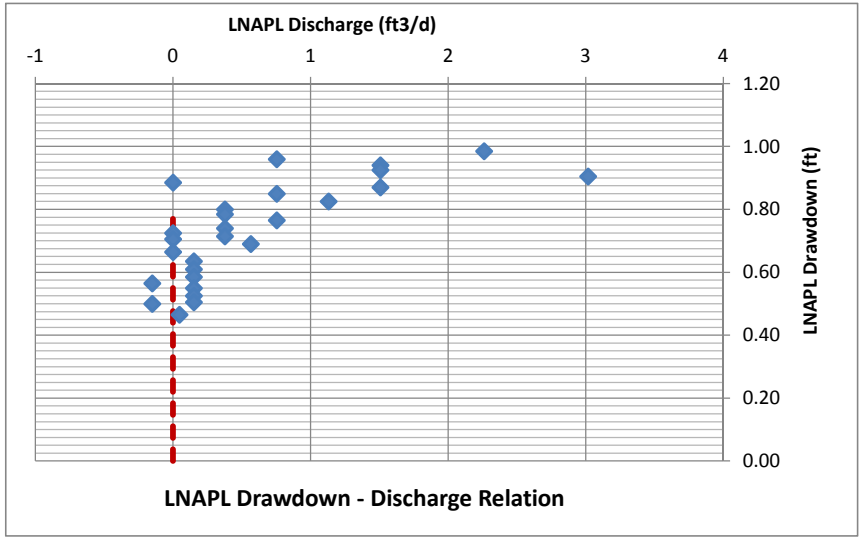
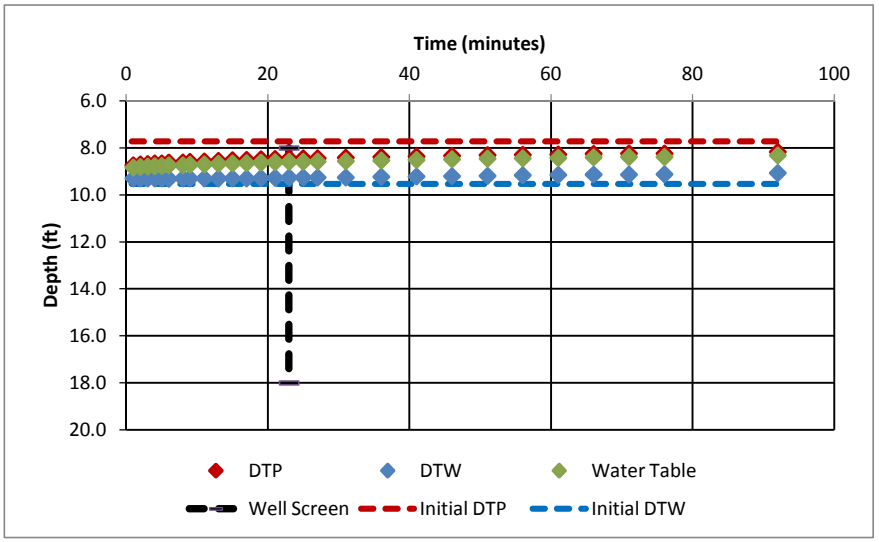
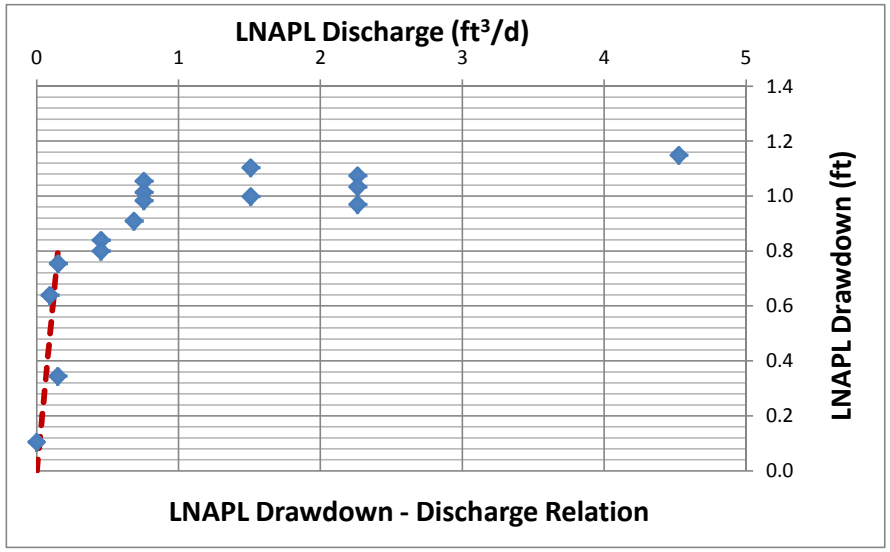


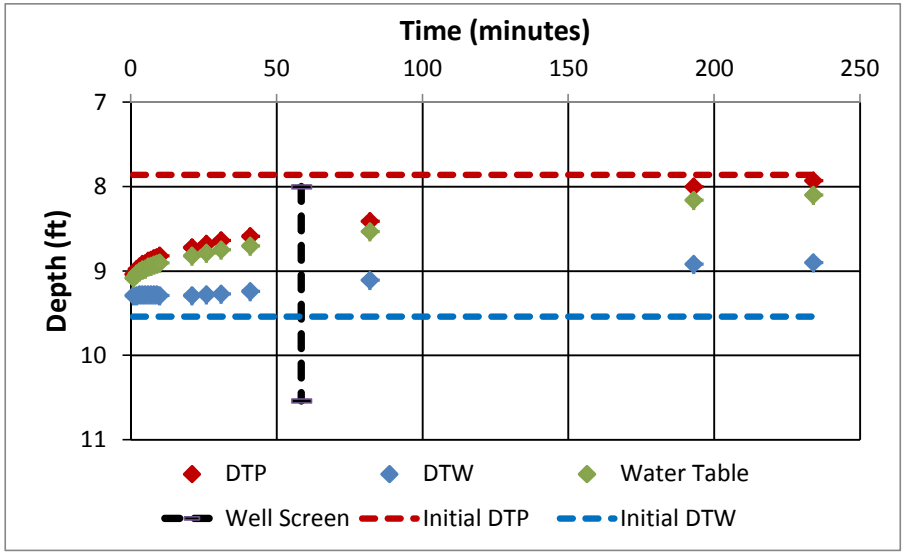



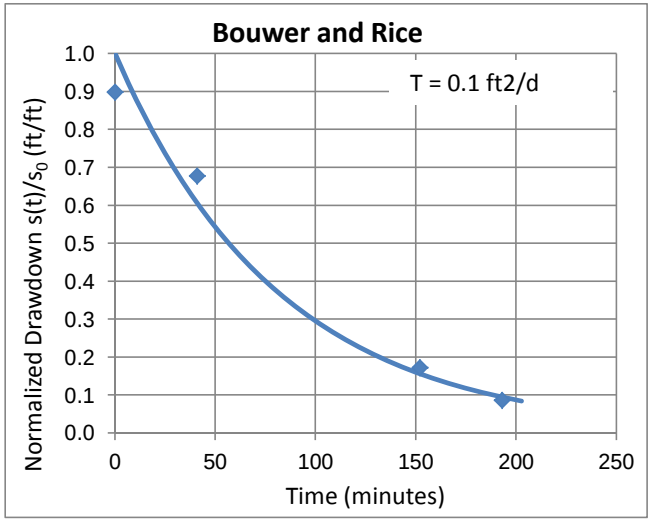

Test not quantified because:

F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation

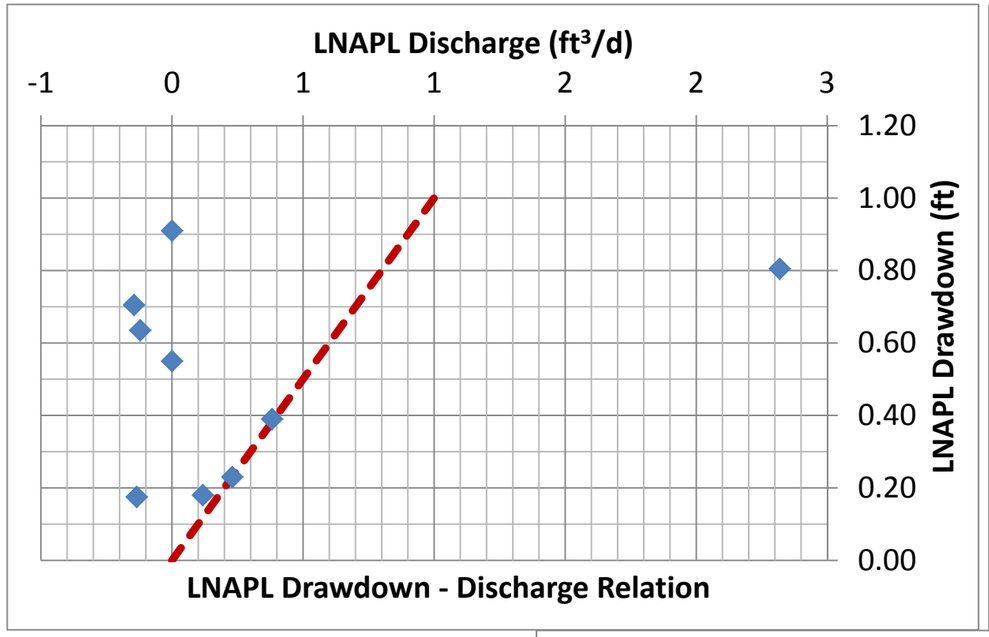
# RFI-12-23 09/19/2012

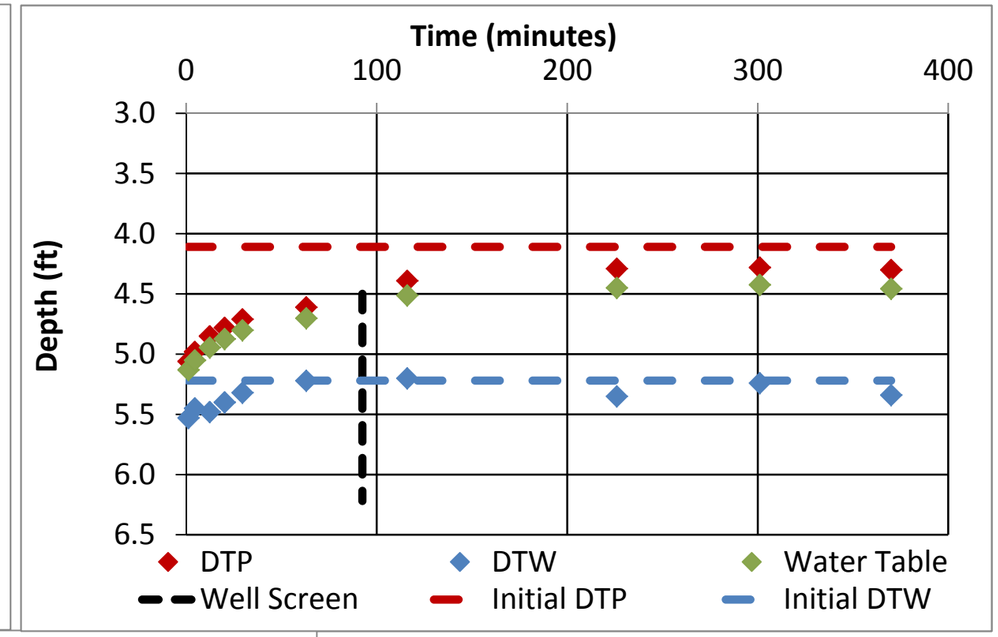


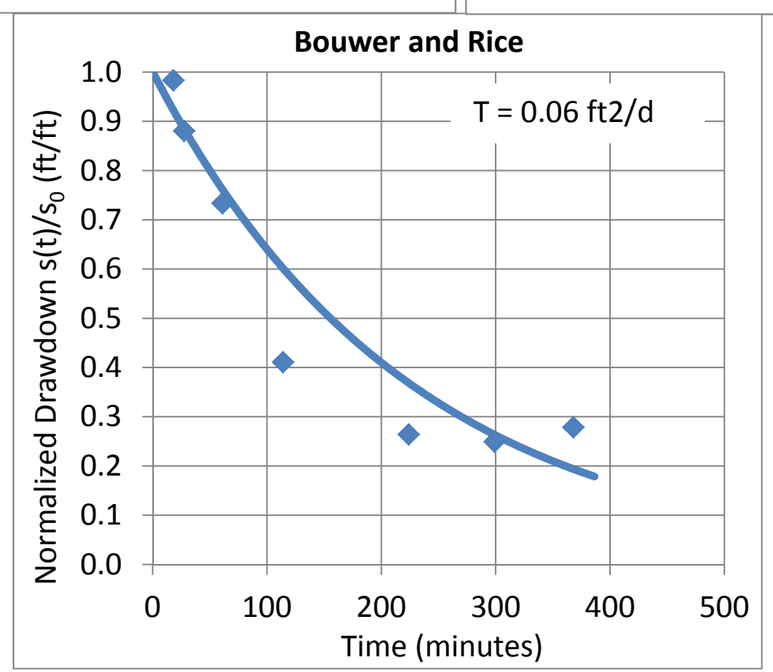



## RFI-12-35 Test 1 12/19/2011



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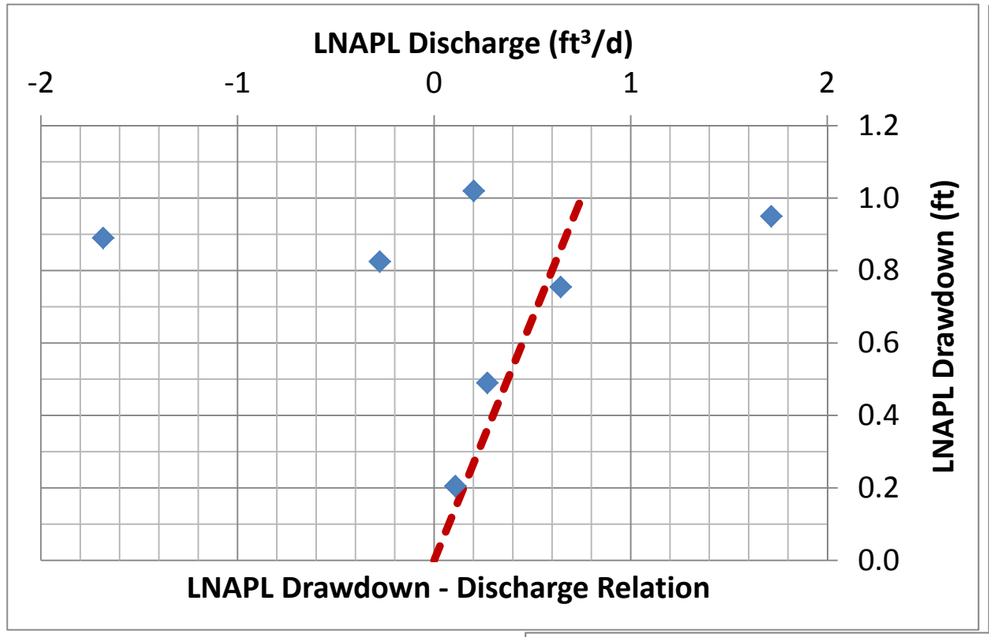


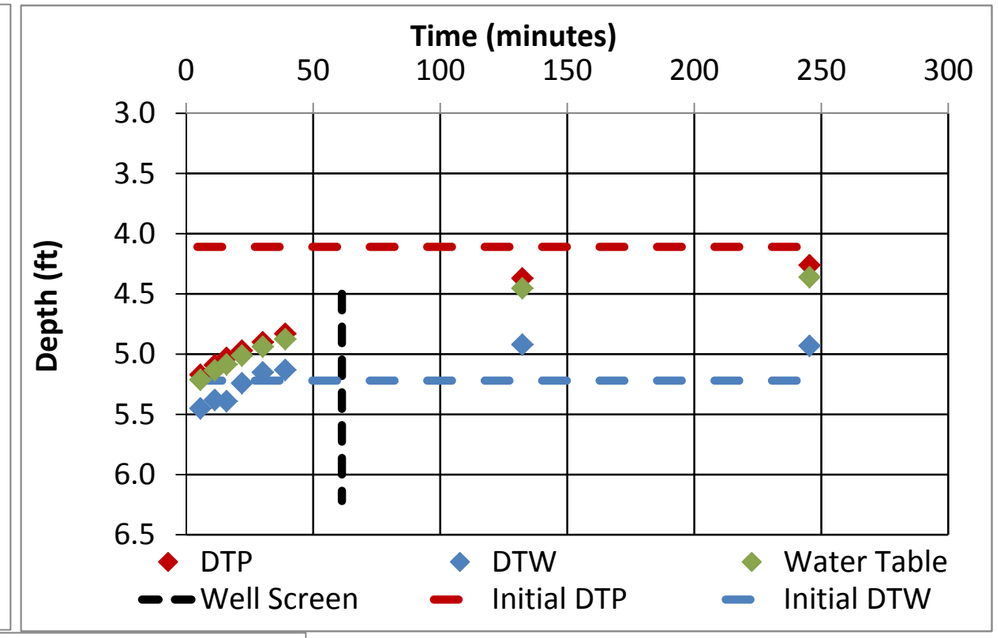


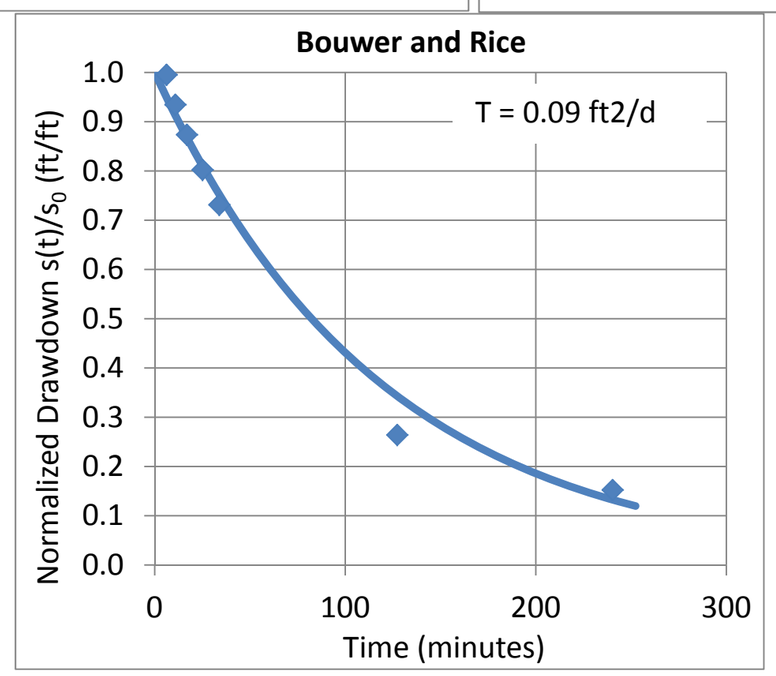

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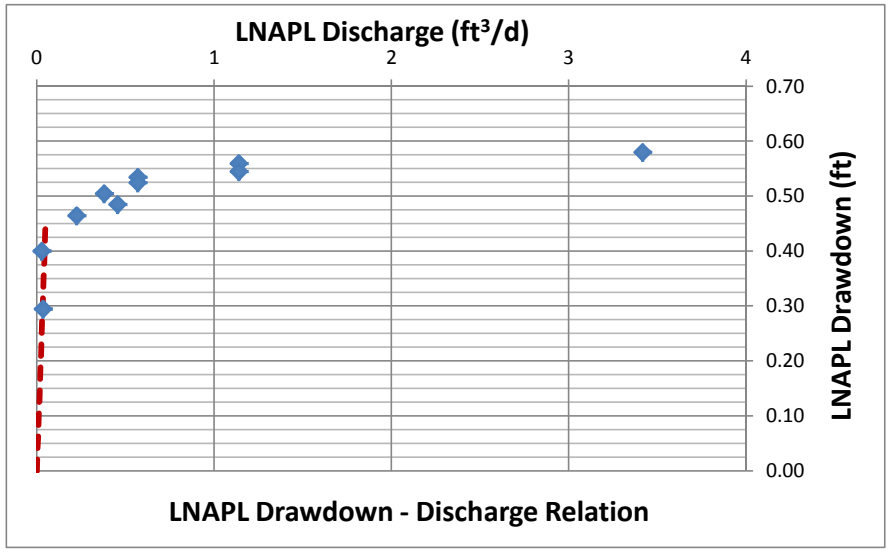
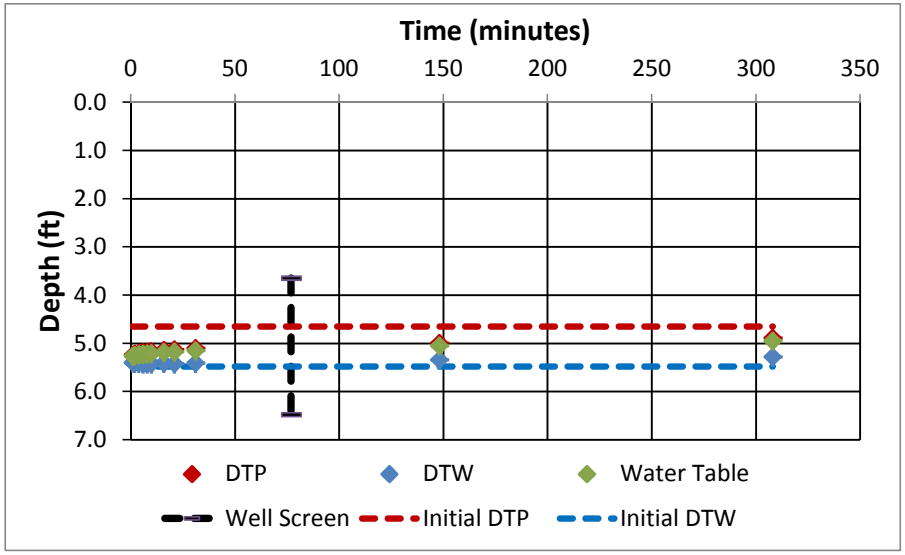
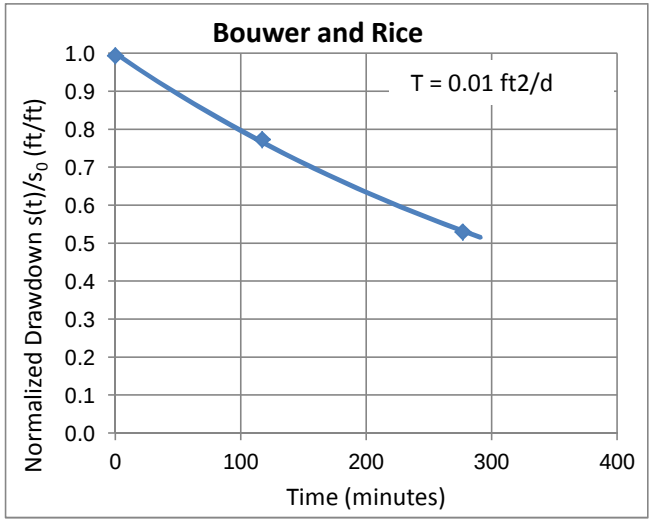
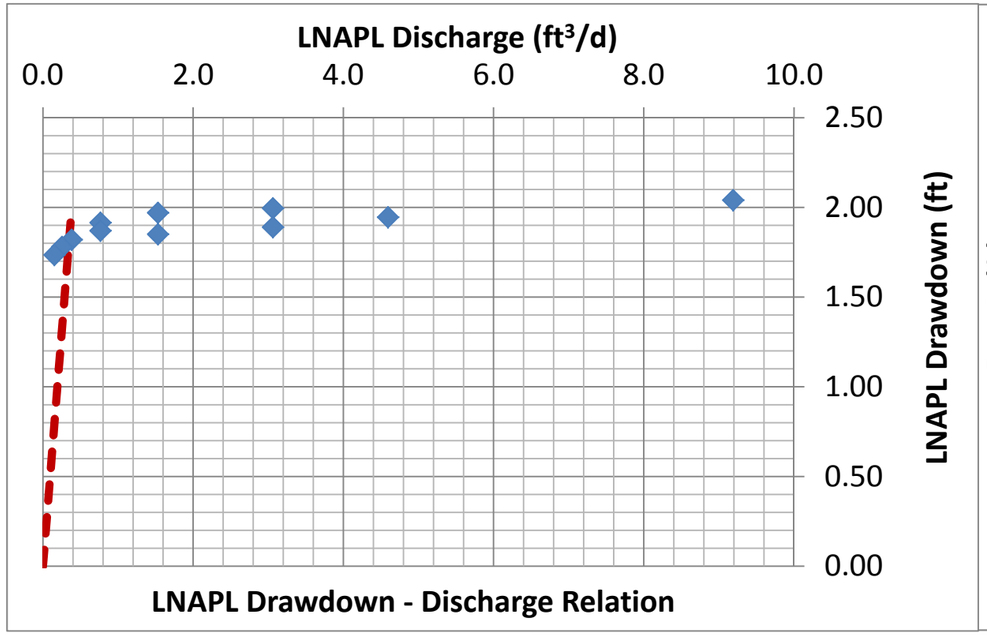
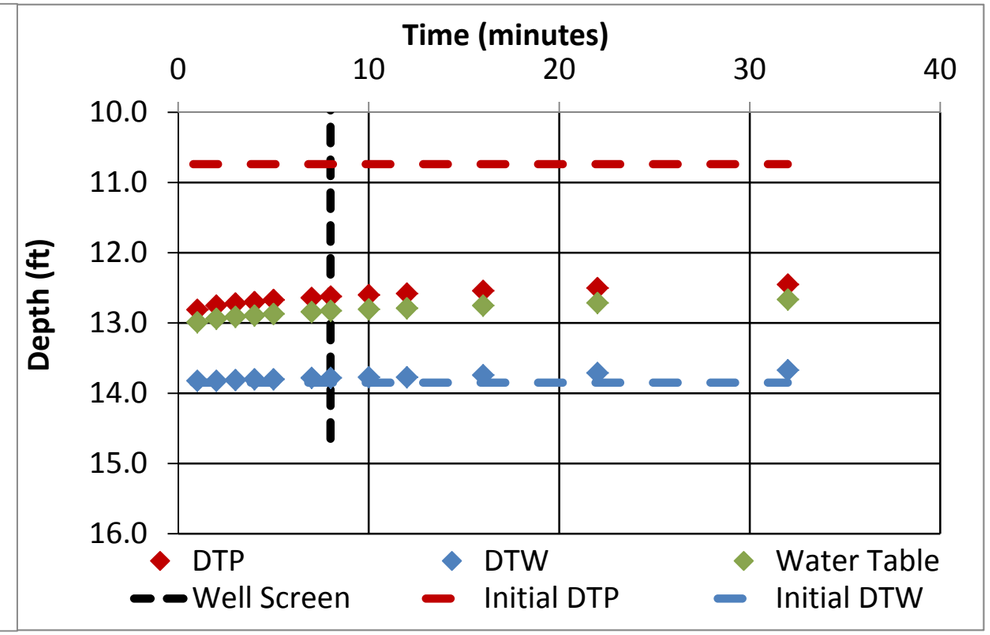


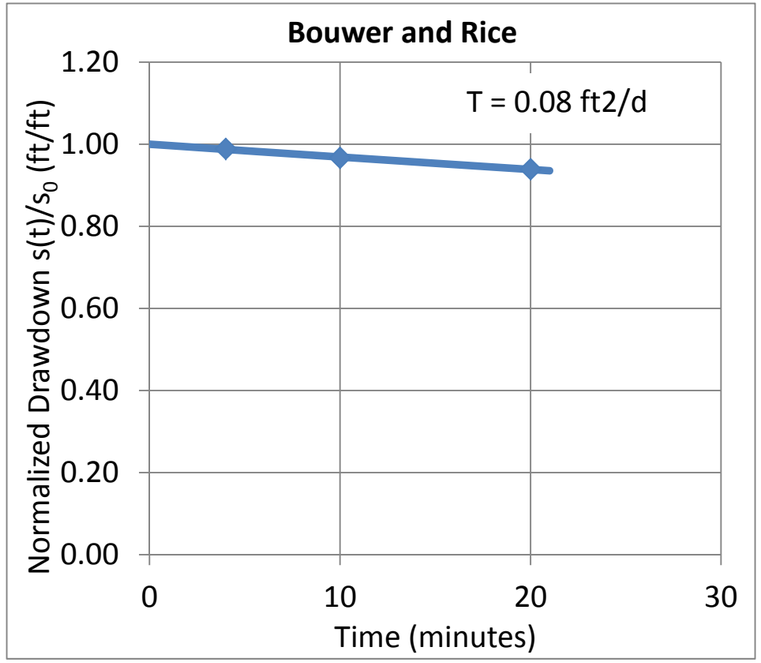



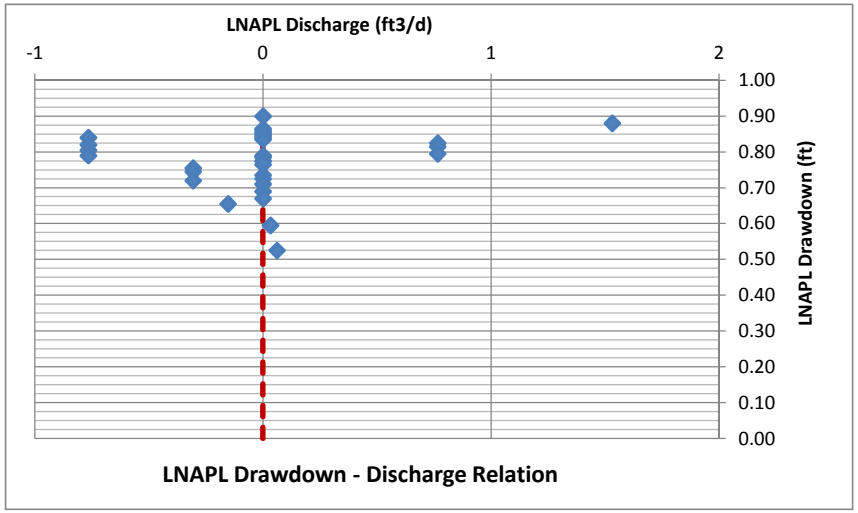
**LIF-12-018 03/28/2012**

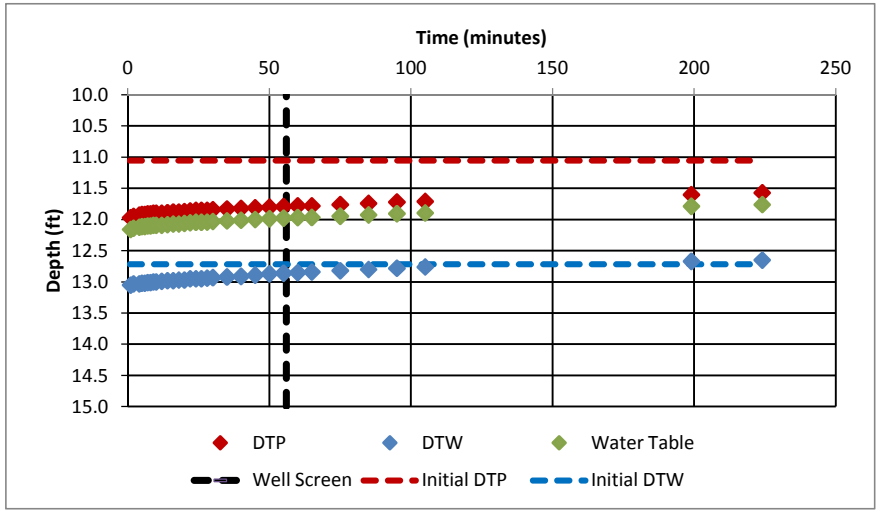


## LIF-12-018 6/11/2012

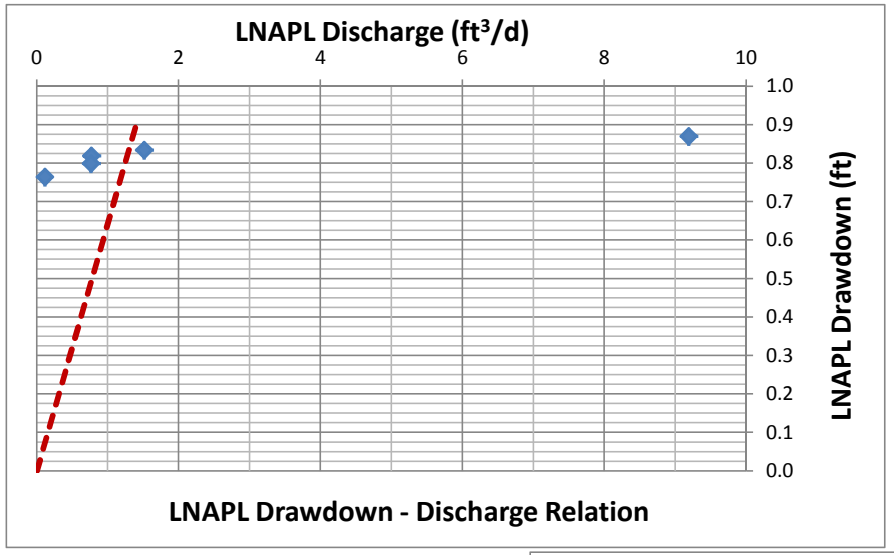


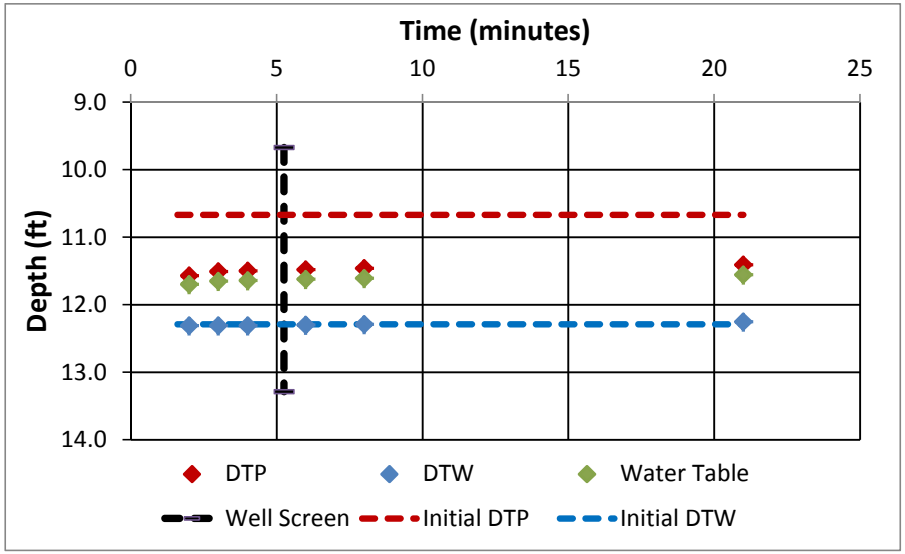



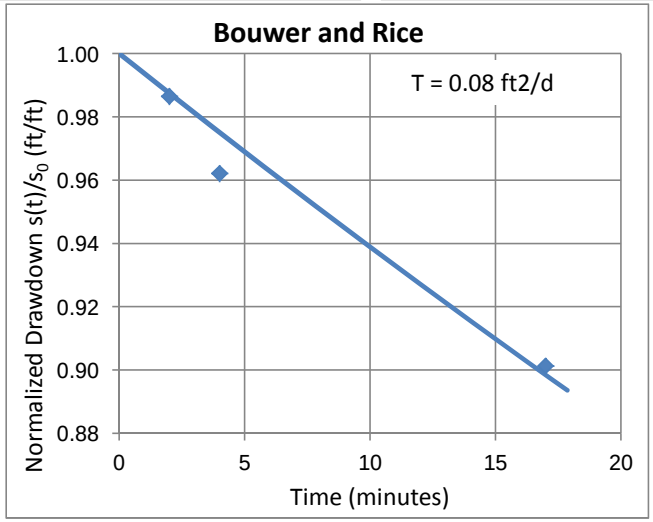

Test not quantified because:

F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation

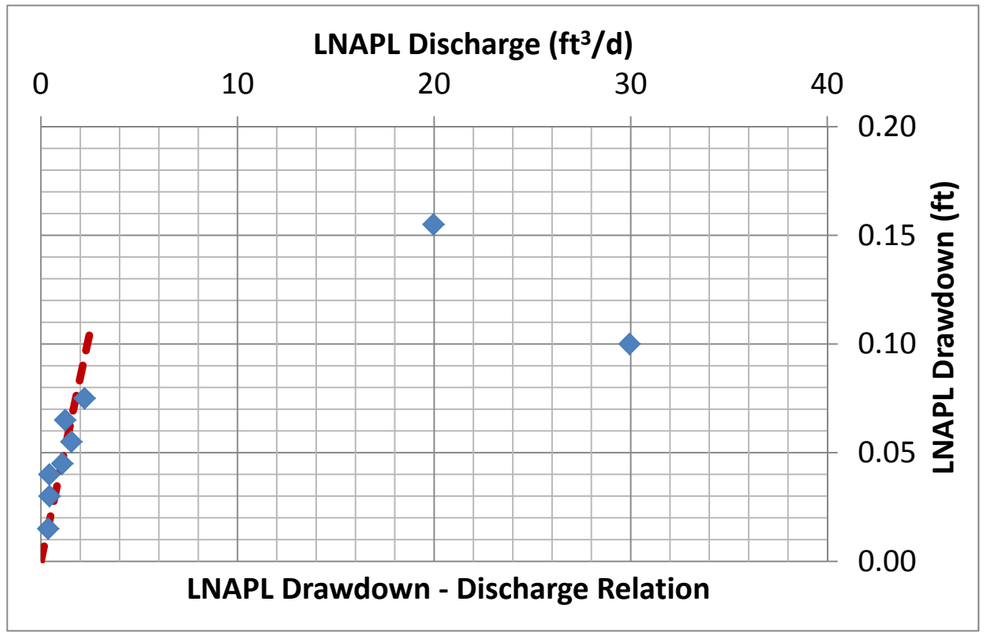
# LIF-12-018 09/19/2012

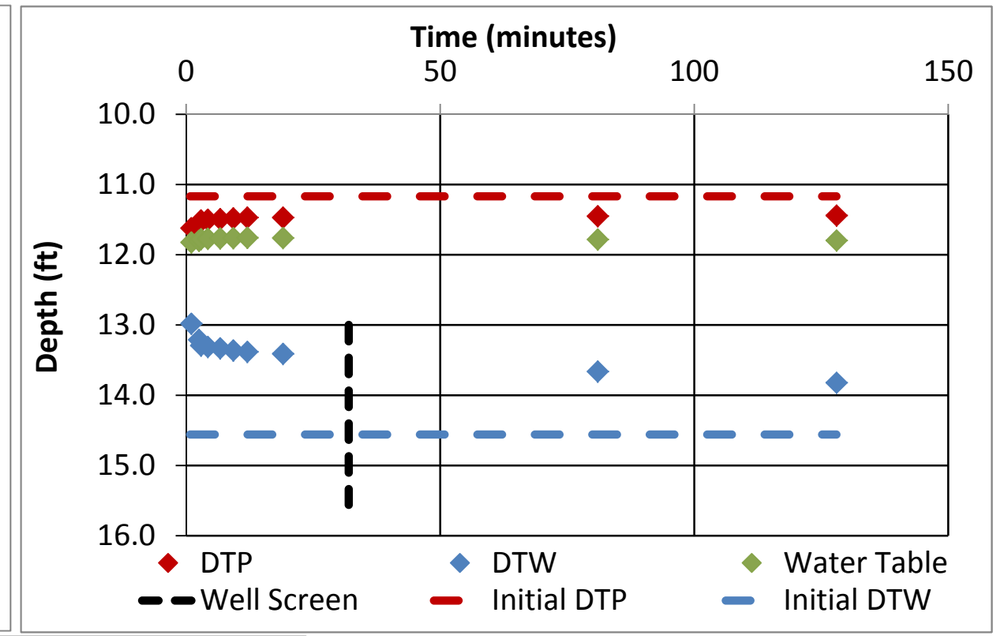


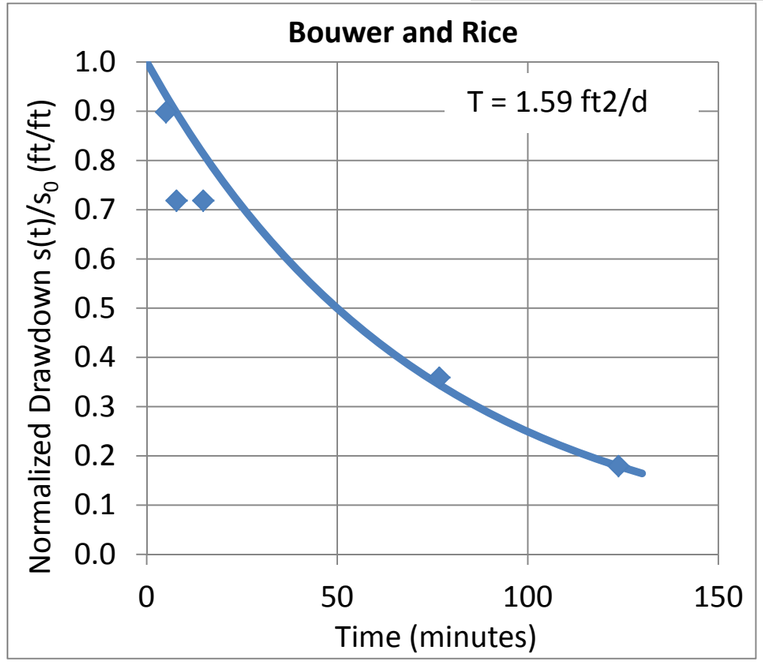



## RFI-40-7R2 Test 1 12/19/2011



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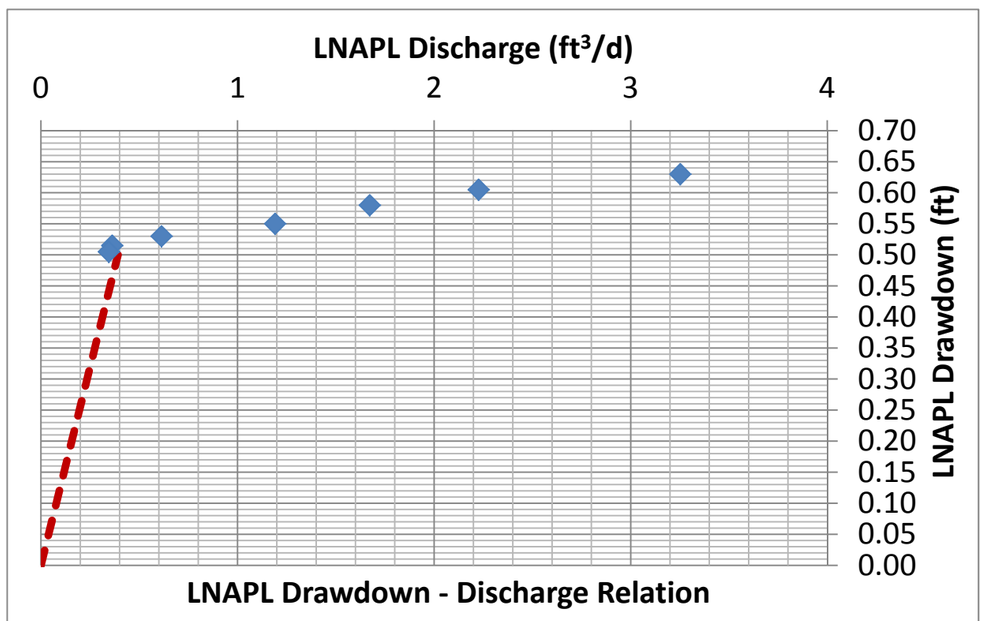


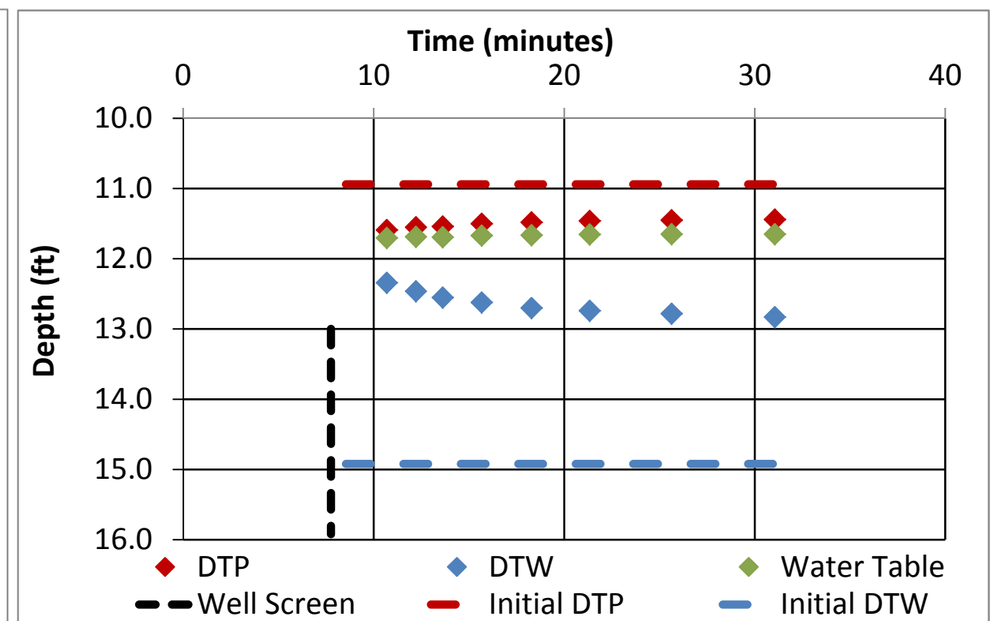


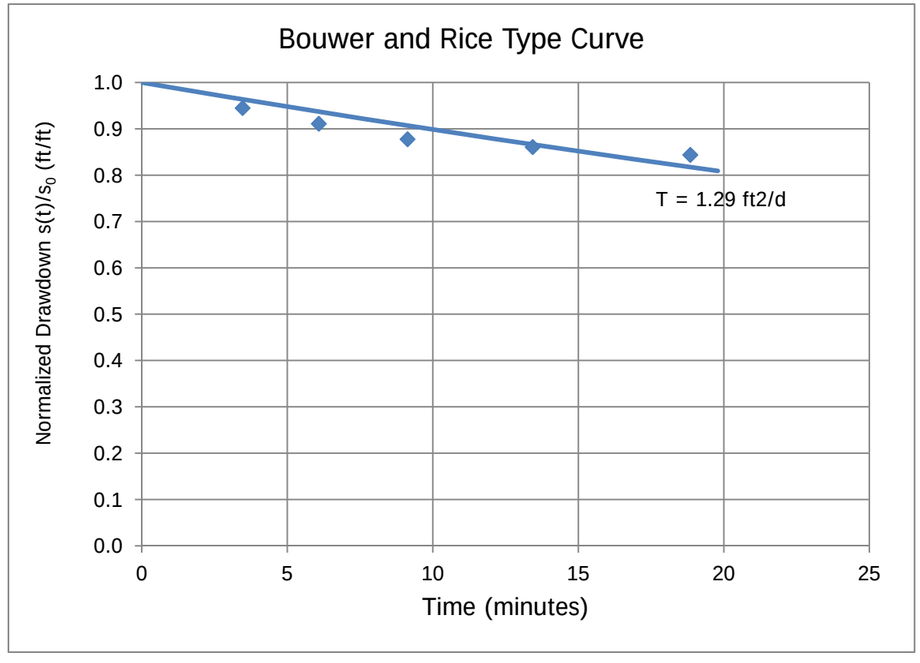

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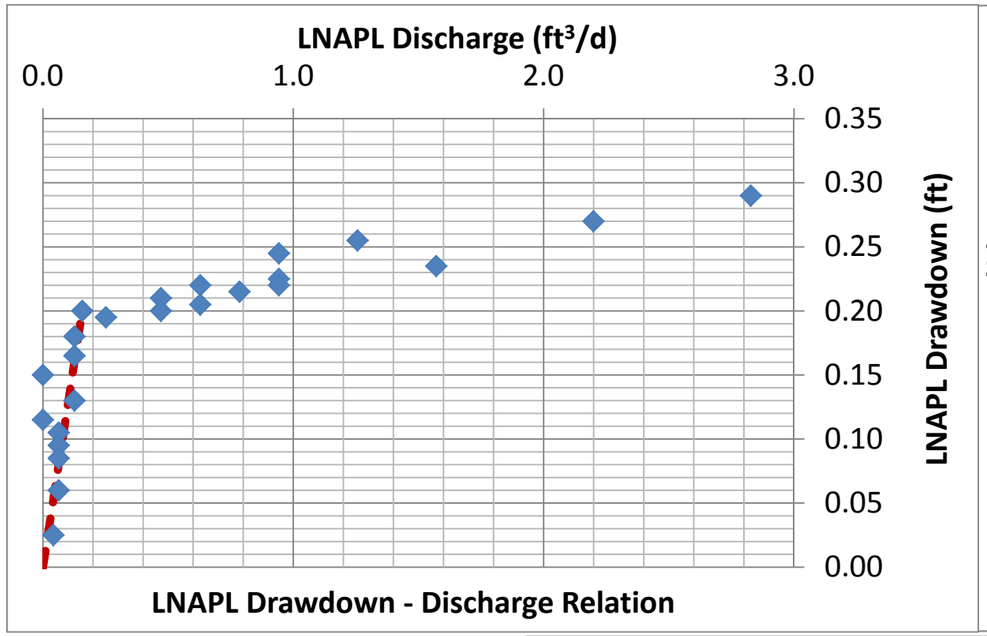


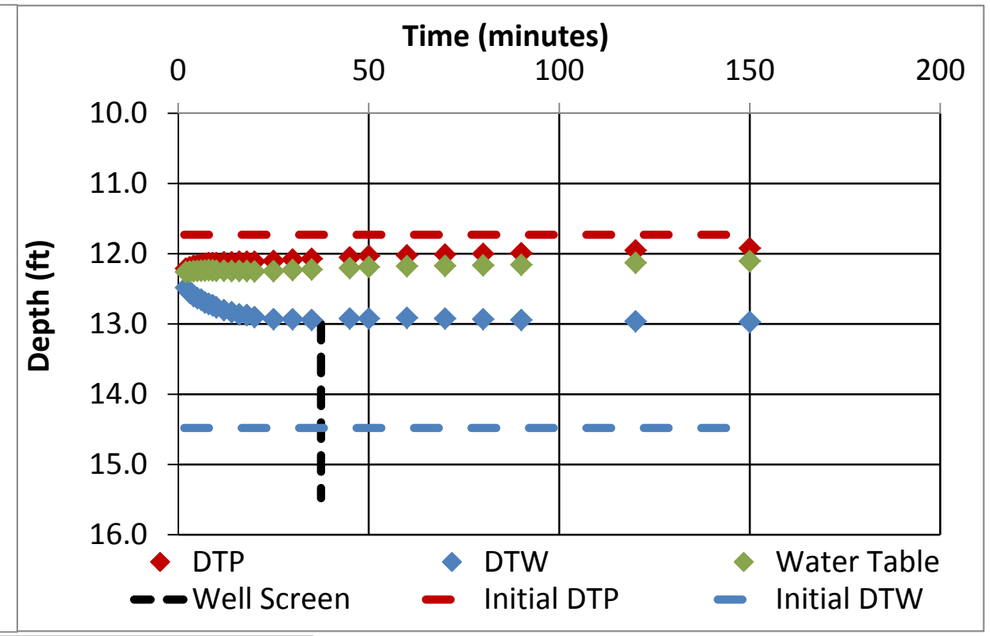


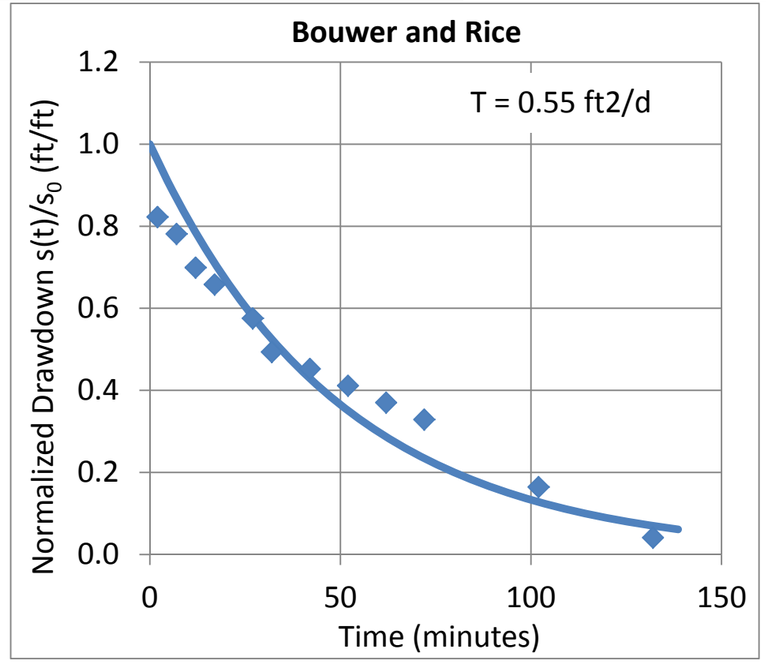

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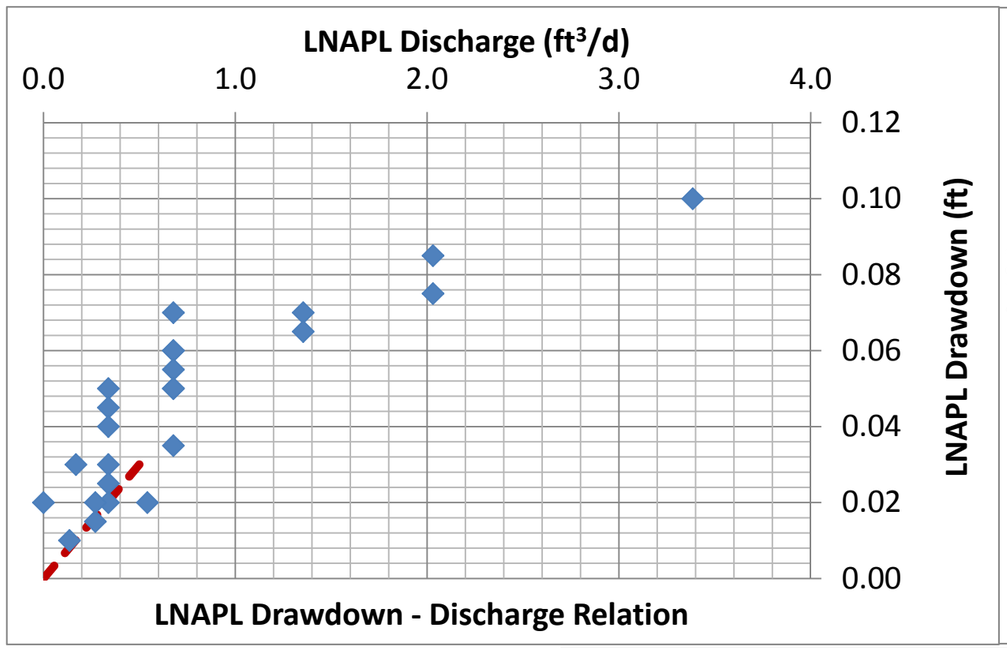
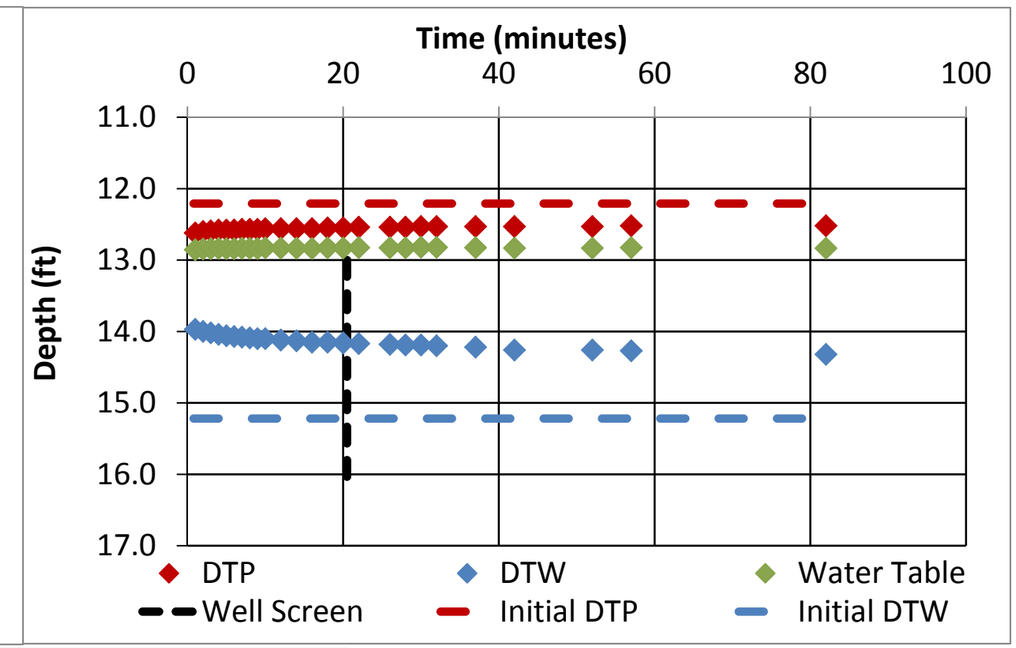
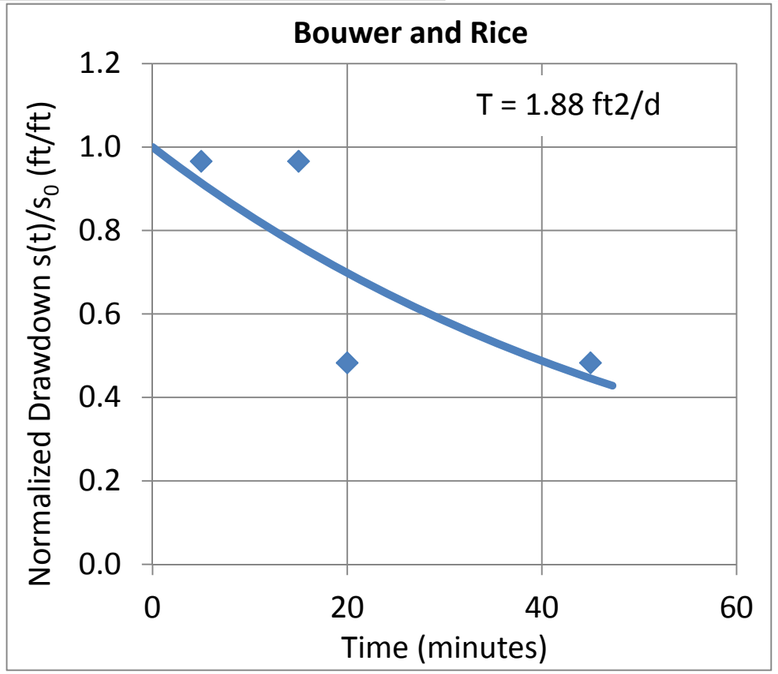
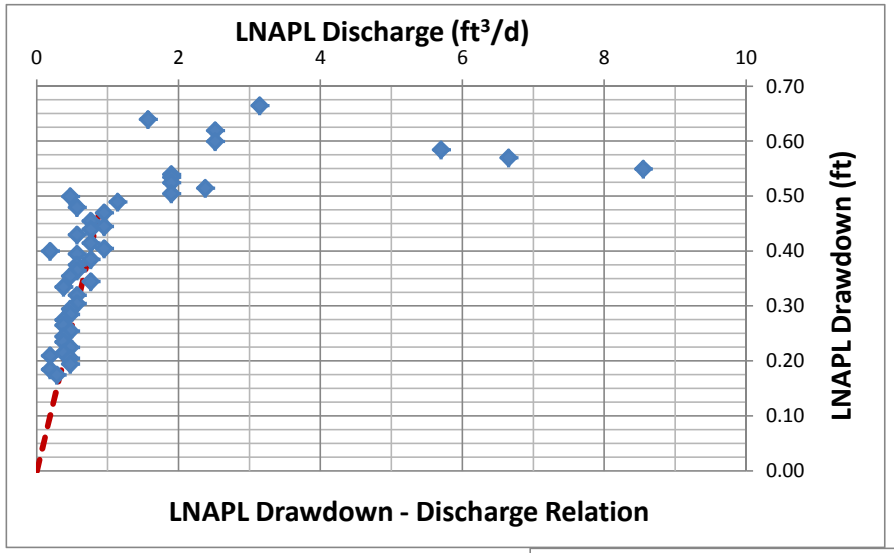
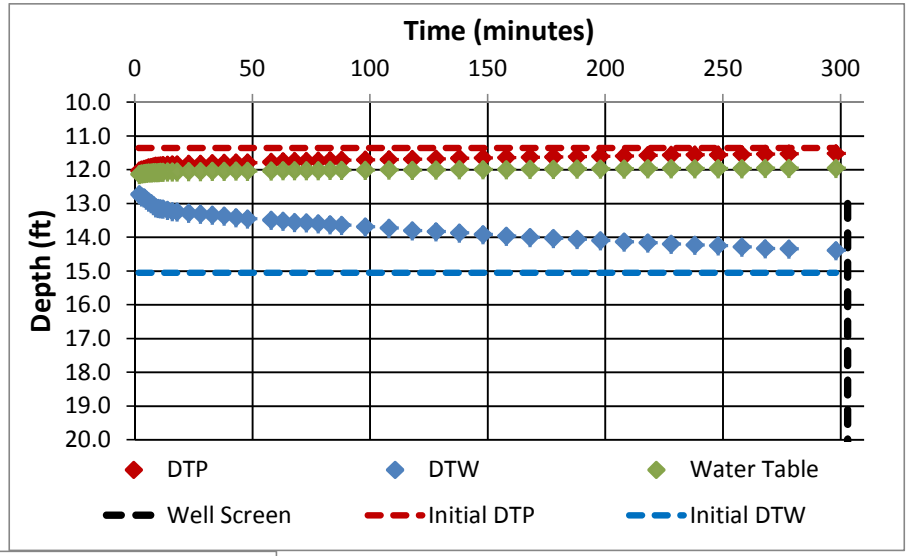


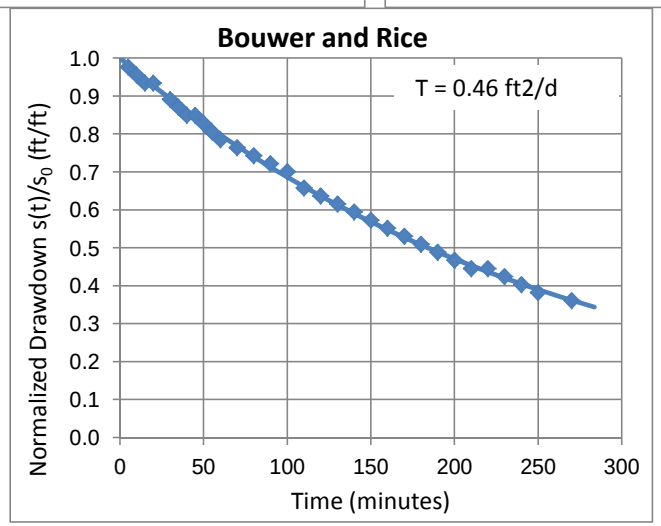



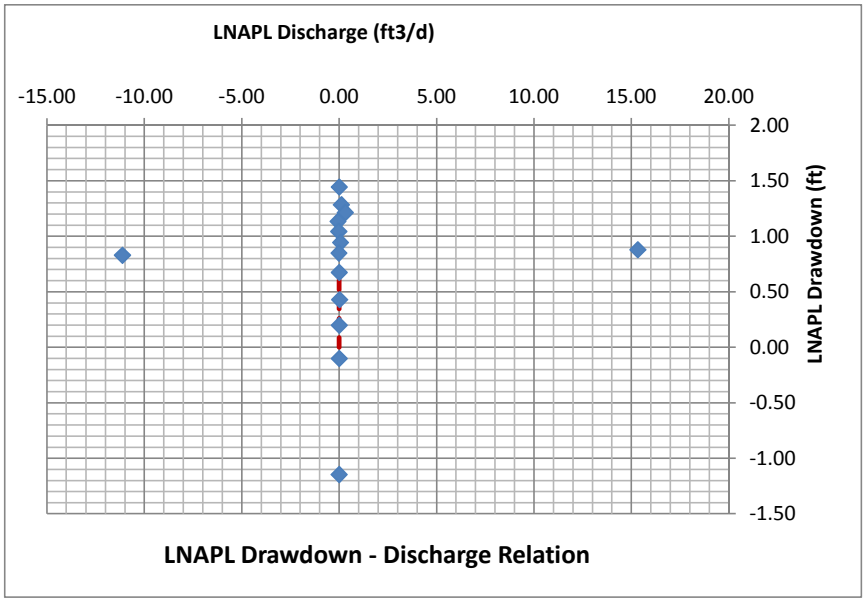
**RFI-40-7R2 09/20/2012**

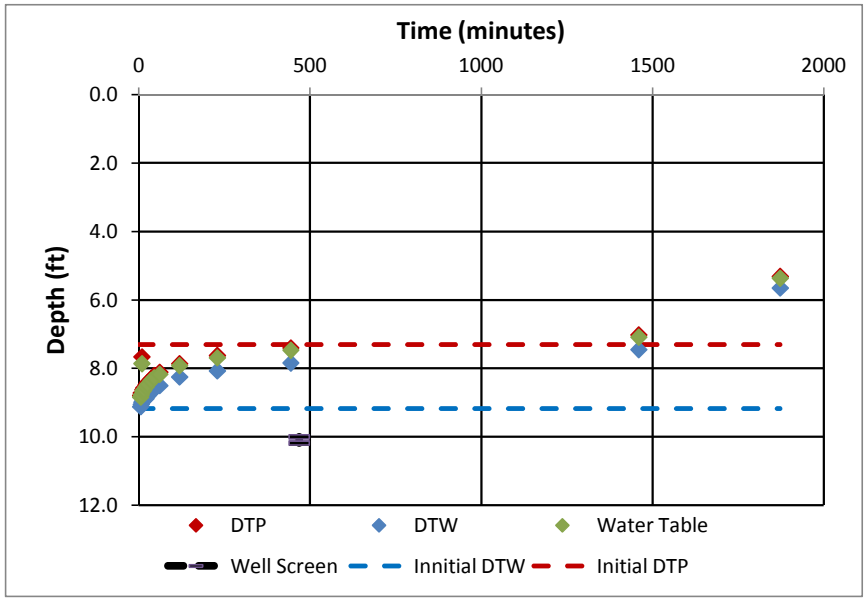


## RFI-40-02R 12/20/2011

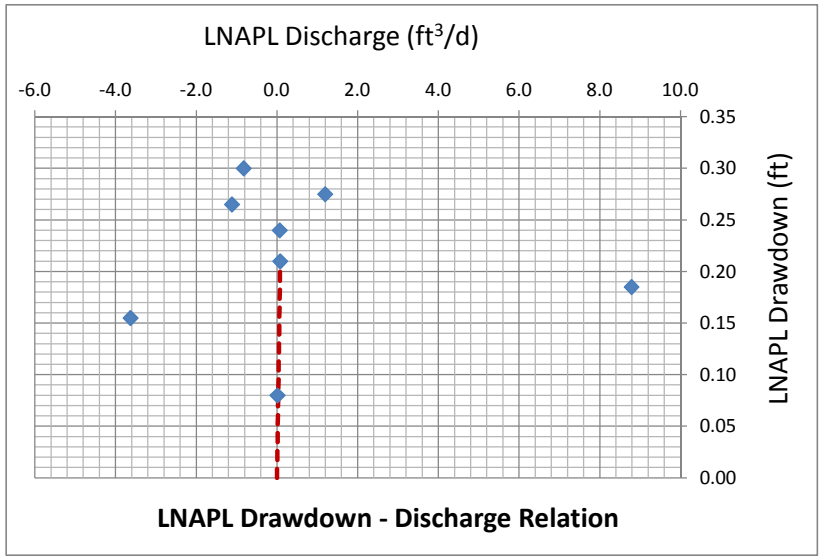


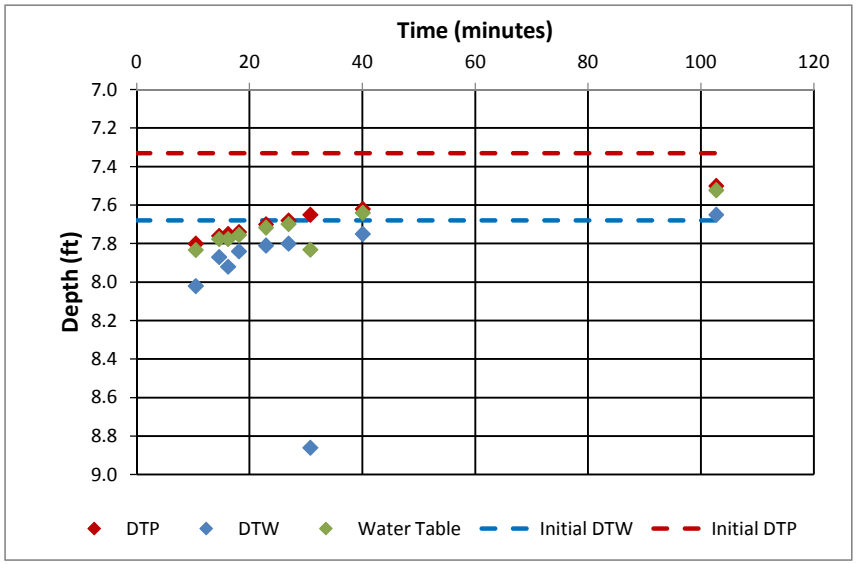




Test not quantified because:

F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation

**RFI-40-02R 12/22/2011**




Test not quantified because:

F: LNAPL transmissivity was unable to be quantified because of poor LNAPL discharge from the formation

ARCADIS

**Appendix D**

NPMP Data Graphs/Laboratory Analytical Reports and Historical Groundwater Data

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 04-3 09/17/01 | 04-3 10/26/10 | 04-3 10/21/11 | 04-4 09/17/01 | 04-4 03/27/03 | 04-4 10/21/11 | 07-01 09/20/01 | 07-01 10/15/10 | 07-01 10/24/11 | 20-500 09/21/01 | 20-500 06/14/02 | 20-500 03/26/03 | 20-500R 11/02/06 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | NA | NA | 1 U | NA | NA | 0.96 J | 4 | 5 | 1 U | 1 U | 1 U | 5 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 5 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | NA | 30 U | 1 U | 1 U | 1 U | 200 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | NA | NA | 1 U | NA | NA | 3.9 | 6 | 7 | 0.65 J | 1 U | 1.2 | 5 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | NA | NA | 5 U | NA | NA | 5 U | 5 U | 2 U | 5 U | 5 U | 5 U | 10 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | NA | NA | 25 U | NA | NA | 25 U | 30 U | 20 U | 25 U | 25 U | 25 U | 100 UJ |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | NA | NA | 50 U | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 300 UJ |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | NA | NA | 50 U | NA | NA | 50 U | 50 U | 10 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | NA | NA | 25 U | NA | NA | 25 U | 50 U | 40 | 25 U | 25 U | 25 U | 100 UJ |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 4.7 | 1.3 | 1.7 | **25** |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 U | NA | NA | 1 U | NA | NA | 1 UJ | 5 U | 2 U | 1 U | 1 U | 1 U | 10 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | NA | NA | 5 U | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 30 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 7 | 5 | 1 U | 1 U | 12 | 5 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 UJ |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | 5 U | NA | NA | 5 U | NA | 1 U | 5 U | 5 U | 5 U | 5 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **429** |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | NA | NA | 5 U | NA | NA | 5 U | 5 U | 1 U | 5 U | 5 U | 5 U | **326** |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | NA | NA | 2 U | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 74 |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | 5 U | NA | NA | 5 U | NA | 10 U | 5 U | 5 U | 5 U | 50 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | NA | NA | 5 U | NA | NA | 5 U | 5 U | 5 U | 0.68 J | 5 U | 5 U | 30 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | 1 U | NA | 20 U | 1 U | 1 U | 1 U | 10 J |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | NA | NA | 5 U | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 30 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 4 J |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | **28** | **33** | 1 U | 1 U | 1 U | 5 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 04-3 09/17/01 | 04-3 10/26/10 | 04-3 10/21/11 | 04-4 09/17/01 | 04-4 03/27/03 | 04-4 10/21/11 | 07-01 09/20/01 | 07-01 10/15/10 | 07-01 10/24/11 | 20-500 09/21/01 | 20-500 06/14/02 | 20-500 03/26/03 | 20-500R 11/02/06 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.9 J |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 2 | 5 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 3 | 5 | 1 U | 1 U | 4.2 | 5 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | NA | NA | 1 U | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | 4.4 U | NA | NA | 4 U | NA | NA | 4.4 U | NA | NA | 4.4 U | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | 11 U | NA | NA | 10 U | NA | NA | 11 U | NA | NA | 11 U | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 UJ | NA | NA | 20 UJ | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 11 UJ | NA | NA | 10 UJ | NA | NA | 11 UJ | NA | NA | 11 UJ | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | R | NA | NA | R | NA | NA | R | NA | NA | R | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 UJ | NA | NA | 5.6 UJ | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | 1.1 U | NA | NA | 1 U | NA | NA | 1.1 U | NA | NA | 1.1 U | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | 2.2 U | NA | NA | 2 U | NA | NA | 2.2 U | NA | NA | 2.2 U | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | 2.2 U | NA | NA | 2 U | NA | NA | 2.2 U | NA | NA | 2.2 U | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | 1.1 U | NA | NA | 1 U | NA | NA | 1.1 U | NA | NA | 1.1 U | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | 11 UJ | NA | NA | 10 UJ | NA | NA | 11 U | NA | NA | 11 U | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | 11 U | NA | NA | 10 U | NA | NA | 11 U | NA | NA | 11 U | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2.2 U | NA | NA | 2 U | NA | NA | 2.2 U | NA | NA | 2.2 U | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | 4.4 U | NA | NA | 4 U | NA | NA | 4.4 U | NA | NA | 4.4 U | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 2.46 J | NA | NA | 5.6 U | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | 2.2 U | NA | NA | 2 U | NA | NA | 2.2 U | NA | NA | 2.2 U | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | 1.1 U | NA | NA | 1 U | NA | NA | 1.1 U | NA | NA | 1.1 U | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 04-3 09/17/01 | 04-3 10/26/10 | 04-3 10/21/11 | 04-4 09/17/01 | 04-4 03/27/03 | 04-4 10/21/11 | 07-01 09/20/01 | 07-01 10/15/10 | 07-01 10/24/11 | 20-500 09/21/01 | 20-500 06/14/02 | 20-500 03/26/03 | 20-500R 11/02/06 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2.2 U | NA | NA | 2 U | NA | NA | 2.2 U | NA | NA | 2.2 U | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | 2.2 U | NA | NA | 2 U | NA | NA | 2.2 U | NA | NA | 2.2 U | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | 22 U | NA | NA | 20 U | NA | NA | 22 U | NA | NA | 22 U | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | 5.6 U | NA | NA | 5 U | NA | NA | 5.6 U | NA | NA | 5.6 U | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | 0.12 U | NA | NA | 0.11 U | 0.11 U | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | 0.11 U | NA | NA | 0.1 U | NA | NA | 0.11 U | NA | NA | 0.11 U | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 U | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **50** | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 400 | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 U | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.8 | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.2 | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9.7 | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 U | 5 U | 5 U | 5 U | NA | 5 U | 2 J | NA | NA | 5 U | NA | **29** | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.3 | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 440 | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | 0.2 U | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 17 | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.7 | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **0.28 J** | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.8 U | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 21 | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | 1.2 U | NA | NA | 1.2 U | NA | NA | 1.2 U | NA | NA | 1.2 U | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | 1 U | NA | NA | 6.5 | NA | NA | 1 J | NA | NA | **41** | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 11 | NA | NA | 17 | NA | NA | 32 J | NA | NA | 660 | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | 0.4 U | NA | NA | 0.4 U | NA | NA | 0.4 U | NA | NA | 0.4 U | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | 0.6 U | NA | NA | 0.6 U | NA | NA | 0.6 U | NA | NA | 0.74 | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | 0.2 U | NA | NA | 0.23 | NA | NA | 0.4 | NA | NA | 0.4 | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | **25** | NA | NA | 5.4 | NA | NA | 5.8 | NA | NA | 14 | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 U | NA | NA | 5 U | NA | NA | 2.1 J | NA | NA | 2.2 J | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | 0.4 U | NA | NA | 0.4 U | NA | NA | 0.4 U | NA | NA | 0.4 U | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | 55 | NA | NA | 37 | NA | NA | 260 | NA | NA | 180 | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 04-3 09/17/01 | 04-3 10/26/10 | 04-3 10/21/11 | 04-4 09/17/01 | 04-4 03/27/03 | 04-4 10/21/11 | 07-01 09/20/01 | 07-01 10/15/10 | 07-01 10/24/11 | 20-500 09/21/01 | 20-500 06/14/02 | 20-500 03/26/03 | 20-500R 11/02/06 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | 4.4 | NA | NA | 1.7 | NA | NA | 3.5 | NA | NA | 9.8 | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | 1.4 U | NA | NA | 2.8 | NA | NA | 1.4 U | NA | NA | 1.4 U | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | 0.4 U | NA | NA | 0.4 U | NA | NA | **0.41 J** | NA | NA | 0.4 U | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | 0.8 U | NA | NA | 4.4 | NA | NA | 0.8 U | NA | NA | 0.8 U | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | 15 | NA | NA | 26 | NA | NA | 100 | NA | NA | 46 | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-500R 10/26/07 | 20-500R 09/15/08 | 20-500R 09/23/09 | 20-500R 10/14/10 | 20-500R 10/20/11 | 20-FP10 09/25/01 | 20-FP10 02/22/02 | 20-FP10 11/02/06 | 20-FP10R 10/26/07 | 20-FP10R 09/15/08 | 20-FP10R 09/23/09 | 20-FP10R 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | NA | 200 U | 1 U | 1 U | 30 U | 30 U | 30 U | 30 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 0.2 | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 | 2 |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 30 U | 10 U | 5 U | 5 U | 2 U | 2 U | 2 U | 2 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 30 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.3 | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 U | 100 U | 100 U | 25 U | 25 U | 20 U | 20 U | 20 U | 20 U | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 UJ | 50 U | 300 U | 300 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 300 U | 50 U | 50 U | 50 U | 10 U | 10 U | 10 U | 10 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 U | 300 U | 100 U | 25 U | 25 U | 20 U | 20 U | 20 U | 2 | 50 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | **65** | 0.4 J | 0.6 | 5 U | 5 U | **6.1** | 2.2 U | 0.3 J | 0.2 J | 1 U | 3 | **6** |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 30 U | 10 U | 1 U | 1 U | 2 U | 2 U | 2 U | 2 U | 5 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 30 U | 30 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 30 U | 5 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 30 U | 5 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 3 | 2 | 2 | 3 | 3 |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 8 U | 1 UJ | 1 U | NA | 5 U | 1.3 J | 5 U | 1 U | 0.4 J | 1 UJ | 1 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 30 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 30 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | 50 U | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | **131** | 4 | 1 U | 12 | 10 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | **252** | 8 | 6 | **80** | **123** | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 14 | 1 U | 1 U | 10 U | 10 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | NA | 50 U | 5 U | 5 U | 10 U | 10 U | 10 U | 10 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 30 U | 30 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 J | 5 J | 0.7 | NA | 100 U | 1 U | 1 U | 20 U | 20 U | 20 U | 0.2 | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 30 U | 30 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 30 U | 30 U | NA | NA | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | 9 | NA | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | **244** | **359** | NA | NA | NA | NA | NA | NA | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.8 J | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | 15 | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | 500 U | NA | NA | NA | NA | NA | NA | NA | 90 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-500R 10/26/07 | 20-500R 09/15/08 | 20-500R 09/23/09 | 20-500R 10/14/10 | 20-500R 10/20/11 | 20-FP10 09/25/01 | 20-FP10 02/22/02 | 20-FP10 11/02/06 | 20-FP10R 10/26/07 | 20-FP10R 09/15/08 | 20-FP10R 09/23/09 | 20-FP10R 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 0.1 | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 2 | **7** | **8** | 2 |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 0.6 J | 2 | 2 |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | 4.3 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 11 UJ | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | 4.3 U | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-500R 10/26/07 | 20-500R 09/15/08 | 20-500R 09/23/09 | 20-500R 10/14/10 | 20-500R 10/20/11 | 20-FP10 09/25/01 | 20-FP10 02/22/02 | 20-FP10 11/02/06 | 20-FP10R 10/26/07 | 20-FP10R 09/15/08 | 20-FP10R 09/23/09 | 20-FP10R 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | 5.4 U | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | **15** | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | 1.2 U | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | **38** | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | 560 J | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | 0.6 U | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | 2.6 | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | 3.2 | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | **13** | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | 180 J | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-500R 10/26/07 | 20-500R 09/15/08 | 20-500R 09/23/09 | 20-500R 10/14/10 | 20-500R 10/20/11 | 20-FP10 09/25/01 | 20-FP10 02/22/02 | 20-FP10 11/02/06 | 20-FP10R 10/26/07 | 20-FP10R 09/15/08 | 20-FP10R 09/23/09 | 20-FP10R 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | 11 | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | 1.4 U | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | 0.4 UJ | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | 0.8 U | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | 25 | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-FP10R 10/24/11 | 40-304 09/14/01 | 40-304 12/17/02 | 40-304 03/21/03 | 40-304 10/06/04 | 40-304 10/31/07 | 40-304 09/11/08 | 40-304 10/18/10 | 40-304 10/25/11 | 70-165 09/26/01 | 70-165 06/22/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 1 U | 1 U | 1 U | 30 U | NA | NA | NA | 30 U [30 U] | 1 UJ | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 13 | 1.4 | 1.1 | 1 U | 1 J | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 5 U | 5 U | 5 U | 2 U | NA | NA | 5 U | 2 U [2 U] | 5 U | NA |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 UJ | 1 U | 1 U | NA | NA | 5 U | 1 U [1 U] | 1 U | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 2 J | 4.6 J | 25 U | 30 U | NA | NA | 30 U | 20 U [20 U] | 25 U | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 UJ | NA | NA | 50 U | 50 U [50 U] | 50 U | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 50 U | 50 U | 50 U | 1 U | NA | NA | 50 U | 10 U [10 U] | 50 U | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 25 U | 25 U | 25 U | 7 J | NA | NA | 50 U | 20 U [20 U] | 25 U | NA |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | **18** | 1 U | 1 U | 1 U | 0.3 J | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 UJ | 1 U | 1 UJ | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 1 U | 1 U | 1 UJ | 2 UJ | NA | NA | 5 U | 2 U [2 U] | 1 UJ | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 UJ | 5 U | NA | NA | 5 U | 5 U [5 U] | 5 U | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 UJ | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 1 U | 1 UJ | NA | NA | 5 U | 1 U [1 U] | 1 U | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 UJ | 1 U | NA | NA | 5 U | 1 U [1 U] | 1 U | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 8 | 12 | 4.9 | 8.3 | 7 | NA | NA | 7 | 7 [9] | 1 U | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 | 5 U | 5 U | 5 U | 1 U | NA | NA | NA | 1 U [1 U] | 5 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 UJ | 1 U | 1 U | NA | NA | 5 U | 1 U [1 U] | 1 U | NA |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 5 U | 1 U [1 U] | 1 U | NA |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 5 U | 5 U | 5 U | 1 U | NA | NA | 5 U | 1 U [1 U] | 5 U | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 2 U | 2 U | 2 U | 1 U | NA | NA | 2 U | 2 U [2 U] | 2 U | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 5 U | 5 U | 5 UJ | 10 U | NA | NA | NA | 10 U [10 U] | 5 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | 5 U | 5 U [5 U] | 5 U | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 1 U | 1 U | 1 U | 20 U | NA | NA | NA | 20 U [20 U] | 1 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | 5 U | 5 U [5 U] | 5 U | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | NA | NA | NA | NA | NA | NA | 5 U | 5 U [5 U] | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | NA | NA | NA | NA | NA | NA | 1 U | 1 U [1 U] | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | 90 U | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-FP10R 10/24/11 | 40-304 09/14/01 | 40-304 12/17/02 | 40-304 03/21/03 | 40-304 10/06/04 | 40-304 10/31/07 | 40-304 09/11/08 | 40-304 10/18/10 | 40-304 10/25/11 | 70-165 09/26/01 | 70-165 06/22/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 2 | 1 U | 1 U | 1 U | 0.2 J | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | 1 U | 1 U [1 U] | 1 U | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 2 | **4.9** | **5.3** | 1.7 | **5** | NA | NA | **4** | **3 [5]** | 1 U | NA |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | 4 U | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 10 UJ | NA | NA | NA | NA | NA | NA | NA | 10 UJ | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 UJ | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | R | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1.02 J | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | 4 U | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 1.76 J | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-FP10R 10/24/11 | 40-304 09/14/01 | 40-304 12/17/02 | 40-304 03/21/03 | 40-304 10/06/04 | 40-304 10/31/07 | 40-304 09/11/08 | 40-304 10/18/10 | 40-304 10/25/11 | 70-165 09/26/01 | 70-165 06/22/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.15 U | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.15 | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U [0.1 U] | 0.1 U | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | 0.15 | NA | NA | NA | 0.1 U | 0.1 U [0.1 U] | 0.1 U [0.1 U] [0.1 U] | 0.1 U [0.1 U] [0.1 U] | 0.1 U | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.28 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | 0.28 U | NA | NA | NA | NA | NA | NA | NA | 0.12 U | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 U |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.7 |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 0.4 U |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.064 J |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.42 J |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.9 |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.8 |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | 3 U | NA | NA | NA | NA | NA | 0.23 J |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **1,200 J** |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | 0.2 U |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.2 |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.1 |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.3 J |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 29 |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | 1.2 U | NA | NA | NA | NA | NA | NA | NA | 1.3 | 1.7 |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | 9.8 | NA | NA | NA | NA | NA | NA | NA | 1.3 J | 2.9 |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | 74 | NA | NA | NA | NA | NA | NA | NA | 37 | 17 |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA | 0.4 U | 0.4 U |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA | 0.2 U | 0.2 U |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | 11 U | NA | NA | NA | NA | NA | NA | NA | 0.6 U | 0.6 U |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | 0.4 | NA | NA | NA | NA | NA | NA | NA | 1.1 | 1.7 |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | 1.9 U | NA | NA | NA | NA | NA | NA | NA | 5.7 | 15 |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | 4 J | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA | **19** | 0.4 U |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | 440 | NA | NA | NA | NA | NA | NA | NA | 720 J | **1,100 J** |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA | 0.2 U | 0.2 U |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 20-FP10R 10/24/11 | 40-304 09/14/01 | 40-304 12/17/02 | 40-304 03/21/03 | 40-304 10/06/04 | 40-304 10/31/07 | 40-304 09/11/08 | 40-304 10/18/10 | 40-304 10/25/11 | 70-165 09/26/01 | 70-165 06/22/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | 18 | NA | NA | NA | NA | NA | NA | NA | 14 | 3.5 |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | 1.4 U | NA | NA | NA | NA | NA | NA | NA | 4.2 J | 2.7 |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ | 0.4 UJ |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA | 0.2 U | 0.2 U |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | 0.8 U | NA | NA | NA | NA | NA | NA | NA | 0.8 U | 0.8 U |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | 8.1 U | NA | NA | NA | NA | NA | NA | NA | 13 | 10 |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 70-165 03/28/03 | 70-165 10/29/07 | 70-165 09/16/08 | 70-165 09/24/09 | 70-165 10/18/10 | 70-165 10/24/11 | MW-23 02/27/02 | MW-23 06/25/02 | MW-23 03/20/03 | MW-23 10/04/04 | MW-23 10/14/10 | MW-26 06/26/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 UJ | NA | 1 U | 1 U | 1 U | 3.1 |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | NA | NA | NA | 30 U | NA | 30 U | 1 U | NA | 1 U | 30 U | NA | 1 UJ |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 4.5 |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | 2 U | 5 U | 2 U | 5 U | NA | 5 U | 2 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | 5 U | 1 U | 1 U | NA | 1 U | 1 U | 5 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | 0.1 | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | NA | NA | NA | 20 U | 30 UJ | 20 U | 25 U | NA | 25 U | 30 U | 30 U | 25 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | NA | NA | NA | 50 U | 50 UJ | 50 U | 50 U | NA | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | NA | NA | NA | 10 U | 50 U | 10 U | 50 U | NA | 50 U | 1 U | 50 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | NA | NA | NA | 2 | 50 UJ | 20 U | 25 U | NA | 25 U | 30 U | 50 U | 3.5 J |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | 2 U | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 UJ | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | NA | NA | NA | 2 U | 5 U | 2 U | 1 UJ | NA | 1 U | 2 UJ | 5 U | 1 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | NA | 5 UJ | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | NA | NA | NA | 1 U | 5 U | 1 U | 1 U | NA | 1 U | 1 UJ | 5 U | 2.1 |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | NA | NA | NA | 1 U | 5 U | 1 U | 1 U | NA | 1 UJ | 1 U | 5 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | 1 U | 5 UJ | NA | 5 U | 1 U | NA | 34 |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | NA | NA | NA | 1 U | 5 U | 1 U | 1 U | NA | 1 U | 1 U | 5 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | NA | NA | NA | 1 U | 5 U | 1 U | 1 U | NA | 1 U | 1 U | 5 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 0.57 J |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | NA | NA | NA | 1 U | 5 U | 1 U | 5 U | NA | 5 U | 1 U | 5 U | 3.6 J |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | 2 U | 2 U | 2 U | NA | 2 U | 1 U | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 10 U | NA | 10 U | 5 U | NA | 5 U | 10 U | NA | 5 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | NA | NA | NA | 5 U | 5 U | 5 U | 5 UJ | NA | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 20 U | NA | 20 U | 1 U | NA | 1 U | 20 U | NA | 120 EJ |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | NA | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA | 5 U | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA | 1 U | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | 90 U | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 70-165 03/28/03 | 70-165 10/29/07 | 70-165 09/16/08 | 70-165 09/24/09 | 70-165 10/18/10 | 70-165 10/24/11 | MW-23 02/27/02 | MW-23 06/25/02 | MW-23 03/20/03 | MW-23 10/04/04 | MW-23 10/14/10 | MW-26 06/26/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | NA | NA | NA | 0.1 | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 70-165 03/28/03 | 70-165 10/29/07 | 70-165 09/16/08 | 70-165 09/24/09 | 70-165 10/18/10 | 70-165 10/24/11 | MW-23 02/27/02 | MW-23 06/25/02 | MW-23 03/20/03 | MW-23 10/04/04 | MW-23 10/14/10 | MW-26 06/26/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | 0.6 J | NA | NA | NA | NA | NA | NA | 1.2 U | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | 2.9 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 43 | NA | NA | NA | NA | NA | NA | NA | NA | 183 | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | 0.93 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | 1.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | 8.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 UJ | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | **27** | **54** | **90 [92]** | **48.9 [49.2]** | **381 J [83 J]** | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | 460 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | 21 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | **5.3** | NA | NA | NA | NA | NA | NA | 0.7 J | NA | 5 U | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | 0.2 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | 17 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | 70-165 03/28/03 | 70-165 10/29/07 | 70-165 09/16/08 | 70-165 09/24/09 | 70-165 10/18/10 | 70-165 10/24/11 | MW-23 02/27/02 | MW-23 06/25/02 | MW-23 03/20/03 | MW-23 10/04/04 | MW-23 10/14/10 | MW-26 06/26/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | MW-26 03/24/03 | MW-26 10/05/04 | MW-26 02/28/05 | RFI-02-05 09/18/01 | RFI-02-05 12/16/02 | RFI-02-05R 10/27/11 | RFI-02-22 04/05/05 | RFI-02-22 10/15/10 | RFI-02-22 10/25/11 | RFI-09-04 11/28/01 | RFI-09-04R 06/24/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1.8 | 3 | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1.6 [1.7] | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | 30 U | NA | 1 U [1 U] | NA | 30 U | 30 U | NA | 30 U | 1 U [1 U] | 1 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1.7 | 6 J | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | 2 U | NA | 5 U [5 U] | NA | 2 U | 2 U | 5 U | 2 U | 5 U [5 U] | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 UJ | 5 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | 30 U | NA | 25 U [25 U] | NA | 20 U | 30 U | 30 U | 20 U | 25 U [25 U] | 25 UJ |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | NA | 50 U [50 U] | NA | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | 1 U | NA | 50 U [50 U] | NA | 10 U | 1 U | 50 U | 10 U | 50 U [50 U] | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | 30 U | NA | 25 U [25 U] | NA | 20 U | 10 J | 50 U | 20 U | 25 U [25 U] | 25 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 0.2 J | 1 U | 1 U | 1 U [1 U] | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 UJ | NA | 1 U [1 U] | NA | 1 U | 1 UJ | 1 U | 1 U | 1 U [1 U] | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 UJ | 2 UJ | NA | 1 U [1 U] | NA | 2 U | R | 5 U | 2 U | 1 U [1 U] | 1 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 UJ | 5 UJ | NA | 5 U [5 U] | NA | 5 U | 5 UJ | 5 U | 5 U | 5 U [5 U] | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 2 J | NA | 1 U [1 U] | NA | 1 U | 1 U | 5 U | 1 U | 1 U [1 U] | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 UJ | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 5 U | 1 U | 1 U [1 U] | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 0.3 J | 1 U | 1 U | 1.1 [1.2] | 0.98 J |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.3 | 2 J | NA | 5 U [5 U] | NA | 1 U | 1 UJ | NA | 1 U | 5 U [5 U] | 5 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 5 U | 1 U | 1 U [1 U] | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 UJ | 5 U | 1 U | 1 U [1 U] | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | 1 U | NA | 5 U [5 U] | NA | 1 U | 1 U | 5 U | 1 U | 5 U [5 U] | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 1 U | NA | 2 U [2 U] | NA | 2 U | 1 U | 2 U | 2 U | 2 U [2 U] | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 6 J | NA | 5 U [5 U] | NA | 10 U | 10 U | NA | 10 U | 5 U [5 U] | 5 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | NA | 5 U [5 U] | NA | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 | 20 U | NA | 1 U [1 U] | NA | 20 U | 20 UJ | NA | 20 U | 1 U [1 U] | 1 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | NA | 5 U [5 U] | NA | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | 5 U | NA | 5 U | 5 U | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | 1 U | NA | 1 U | 1 U | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | 90 U | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | MW-26 03/24/03 | MW-26 10/05/04 | MW-26 02/28/05 | RFI-02-05 09/18/01 | RFI-02-05 12/16/02 | RFI-02-05R 10/27/11 | RFI-02-22 04/05/05 | RFI-02-22 10/15/10 | RFI-02-22 10/25/11 | RFI-09-04 11/28/01 | RFI-09-04R 06/24/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 0.2 J | 1 U | 1 U | **9.3 [9.3]** | **6.7** |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 14 [13] | 4 |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | NA | 1 U [1 U] | NA | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | 4.4 U [4.4 U] | NA | NA | NA | NA | NA | 4 U [4.2 U] | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | 11 U [11 U] | NA | NA | NA | NA | NA | 10 U [11 U] | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 UJ [22 UJ] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 11 UJ [11 UJ] | NA | NA | NA | NA | NA | 10 UJ [11 UJ] | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | R [R] | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | R [R] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | 1.1 U [1.1 U] | NA | NA | NA | NA | NA | 1 U [1.1 U] | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | 2.2 U [2.2 U] | NA | NA | NA | NA | NA | 2 U [2.1 U] | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | 2.2 U [2.2 U] | NA | NA | NA | NA | NA | 2 U [2.1 U] | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | 1.1 U [1.1 U] | NA | NA | NA | NA | NA | 1 U [1.1 U] | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | 11 U [11 U] | NA | NA | NA | NA | NA | 10 U [11 U] | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | 11 U [11 U] | NA | NA | NA | NA | NA | 10 U [11 U] | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | 2.2 U [2.2 U] | NA | NA | NA | NA | NA | 2 U [2.1 U] | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | 4.4 U [4.4 U] | NA | NA | NA | NA | NA | 4 U [4.2 U] | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | 2.2 U [2.2 U] | NA | NA | NA | NA | NA | 2 U [2.1 U] | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | 1.1 U [1.1 U] | NA | NA | NA | NA | NA | 1 U [1.1 U] | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | MW-26 03/24/03 | MW-26 10/05/04 | MW-26 02/28/05 | RFI-02-05 09/18/01 | RFI-02-05 12/16/02 | RFI-02-05R 10/27/11 | RFI-02-22 04/05/05 | RFI-02-22 10/15/10 | RFI-02-22 10/25/11 | RFI-09-04 11/28/01 | RFI-09-04R 06/24/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | 2.2 U [2.2 U] | NA | NA | NA | NA | NA | 2 U [2.1 U] | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | 2.2 U [2.2 U] | NA | NA | NA | NA | NA | 2 U [2.1 U] | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | 22 U [22 U] | NA | NA | NA | NA | NA | 20 U [21 U] | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | 5.6 U [5.6 U] | NA | NA | NA | NA | NA | 5 U [5.3 U] | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.12 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.12 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.12 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.12 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.041 J [0.15] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.12 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.12 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | 0.041 J [0.15] | NA | NA | NA | NA | NA | 0.11 U [0.1 U] | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.11 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.11 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.11 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.11 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.18 [0.071 J] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.11 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.11 U [0.11 U] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | 0.18 [0.071 J] | NA | NA | NA | NA | NA | 0.11 U [0.11 U] | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | 1.2 U [1.2 U] | 1.2 U | NA | NA | NA | NA | 1.2 U [1.2 U] | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | 1.7 U [0.87 J] | 1.4 | NA | NA | NA | NA | 1 U [0.5 J] | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | 330 J [270] | 120 J | NA | NA | NA | NA | 77 [84] | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | 0.2 J [3.2] | 0.4 UJ | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | 0.056 J [0.14 J] | 0.11 J | NA | NA | NA | NA | 0.28 [0.087 J] | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | 0.98 [1] | 5 | NA | NA | NA | NA | 0.77 U [0.6 U] | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | 0.39 J [0.45] | 0.64 J | NA | NA | NA | NA | 0.65 [0.72] | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | 5 J [4.7] | 21 J | NA | NA | NA | NA | 2.6 U [2.5 U] | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | 1.7 J [1.6 J] | NA | NA | NA | NA | NA | 3 J [2.6 J] | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | 4 | 0.65 J [0.34 J] | 2.1 J | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | **1,400 J [1,500]** | **2,000** | NA | NA | NA | NA | 22 [22] | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | 0.2 U [0.2 U] | 0.2 U | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | 5.7 J [5.5] | 12 J | NA | NA | NA | NA | 4 [4.3] | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | 1.4 U [0.84 J] | 2.2 J | NA | NA | NA | NA | 3 J [2.8 J] | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | 0.4 U [0.4 U] | 0.4 UJ | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | 0.17 J [0.2 U] | 0.12 J | NA | NA | NA | NA | 0.2 U [0.26] | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | 0.8 U [0.8 U] | 0.27 J | NA | NA | NA | NA | 0.8 U [0.8 U] | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | 64 J [18] | 60 J | NA | NA | NA | NA | 22 U [9.9 U] | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | 1.2 U [1.2 U] | NA | NA | NA | NA | NA | 1.2 U [1.2 U] | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | 1 U [1 U] | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | 210 [210] | NA | NA | NA | NA | NA | 81 [84] | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | 0.4 U [0.4 U] | NA | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | 1.2 [0.7] | NA | NA | NA | NA | NA | **17 [16]** | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | 0.22 [0.21] | NA | NA | NA | NA | NA | 0.77 [0.76] | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | 0.6 U [6.8 J] | NA | NA | NA | NA | NA | 0.6 U [5.8 U] | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | 0.98 J [1.9 J] | NA | NA | NA | NA | NA | 2.1 J [2.6 J] | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | 2 | 0.4 U [0.4 U] | NA | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | **880 [880]** | NA | NA | NA | NA | NA | 23 [23] | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | MW-26 03/24/03 | MW-26 10/05/04 | MW-26 02/28/05 | RFI-02-05 09/18/01 | RFI-02-05 12/16/02 | RFI-02-05R 10/27/11 | RFI-02-22 04/05/05 | RFI-02-22 10/15/10 | RFI-02-22 10/25/11 | RFI-09-04 11/28/01 | RFI-09-04R 06/24/02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | 2.2 [2.3] | NA | NA | NA | NA | NA | 5.4 [5.4] | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | 1.4 U [1.4 U] | NA | NA | NA | NA | NA | 4 J [4.8 J] | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | 0.4 UJ [0.4 UJ] | NA | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | 0.8 U [0.8 U] | NA | NA | NA | NA | NA | 4.2 [4.3] | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | 13 [17] | NA | NA | NA | NA | NA | 6 U [30 U] | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-04R 03/24/03 | RFI-09-04R 10/05/04 | RFI-09-04R 06/08/05 | RFI-09-04R 11/01/06 | RFI-09-04R 11/14/07 | RFI-09-04R 09/12/08 | RFI-09-04R 10/18/10 | RFI-09-04R 10/20/11 | RFI-09-14 10/03/01 | RFI-09-14 06/26/02 | RFI-09-14 03/31/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 0.3 J | 0.3 J | 0.6 J | 0.6 J | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | 30 U | 30 U | 30 U | 30 U | 30 U | NA | 30 U | 1 U | NA | 1 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U | 5 U | NA | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | NA | 1 UJ |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | 30 U | 30 U | 20 U | 20 U | 20 U | 30 U | 20 U | 25 U | NA | 25 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U | 50 U | NA | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | 1 U | 1 U | 10 U | 10 U | 10 U | 50 U | 10 U | 50 U | NA | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | 30 U | 30 U | 20 U | 20 U | 20 U | 50 U | 20 U | 25 U | NA | 47 |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 UJ | 2 UJ | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U | 1 U | NA | 1 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 UJ | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 0.3 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | NA | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 UJ | 1 U | 1 U | 1 UJ | 1 U | 1 U | 5 U | 1 U | 1 U | NA | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 U | NA | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 1 U | 1 U | 1 UJ | 1 U | 1 UJ | NA | 1 U | 5 U | NA | 5 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | NA | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 UJ | 1 UJ | 1 U | 5 U | 1 U | 1 U | NA | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 5 U | NA | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 2 U | NA | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 10 UJ | 10 U | 10 U | 10 U | 10 U | NA | 10 U | 5 U | NA | 5 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA | 20 U | 1 U | NA | 1 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | 1 U | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U | 1 UJ | NA | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | 90 U | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-04R 03/24/03 | RFI-09-04R 10/05/04 | RFI-09-04R 06/08/05 | RFI-09-04R 11/01/06 | RFI-09-04R 11/14/07 | RFI-09-04R 09/12/08 | RFI-09-04R 10/18/10 | RFI-09-04R 10/20/11 | RFI-09-14 10/03/01 | RFI-09-14 06/26/02 | RFI-09-14 03/31/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | **5.5** | **11** | **9** | **12** | **10** | **9** | **8** | **10** | 1 U | NA | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 9.6 | 5 | 5 J | 4 | 3 | 3 | 6 | 5 | 1 U | NA | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-04R 03/24/03 | RFI-09-04R 10/05/04 | RFI-09-04R 06/08/05 | RFI-09-04R 11/01/06 | RFI-09-04R 11/14/07 | RFI-09-04R 09/12/08 | RFI-09-04R 10/18/10 | RFI-09-04R 10/20/11 | RFI-09-14 10/03/01 | RFI-09-14 06/26/02 | RFI-09-14 03/31/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.71 J | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 150 | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | 3 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.5 U | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | R | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 U | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-04R 03/24/03 | RFI-09-04R 10/05/04 | RFI-09-04R 06/08/05 | RFI-09-04R 11/01/06 | RFI-09-04R 11/14/07 | RFI-09-04R 09/12/08 | RFI-09-04R 10/18/10 | RFI-09-04R 10/20/11 | RFI-09-14 10/03/01 | RFI-09-14 06/26/02 | RFI-09-14 03/31/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-14 10/04/04 | RFI-09-14 12/08/05 | RFI-09-14 06/27/07 | RFI-09-14 11/01/07 | RFI-09-14 03/18/08 | RFI-09-14 06/18/08 | RFI-09-14 09/10/08 | RFI-09-14 12/02/08 | RFI-09-14 10/13/10 | RFI-09-46 12/19/02 | RFI-09-46 04/01/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U [30 U] | NA | 1 U [1 U] | 1 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 U | 2 U | 2 U [2 U] | 5 U | 5 U [5 U] | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U | 1 UJ [1 UJ] | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ [20 UJ] | 30 U | 25 U [25 U] | 25 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ [50 UJ] | 50 U | 50 U [50 U] | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | 50 U | 50 U [50 U] | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 30 U | 30 U | 20 U | 20 U | 20 U | 2 J | 20 U | 20 UJ [20 UJ] | 50 U | 6.1 J [5.2 J] | 25 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | **700 D [680 D]** | **500 D** |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 UJ [1 UJ] | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 U | 2 U [2 U] | 5 U | 1 U [1 U] | 1 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 UJ | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 0.57 J [5 U] | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 UJ [1 U] | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U [1 U] | 5 U | 1 U [1 U] | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U | 1 U [1 U] | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U [1 U] | NA | 170 D [160 D] | 160 D |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U | 1 UJ [1 UJ] | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 UJ | 1 U [1 U] | 5 U | 1 U [1 U] | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1.9 [1.8] | 1.6 |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U | 17 [16] | 15 |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 2 U | 45 [43] | 38 |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | NA | 5 U [5 U] | 5 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 0.61 J [0.59 J] | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | 20 UJ | 20 U | 20 U | 20 U [20 U] | NA | 49 [45] | 48 |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 8.2 [7.8] | 6.7 |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | 90 U | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-14 10/04/04 | RFI-09-14 12/08/05 | RFI-09-14 06/27/07 | RFI-09-14 11/01/07 | RFI-09-14 03/18/08 | RFI-09-14 06/18/08 | RFI-09-14 09/10/08 | RFI-09-14 12/02/08 | RFI-09-14 10/13/10 | RFI-09-46 12/19/02 | RFI-09-46 04/01/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U [1 U] | 1 U | 19 [18] | 16 |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-14 10/04/04 | RFI-09-14 12/08/05 | RFI-09-14 06/27/07 | RFI-09-14 11/01/07 | RFI-09-14 03/18/08 | RFI-09-14 06/18/08 | RFI-09-14 09/10/08 | RFI-09-14 12/02/08 | RFI-09-14 10/13/10 | RFI-09-46 12/19/02 | RFI-09-46 04/01/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 U [1.2 U] | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.2 J [2 J] | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 117 | NA | NA | NA | NA | NA | NA | NA | NA | 1,300 J [1,200 J] | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 U [0.4 U] | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.6 U [0.6 U] | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 J [0.34 J] | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.3 J [1.9 J] | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U [3.3 J] | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.48 J [0.4 U] | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 65 J [59 J] | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6.9 J [5.8 J] | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 1.6 U [1.6 U] | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ [0.4 UJ] | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U [0.2 U] | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.8 U [0.8 U] | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 57 J [47 J] | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-14 10/04/04 | RFI-09-14 12/08/05 | RFI-09-14 06/27/07 | RFI-09-14 11/01/07 | RFI-09-14 03/18/08 | RFI-09-14 06/18/08 | RFI-09-14 09/10/08 | RFI-09-14 12/02/08 | RFI-09-14 10/13/10 | RFI-09-46 12/19/02 | RFI-09-46 04/01/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-46 10/05/04 | RFI-09-46 06/27/07 | RFI-09-46 10/26/07 | RFI-09-46 03/18/08 | RFI-09-46 06/17/08 | RFI-09-46 09/12/08 | RFI-09-46 12/02/08 | RFI-09-46 10/13/10 | RFI-09-46 10/25/11 | RFI-09-48 04/24/03 | RFI-09-48 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U | NA | 30 U | 1 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 0.1 J | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 3 [3] | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 5 U [5 U] | 2 U | 5 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U [5 U] | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 2 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 20 U | 20 U | 2 J [20 U] | 20 U | 20 U | 20 UJ | 130 U [140 U] | 20 U | 25 U | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 UJ | 50 UJ | 50 U [50 U] | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 50 U [50 U] | 10 U | 50 U | 1 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 60 J | 40 U | 20 U | 20 U [20 U] | 30 U | 50 U | 20 UJ | 50 U [50 U] | 20 U | 1.9 J | 30 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | **49** | **34** | **165** | **26 [25]** | **26** | **76** | **22** | **68 [64]** | **28** | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 UJ | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 UJ |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 U | 2 U | 2 UJ [2 UJ] | 2 U | 2 U | 2 U | 5 U [5 U] | 2 U | 1 U | 2 UJ |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 UJ |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 U | 1 U | 1 UJ [1 UJ] | 1 U | 1 U | 1 U | 5 U [5 U] | 1 U | 1 U | 1 UJ |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 3 U | 4 U | 13 U | 4 U [5 U] | 6 UJ | 4 UJ | 9 U | 5 U [9 U] | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 123 J | 98 | 136 | 85 [85] | 102 | 58 J | 125 | NA | 113 | 5 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U [5 U] | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 UJ | 1 U | 1 U [1 U] | 1 U | 1 UJ | 1 U | 5 U [5 U] | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | 10 U [10 U] | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 0.4 J | 0.3 J | 0.6 J | 0.4 J [0.4 J] | 0.4 J | 0.5 J | 0.5 J | 1 U [1 U] | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 9 | 7 | 11 | 7 [7] | 8 | 10 | 12 J | 11 [10] | 10 | 5 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 16 J | 8 | 12 | 7 [7] | 8 | 10 | 12 | 13 [11] | 12 | 2 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 UJ | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | NA | 10 U | 5 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 0.9 J | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 40 | 30 | 40 | 30 [30] | 40 | 40 | 40 | NA | 50 | 1 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | **16 [15]** | **18** | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 8 [7] | 8 | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 3 | 2 | 4 | 2 [2] | 2 | 3 | 4 | 4 [4] | 3 | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | 90 U [90 U] | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-46 10/05/04 | RFI-09-46 06/27/07 | RFI-09-46 10/26/07 | RFI-09-46 03/18/08 | RFI-09-46 06/17/08 | RFI-09-46 09/12/08 | RFI-09-46 12/02/08 | RFI-09-46 10/13/10 | RFI-09-46 10/25/11 | RFI-09-48 04/24/03 | RFI-09-48 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 6 | 4 | 7 | 4 [4] | 4 | 5 | 5 | 6 [6] | 5 | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-46 10/05/04 | RFI-09-46 06/27/07 | RFI-09-46 10/26/07 | RFI-09-46 03/18/08 | RFI-09-46 06/17/08 | RFI-09-46 09/12/08 | RFI-09-46 12/02/08 | RFI-09-46 10/13/10 | RFI-09-46 10/25/11 | RFI-09-48 04/24/03 | RFI-09-48 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 U | 5 U |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | **49** | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 635 | NA | NA | NA | NA | NA | NA | NA | NA | 190 | 202 |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 U | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.49 J | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.92 | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.3 | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.6 J | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.21 J | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 90 | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 12 | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 1.6 U | 5 U |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.061 J | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.8 U | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-46 10/05/04 | RFI-09-46 06/27/07 | RFI-09-46 10/26/07 | RFI-09-46 03/18/08 | RFI-09-46 06/17/08 | RFI-09-46 09/12/08 | RFI-09-46 12/02/08 | RFI-09-46 10/13/10 | RFI-09-46 10/25/11 | RFI-09-48 04/24/03 | RFI-09-48 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-48 02/24/05 | RFI-09-48 12/08/05 | RFI-09-48 11/01/06 | RFI-09-48 04/23/07 | RFI-09-48 06/27/07 | RFI-09-48 11/01/07 | RFI-09-48 03/18/08 | RFI-09-48 06/17/08 | RFI-09-48 09/12/08 | RFI-09-48 12/02/08 | RFI-09-48 10/18/10 | RFI-09-48 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | NA | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U | 30 U | 30 U | NA | 30 U [30 U] |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 UJ | 2 U | 2 U | 2 U | 5 U | 2 U [2 U] |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U [1 U] |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | NA | 30 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 U | 20 U | 20 UJ | 30 U | 20 U [20 U] |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | NA | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | 50 U [50 U] |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | NA | 1 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | 10 U | 50 U | 10 U [10 U] |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | NA | 30 U | 20 U | 20 UJ | 20 U [20 U] | 20 U | 20 U | 20 U | 20 U | 20 UJ | 50 U | 20 U [20 U] |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | NA | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U [2 U] |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | NA | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U [1 U] |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 UJ | 1 U | 1 U | 5 U | 1 U [1 U] |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | 1 UJ | 1 UJ | 1 U [1 U] | 1 U | 1 U | 1 U | 1 UJ | 1 U | NA | 1 U [1 U] |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U [1 U] |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | NA | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U [1 U] |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U [1 U] |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U [2 U] |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | 10 U | NA | 10 U [10 U] |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | NA | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 UJ | 20 U | 20 U | 20 U | NA | 20 U [20 U] |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | NA | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U [5 U] |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U [1 U] |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 90 U | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-48 02/24/05 | RFI-09-48 12/08/05 | RFI-09-48 11/01/06 | RFI-09-48 04/23/07 | RFI-09-48 06/27/07 | RFI-09-48 11/01/07 | RFI-09-48 03/18/08 | RFI-09-48 06/17/08 | RFI-09-48 09/12/08 | RFI-09-48 12/02/08 | RFI-09-48 10/18/10 | RFI-09-48 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | NA | 1 U | 1 U | 0.2 J | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 0.3 J | 0.6 J | 0.9 J | 1 U | 1 U [1 U] |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-48 02/24/05 | RFI-09-48 12/08/05 | RFI-09-48 11/01/06 | RFI-09-48 04/23/07 | RFI-09-48 06/27/07 | RFI-09-48 11/01/07 | RFI-09-48 03/18/08 | RFI-09-48 06/17/08 | RFI-09-48 09/12/08 | RFI-09-48 12/02/08 | RFI-09-48 10/18/10 | RFI-09-48 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-48 02/24/05 | RFI-09-48 12/08/05 | RFI-09-48 11/01/06 | RFI-09-48 04/23/07 | RFI-09-48 06/27/07 | RFI-09-48 11/01/07 | RFI-09-48 03/18/08 | RFI-09-48 06/17/08 | RFI-09-48 09/12/08 | RFI-09-48 12/02/08 | RFI-09-48 10/18/10 | RFI-09-48 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-53 04/07/05 | RFI-09-53 06/08/05 | RFI-09-53 11/01/06 | RFI-09-53 11/14/07 | RFI-09-53 09/12/08 | RFI-09-53 09/24/09 | RFI-09-53 10/18/10 | RFI-09-53 10/20/11 | RFI-10-24 02/20/02 | RFI-10-24 06/25/02 | RFI-10-24 03/26/03 | RFI-10-24 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 50 | **258** | **145 [132]** | **133** | **135** | 1 U | 39 | **131** | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 0.5 J | 200 U | 30 U [30 U] | 30 U | 0.3 J | 30 U | NA | 30 U | 1 U | 1 U | 1 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 15 | 35 | 28 [26] | 28 | 62 | 1 U | 49 | 72 | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 0.6 J | 4 J | 2 [2] | 2 | 2 | 1 U | 1 U | 3 | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 10 U | 2 U [2 U] | 2 U | 2 U | 2 U | 5 U | 2 U | 5 U | 5 U | 5 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 UJ | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 0.3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 100 U | 20 U [20 U] | 20 U | 20 U | 20 U | 30 U | 20 U | 25 U | 25 U | 25 U | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 300 U | 50 U [50 U] | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 5 U | 10 U [10 U] | 10 U | 10 U | 10 U | 50 U | 10 U | 50 U | 50 U | 50 U | 1 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 30 UJ | 100 U | 20 U [20 U] | 20 U | 20 U | 20 U | 50 U | 20 U | 25 U | 25 U | 25 U | 30 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 0.3 J | 5 U | 1 U [1 U] | 0.2 J | 0.4 J | 0.1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 UJ | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | R | 10 U | 2 U [2 U] | 2 U | 2 U | 2 U | 5 U | 2 U | 1 U | 1 U | 1 U | 2 UJ |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 30 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 0.3 J | 5 U | 2 [1] | 0.7 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 2 | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 UJ |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 2 | 3 J | 5 [4] | 3 | 2 | 1 U | 2 | 2 | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 12 | 11 | 24 [21] | 28 | 68 | 2 | 25 | 54 | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 UJ | 5 U | 1 UJ [1 UJ] | 1 U | 1 UJ | 1 U | NA | 1 U | 5 U | 5 U | 5 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 5 U | 1 U [1 U] | 1 UJ | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U | 1 U | 5 U | 5 U | 5 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 50 U | 10 U [10 U] | 10 U | 10 U | 10 U | NA | 10 U | 5 U | 5 U | 5 U | 10 UJ |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 UJ | 30 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.2 J | 100 U | 20 U [20 U] | 20 U | 20 U | 20 U | NA | 20 U | 1 U | 1 U | 1 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 30 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-53 04/07/05 | RFI-09-53 06/08/05 | RFI-09-53 11/01/06 | RFI-09-53 11/14/07 | RFI-09-53 09/12/08 | RFI-09-53 09/24/09 | RFI-09-53 10/18/10 | RFI-09-53 10/20/11 | RFI-10-24 02/20/02 | RFI-10-24 06/25/02 | RFI-10-24 03/26/03 | RFI-10-24 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 0.3 J | 5 U | 1 U [1 U] | 0.2 J | 0.4 J | 0.2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | **35** | **184** | **113 [106]** | **123** | **104** | 1 | **45** | **75** | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 5 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 J | 5 U | **4 [4]** | **5** | **23** | **3** | **8** | **32** | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-53 04/07/05 | RFI-09-53 06/08/05 | RFI-09-53 11/01/06 | RFI-09-53 11/14/07 | RFI-09-53 09/12/08 | RFI-09-53 09/24/09 | RFI-09-53 10/18/10 | RFI-09-53 10/20/11 | RFI-10-24 02/20/02 | RFI-10-24 06/25/02 | RFI-10-24 03/26/03 | RFI-10-24 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-09-53 04/07/05 | RFI-09-53 06/08/05 | RFI-09-53 11/01/06 | RFI-09-53 11/14/07 | RFI-09-53 09/12/08 | RFI-09-53 09/24/09 | RFI-09-53 10/18/10 | RFI-09-53 10/20/11 | RFI-10-24 02/20/02 | RFI-10-24 06/25/02 | RFI-10-24 03/26/03 | RFI-10-24 10/06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-24 12/08/05 | RFI-10-24 06/28/07 | RFI-10-24 10/25/07 | RFI-10-24 03/20/08 | RFI-10-24 06/17/08 | RFI-10-24 09/15/08 | RFI-10-24 12/03/08 | RFI-10-24 10/14/10 | RFI-10-24 10/24/11 | RFI-10-26 02/21/02 | RFI-10-26 06/20/02 | RFI-10-26 03/27/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | NA | 30 U | 1 U | 1 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 4 | 41 | 9 | 4.2 | 1 U | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 3 | 1 | 1 U | 1 U | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U | 5 U | 5 U | NA |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ | 30 U | 20 U | 25 U | 25 U | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 50 U | 10 U | 50 U | 50 U | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ | 50 U | 20 U | 25 U | 25 U | NA |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 2 UJ | 2 U | 2 U | 2 U | 5 U | 2 U | 1 U | 1 U | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 1 UJ | 1 U | 18 | 16 | 8 | 1 | 21 | 1 U | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5.6 | 1 U | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | NA | 1 U | 5 U | 5 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | NA |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | NA |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 5 U | 5 U | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 2 U | 2 U | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA | 10 U | 5 U | 5 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA | 20 U | 1 U | 1 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 0.3 J | 5 U | 5 U | 5 U | 5 U | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | 90 U | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-24 12/08/05 | RFI-10-24 06/28/07 | RFI-10-24 10/25/07 | RFI-10-24 03/20/08 | RFI-10-24 06/17/08 | RFI-10-24 09/15/08 | RFI-10-24 12/03/08 | RFI-10-24 10/14/10 | RFI-10-24 10/24/11 | RFI-10-26 02/21/02 | RFI-10-26 06/20/02 | RFI-10-26 03/27/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-24 12/08/05 | RFI-10-24 06/28/07 | RFI-10-24 10/25/07 | RFI-10-24 03/20/08 | RFI-10-24 06/17/08 | RFI-10-24 09/15/08 | RFI-10-24 12/03/08 | RFI-10-24 10/14/10 | RFI-10-24 10/24/11 | RFI-10-26 02/21/02 | RFI-10-26 06/20/02 | RFI-10-26 03/27/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 U | 1.2 U |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.3 | 1 U |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 52 | 130 |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 U | 0.4 U |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.13 J | 0.28 |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.2 | 3.6 |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.1 | 1.1 |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6.4 | 2.8 |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **28** | 4.9 J |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **4.8** | 0.36 J |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 140 | 15 |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **0.255** | 0.2 U |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7.1 | 12 |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.4 U | **5.9** |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ | 0.4 U |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.18 J | 0.2 U |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **5.1** | 0.8 U |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 UJ | 11 |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7.2 | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-24 12/08/05 | RFI-10-24 06/28/07 | RFI-10-24 10/25/07 | RFI-10-24 03/20/08 | RFI-10-24 06/17/08 | RFI-10-24 09/15/08 | RFI-10-24 12/03/08 | RFI-10-24 10/14/10 | RFI-10-24 10/24/11 | RFI-10-26 02/21/02 | RFI-10-26 06/20/02 | RFI-10-26 03/27/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-26 11/02/06 | RFI-10-26 10/26/07 | RFI-10-26 09/15/08 | RFI-10-26 10/14/10 | RFI-10-26 10/24/11 | RFI-10-29 12/12/02 | RFI-10-29 06/30/05 | RFI-10-29 12/08/05 | RFI-10-29 06/28/07 | RFI-10-29 10/25/07 | RFI-10-29 03/20/08 | RFI-10-29 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | NA | 30 U | 3 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 0.2 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 5 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 U | 30 U | 20 U | 25 U | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 50 U | 10 U | 50 U | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 U | 50 U | 20 U | 1.9 J | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 5 U | 2 U | 1 UJ | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 UJ | NA | 1 U | 3 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 2 U | 2 U | 2 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | NA | 10 U | 3 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | NA | 20 U | 3 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-26 11/02/06 | RFI-10-26 10/26/07 | RFI-10-26 09/15/08 | RFI-10-26 10/14/10 | RFI-10-26 10/24/11 | RFI-10-29 12/12/02 | RFI-10-29 06/30/05 | RFI-10-29 12/08/05 | RFI-10-29 06/28/07 | RFI-10-29 10/25/07 | RFI-10-29 03/20/08 | RFI-10-29 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 0.51 J | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-26 11/02/06 | RFI-10-26 10/26/07 | RFI-10-26 09/15/08 | RFI-10-26 10/14/10 | RFI-10-26 10/24/11 | RFI-10-29 12/12/02 | RFI-10-29 06/30/05 | RFI-10-29 12/08/05 | RFI-10-29 06/28/07 | RFI-10-29 10/25/07 | RFI-10-29 03/20/08 | RFI-10-29 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | **8** | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | 14 | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-26 11/02/06 | RFI-10-26 10/26/07 | RFI-10-26 09/15/08 | RFI-10-26 10/14/10 | RFI-10-26 10/24/11 | RFI-10-29 12/12/02 | RFI-10-29 06/30/05 | RFI-10-29 12/08/05 | RFI-10-29 06/28/07 | RFI-10-29 10/25/07 | RFI-10-29 03/20/08 | RFI-10-29 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-29 09/17/08 | RFI-10-29 12/03/08 | RFI-10-29 10/14/10 | RFI-10-29 10/24/11 | RFI-10-31 04/24/03 | RFI-10-31 10/07/04 | RFI-10-33 06/29/05 | RFI-10-33 12/08/05 | RFI-10-33 10/25/07 | RFI-10-33 03/20/08 | RFI-10-33 06/18/08 | RFI-10-33 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 8.7 | 0.4 J | 19 | 63 | 76 [76] | 9 | 18 | 25 |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | NA | 30 U | 1 U | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 7 | 1 U | 21 | 60 | 68 [73] | 5 | 12 | 21 |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1.1 | 1 U | 4 | **10** | **11 [12]** | 1 | 3 | 4 |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 5 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 UJ | 30 U | 20 U | 0.68 J | 30 U | 30 U | 30 U | 20 U [20 U] | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 UJ |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 50 U | 10 U | 50 U | 1 U | 1 U | 1 U | 10 U [10 U] | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 UJ | 50 U | 20 U | 3.8 J | 30 U | 30 U | 30 U | 20 U [20 U] | 20 U | 20 U | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 U | 5 U | 2 U | 1 U | 2 UJ | 2 U | 2 U | 2 U [2 U] | 2 UJ | 2 UJ | 2 UJ |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 U | 5 U | 1 U | 4.3 | 1 UJ | 4 | 5 | 3 [4] | 1 UJ | 1 UJ | 1 J |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.4 J [0.4 J] | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 UJ | 1 UJ | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 5 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 2 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | NA | 10 U | 5 U | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | NA | 20 U | 1 U | 20 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | 1 U | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | 90 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-29 09/17/08 | RFI-10-29 12/03/08 | RFI-10-29 10/14/10 | RFI-10-29 10/24/11 | RFI-10-31 04/24/03 | RFI-10-31 10/07/04 | RFI-10-33 06/29/05 | RFI-10-33 12/08/05 | RFI-10-33 10/25/07 | RFI-10-33 03/20/08 | RFI-10-33 06/18/08 | RFI-10-33 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-29 09/17/08 | RFI-10-29 12/03/08 | RFI-10-29 10/14/10 | RFI-10-29 10/24/11 | RFI-10-31 04/24/03 | RFI-10-31 10/07/04 | RFI-10-33 06/29/05 | RFI-10-33 12/08/05 | RFI-10-33 10/25/07 | RFI-10-33 03/20/08 | RFI-10-33 06/18/08 | RFI-10-33 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | 0.38 J | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | 1.3 J | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | 34 | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | 0.1 J | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | 1.8 | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | 1.4 | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | 4.8 | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | 1.3 | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | 110 | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | 6.8 | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | 3.8 | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | 0.4 UJ | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | 0.08 J | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | 2.8 | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | 13 | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-29 09/17/08 | RFI-10-29 12/03/08 | RFI-10-29 10/14/10 | RFI-10-29 10/24/11 | RFI-10-31 04/24/03 | RFI-10-31 10/07/04 | RFI-10-33 06/29/05 | RFI-10-33 12/08/05 | RFI-10-33 10/25/07 | RFI-10-33 03/20/08 | RFI-10-33 06/18/08 | RFI-10-33 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-33 12/03/08 | RFI-10-33 10/14/10 | RFI-10-33 10/24/11 | RFI-10-35 06/29/05 | RFI-10-35 12/08/05 | RFI-10-35 06/28/07 | RFI-10-35 10/25/07 | RFI-10-35 03/27/08 | RFI-10-35 06/17/08 | RFI-10-35 09/17/08 | RFI-10-35 12/03/08 | RFI-10-35 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | **96** | 45 | 18 | 3 | 1 | 0.2 J | 0.6 J | 0.9 J [0.7 J] | 2 | 6 | 13 | 12 |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | NA | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 67 | 29 | 9 | 15 | 31 | 29 | 38 | 36 [35] | 29 | 45 | 48 | 21 |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | **15** | 6 | 2 | 1 | 2 | 2 | 4 | 3 [3] | 3 | 4 | 5 | 3 |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 UJ | 30 U | 20 U | 30 U | 30 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 UJ | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 UJ | 50 UJ | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 50 U | 10 U | 1 U | 1 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 UJ | 50 U | 20 U | 30 U | 30 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 UJ | 50 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 UJ [2 UJ] | 2 U | 2 UJ | 2 U | 5 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 3 | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | 1 U | 1 UJ | 1 U | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 UJ | 1 U | 1 U | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 0.6 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 J [0.2 J] | 1 U | 0.2 J | 0.5 J | 1 |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 5 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 2 U | 2 U | 1 U | 1 U | 0.1 J | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | 1 U | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | 90 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 90 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-33 12/03/08 | RFI-10-33 10/14/10 | RFI-10-33 10/24/11 | RFI-10-35 06/29/05 | RFI-10-35 12/08/05 | RFI-10-35 06/28/07 | RFI-10-35 10/25/07 | RFI-10-35 03/27/08 | RFI-10-35 06/17/08 | RFI-10-35 09/17/08 | RFI-10-35 12/03/08 | RFI-10-35 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-33 12/03/08 | RFI-10-33 10/14/10 | RFI-10-33 10/24/11 | RFI-10-35 06/29/05 | RFI-10-35 12/08/05 | RFI-10-35 06/28/07 | RFI-10-35 10/25/07 | RFI-10-35 03/27/08 | RFI-10-35 06/17/08 | RFI-10-35 09/17/08 | RFI-10-35 12/03/08 | RFI-10-35 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-33 12/03/08 | RFI-10-33 10/14/10 | RFI-10-33 10/24/11 | RFI-10-35 06/29/05 | RFI-10-35 12/08/05 | RFI-10-35 06/28/07 | RFI-10-35 10/25/07 | RFI-10-35 03/27/08 | RFI-10-35 06/17/08 | RFI-10-35 09/17/08 | RFI-10-35 12/03/08 | RFI-10-35 10/14/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-35 10/24/11 | RFI-12-42 10/27/11 | RFI-17-02 10/03/01 | RFI-17-02 06/25/02 | RFI-17-02 04/02/03 | RFI-17-02 10/05/04 | RFI-17-02 06/09/05 | RFI-17-02 12/08/05 | RFI-17-02 11/01/06 | RFI-17-02 04/24/07 | RFI-17-02 06/26/07 | RFI-17-02 10/26/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 11 | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 1 U | NA | NA | NA | 30 U | 30 U | 30 U | 30 U | 30 UJ | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 8 | 1 U | 1 U | NA | NA | NA | 2 | 2 | 2 | 1 | 1 J | 0.8 J |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 2 | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 5 U | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 25 U | NA | NA | NA | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | NA | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 50 U | NA | NA | NA | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 25 U | NA | NA | NA | 30 U | 30 U | 20 U | 20 UJ | R | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 1 U | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 5 U | NA | NA | NA | 1 U | 1 U | 1 UJ | 1 UJ | 1 UJ | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | R | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 5 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 2 U | 2 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 5 U | NA | NA | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | NA | NA | NA | 3 J | 4 J | 3 J | 2 J | 2 J | 1 J |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 1 U | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | **26** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 UJ | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-35 10/24/11 | RFI-12-42 10/27/11 | RFI-17-02 10/03/01 | RFI-17-02 06/25/02 | RFI-17-02 04/02/03 | RFI-17-02 10/05/04 | RFI-17-02 06/09/05 | RFI-17-02 12/08/05 | RFI-17-02 11/01/06 | RFI-17-02 04/24/07 | RFI-17-02 06/26/07 | RFI-17-02 10/26/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | NA | NA | NA | 1 U | 1 U | 0.9 J | 1 U | 1 UJ | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 10 UJ | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-35 10/24/11 | RFI-12-42 10/27/11 | RFI-17-02 10/03/01 | RFI-17-02 06/25/02 | RFI-17-02 04/02/03 | RFI-17-02 10/05/04 | RFI-17-02 06/09/05 | RFI-17-02 12/08/05 | RFI-17-02 11/01/06 | RFI-17-02 04/24/07 | RFI-17-02 06/26/07 | RFI-17-02 10/26/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | 1.2 U | 1.2 U | 5 U | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | **27** | 5.8 | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | 93 | 120 | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | 0.4 U | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | 0.062 J | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | 2.6 | 1.2 | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | 1.2 | 0.56 | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | 3.3 | 6.3 | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | 1.1 J | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | 2 | 0.77 | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | 85 | 16 J | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | 0.2 U | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | 3.8 | 7.9 | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | 3.2 | 1.9 J | 5 U | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | 0.4 UJ | 0.4 U | 0.5 U | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | 3.8 | 0.56 J | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | 12 | 13 | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | 1.2 U | 4.3 | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | 1.4 J | 1.7 J | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | R | 81 | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | 0.4 UJ | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | 0.6 UJ | 0.89 | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | 0.2 U | 0.23 | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | 1.2 J | 1.4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | 1.6 J | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | 0.4 U | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | 71 | 39 J | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-10-35 10/24/11 | RFI-12-42 10/27/11 | RFI-17-02 10/03/01 | RFI-17-02 06/25/02 | RFI-17-02 04/02/03 | RFI-17-02 10/05/04 | RFI-17-02 06/09/05 | RFI-17-02 12/08/05 | RFI-17-02 11/01/06 | RFI-17-02 04/24/07 | RFI-17-02 06/26/07 | RFI-17-02 10/26/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | 2.5 | 2.1 | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | 3 | 3.8 | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | 0.4 UJ | 0.4 UJ | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | 0.8 U | 0.8 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | 9.9 J | 6.6 | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02 03/18/08 | RFI-17-02 06/17/08 | RFI-17-02 09/10/08 | RFI-17-02 12/04/08 | RFI-17-02 10/19/10 | RFI-17-02 10/21/11 | RFI-17-02D 07/29/05 | RFI-17-02D 12/08/05 | RFI-17-02D 11/01/06 | RFI-17-02D 04/24/07 | RFI-17-02D 06/27/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U [30 U] | 30 U | 30 U | NA | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 0.7 J | 0.8 J [0.8 J] | 0.8 J | 0.7 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 J |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 UJ | 2 U [2 U] | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U [20 U] | 20 U | 20 U | 30 U | 20 U | 30 U | 30 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U [50 U] | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U [10 U] | 10 U | 10 U | 50 U | 10 U | 1 U | 1 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U [20 U] | 20 U | 20 UJ | 50 U | 20 U | 30 U | 30 U | 20 U | 6 J | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U [2 U] | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 UJ [1 UJ] | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 0.1 J | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 3 | 3 | 4 | 1 | 2 |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 UJ | 1 U | NA | 1 U | 1 UJ | 1 U | 1 UJ | 1 UJ | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U [1 U] | 1 UJ | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U [10 U] | 10 U | 10 U | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 1 J | 0.4 J [0.4 J] | 0.3 J | 0.3 J | 5 U | 5 U | 3 J | 3 J | 2 J | 0.9 J | 1 J |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 UJ | 20 U [20 U] | 20 U | 20 U | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02 03/18/08 | RFI-17-02 06/17/08 | RFI-17-02 09/10/08 | RFI-17-02 12/04/08 | RFI-17-02 10/19/10 | RFI-17-02 10/21/11 | RFI-17-02D 07/29/05 | RFI-17-02D 12/08/05 | RFI-17-02D 11/01/06 | RFI-17-02D 04/24/07 | RFI-17-02D 06/27/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 0.6 J | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | **3** | **3** | 2 | 1 U | 2 |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02 03/18/08 | RFI-17-02 06/17/08 | RFI-17-02 09/10/08 | RFI-17-02 12/04/08 | RFI-17-02 10/19/10 | RFI-17-02 10/21/11 | RFI-17-02D 07/29/05 | RFI-17-02D 12/08/05 | RFI-17-02D 11/01/06 | RFI-17-02D 04/24/07 | RFI-17-02D 06/27/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02 03/18/08 | RFI-17-02 06/17/08 | RFI-17-02 09/10/08 | RFI-17-02 12/04/08 | RFI-17-02 10/19/10 | RFI-17-02 10/21/11 | RFI-17-02D 07/29/05 | RFI-17-02D 12/08/05 | RFI-17-02D 11/01/06 | RFI-17-02D 04/24/07 | RFI-17-02D 06/27/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02D 10/26/07 | RFI-17-02D 03/18/08 | RFI-17-02D 06/17/08 | RFI-17-02D 09/10/08 | RFI-17-02D 12/04/08 | RFI-17-02D 09/22/09 | RFI-17-02D 10/21/11 | RFI-17-02-ULF 10/03/01 | RFI-36-02 10/04/01 | RFI-36-02 06/13/02 | RFI-36-02 03/25/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U [30 U] | 30 U | NA | 1 U | NA | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 0.3 J | 0.5 J | 0.8 J | 0.9 J [1 J] | 0.9 J | 1 [1] | 1 U | NA | 0.76 J | NA | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 UJ | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U | NA | 5 U | NA | NA |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 0.3 [0.3] | 1 U | NA | 1 U | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U [20 U] | 20 U | NA | 25 U | NA | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 UJ [50 UJ] | 50 UJ | 50 U [50 U] | 50 U | NA | 50 U | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U [10 U] | 10 U | NA | 50 U | NA | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 U | 20 U [20 U] | 20 UJ | 3 [4] | 20 U | NA | 25 U | NA | NA |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 | **31** | **72 [71]** | **127** | **80 [78]** | 1 U | NA | 1 U | NA | NA |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U | NA | 1 U | NA | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | NA | 5 U | NA | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 UJ | 1 UJ [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 4 | 3 | 4 | 4 [4] | 4 | 3 [3] | 2 | NA | 1 U | NA | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | 1 U | 1 U [1 U] | 1 U | NA | 5 U | NA | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 5 U | NA | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [0.3] | 2 U | NA | 2 U | NA | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U [10 U] | 10 U | NA | 5 U | NA | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 0.7 J | 0.7 J | 0.5 J | 0.5 J [0.6 J] | 0.5 J | 0.5 [0.5] | 5 U | NA | 5 U | NA | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 UJ | 20 U | 20 U [20 U] | 20 U | 20 U [20 U] | 20 U | NA | 1 U | NA | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | NA | 5 U | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 UJ | NA | NA |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02D 10/26/07 | RFI-17-02D 03/18/08 | RFI-17-02D 06/17/08 | RFI-17-02D 09/10/08 | RFI-17-02D 12/04/08 | RFI-17-02D 09/22/09 | RFI-17-02D 10/21/11 | RFI-17-02-ULF 10/03/01 | RFI-36-02 10/04/01 | RFI-36-02 06/13/02 | RFI-36-02 03/25/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 0.3 [0.3] | 1 U | NA | 1 U | NA | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 0.2 J | 1 U [0.3] | 1 U | NA | 1 U | NA | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | NA | 1 U | NA | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | **3** | 1 | 2 | 1 [2] | 2 J | 1 [1] | 1 U | NA | 1 U | NA | NA |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 10 UJ | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02D 10/26/07 | RFI-17-02D 03/18/08 | RFI-17-02D 06/17/08 | RFI-17-02D 09/10/08 | RFI-17-02D 12/04/08 | RFI-17-02D 09/22/09 | RFI-17-02D 10/21/11 | RFI-17-02-ULF 10/03/01 | RFI-36-02 10/04/01 | RFI-36-02 06/13/02 | RFI-36-02 03/25/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | 0.44 J | 1.2 U | 1.2 U | 1.2 U |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | 5.5 J | **85 J** | **91** | **19** |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | 140 J | 400 J | 230 J | 170 J |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | 0.4 U | 0.74 J | 0.4 UJ | 0.4 U |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | 0.093 J | 0.2 U | 0.2 U | 0.14 J |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | 1.9 J | 1 | 0.5 J | 0.43 J |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | 0.5 J | 14 | 5.3 | 12 |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | 2.6 J | 1.9 | 2.5 | 3.1 |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | NA | 5 U |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | 0.77 J | 0.51 | 0.42 J | 1.3 |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | 33 J | **1,200 J** | **1,400 J** | 640 |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | 6.9 J | **130** | 92 | 66 |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | 5 U | **7.3 J** | 1.4 U | 1.4 U | 1.6 U |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | **0.45 J** | 0.4 U | 0.4 UJ | 0.4 U |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | 0.055 J | 0.2 U | 0.2 U | 0.2 U |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | 1.2 J | 0.8 U | 0.8 U | 0.8 U |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | 29 J | 18 J | 15 J | 23 U |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 U | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | **57** | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | R | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.6 UJ | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 8.4 | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 10 J | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 U | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 780 | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-17-02D 10/26/07 | RFI-17-02D 03/18/08 | RFI-17-02D 06/17/08 | RFI-17-02D 09/10/08 | RFI-17-02D 12/04/08 | RFI-17-02D 09/22/09 | RFI-17-02D 10/21/11 | RFI-17-02-ULF 10/03/01 | RFI-36-02 10/04/01 | RFI-36-02 06/13/02 | RFI-36-02 03/25/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 77 | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1.4 | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.4 UJ | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.8 U | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 19 J | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-02 10/13/04 | RFI-36-02 11/02/06 | RFI-36-02 11/14/07 | RFI-36-03 09/27/01 | RFI-36-03 06/18/02 | RFI-36-03 03/25/03 | RFI-36-03 06/09/05 | RFI-36-03 11/02/06 | RFI-36-03 04/23/07 | RFI-36-03 06/26/07 | RFI-36-03 10/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 0.4 J | 0.2 J [0.1 J] | 0.4 J | 42 | 19 | 54 | 2 | 8 | 5 | 4 [5] | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U [30 U] | 30 U | 1 U | 1 U | 1 U | 30 U | 30 U | 30 U | 30 UJ [30 UJ] | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 4 J | 1 [2] | 1 | 4.5 | 86 | 160 D | 1 U | 0.8 J | 1 | 3 [3] | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U [1 U] | 1 U | 1 U | 0.76 J | 3 | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U [2 U] | 2 U | 5 U | 5 U | 5 U | 2 U | 2 U | 2 U | 2 U [2 U] | NA |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 1.9 | 1.1 | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 20 U [20 U] | 20 U | 25 U | 25 U | 25 U | 30 U | 20 U | 20 U | 20 U [20 U] | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 10 U [10 U] | 10 U | 50 U | 50 U | 50 U | 1 U | 10 U | 10 U | 10 U [10 U] | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 30 U | 20 U [20 U] | 20 U | 25 U | 1.5 J | 25 U | 30 U | 20 U | 20 UJ | R [R] | NA |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 2.8 | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 UJ | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 U [2 U] | 2 U | 1 U | 1 U | 1 UJ | 2 U | 2 U | 2 U | 2 U [2 U] | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 UJ | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 U [1 U] | 1 U | 1 U | 16 | 19 | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 12 | 0.4 J | 0.2 J | 1 U [1 U] | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 0.77 J | 1.2 | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 UJ [1 UJ] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U [1 U] | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 0.79 J | 5 U | 5 U | 1 U | 1 U | 1 UJ | 1 UJ [1 UJ] | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U [1 U] | 1 UJ | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | R [R] | NA |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U [1 U] | 1 U | 5 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 2 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U [10 U] | 10 U | 5 U | 5 U | 5 U | 10 U | 10 U | 10 U | 10 U [10 U] | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U [5 U] | 5 U | 5 U | 0.65 J | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U [20 U] | 20 U | 1 U | 1 U | 1 U | 20 U | 20 U | 20 U | 20 U [20 U] | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 0.4 J | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-02 10/13/04 | RFI-36-02 11/02/06 | RFI-36-02 11/14/07 | RFI-36-03 09/27/01 | RFI-36-03 06/18/02 | RFI-36-03 03/25/03 | RFI-36-03 06/09/05 | RFI-36-03 11/02/06 | RFI-36-03 04/23/07 | RFI-36-03 06/26/07 | RFI-36-03 10/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U [1 U] | 1 U | 0.68 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U [1 U] | 1 U | 1 U | 1.9 | 1 U | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | NA |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | 4.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | 4.1 U | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-02 10/13/04 | RFI-36-02 11/02/06 | RFI-36-02 11/14/07 | RFI-36-03 09/27/01 | RFI-36-03 06/18/02 | RFI-36-03 03/25/03 | RFI-36-03 06/09/05 | RFI-36-03 11/02/06 | RFI-36-03 04/23/07 | RFI-36-03 06/26/07 | RFI-36-03 10/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | 5.1 U | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | 1.2 U | 1.2 U | 1.4 | NA | NA | NA | NA | 5 U |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | **13** | NA | NA | 1.5 U | 1.9 U | 2.8 | NA | NA | NA | NA | 2 U |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | 150 J | 200 | 150 J | NA | NA | NA | NA | 79 |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | 0.74 J | 0.4 UJ | 0.4 U | NA | NA | NA | NA | 1 U |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | 0.31 J | 0.49 | **21** | NA | NA | NA | NA | 0.5 U |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | 2 | 1.2 | 2.9 | NA | NA | NA | NA | 5 U |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | 0.84 | 5.3 | 9.2 | NA | NA | NA | NA | 5 U |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | 2.3 | 4.5 J | 17 | NA | NA | NA | NA | 4 U |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | **11** | **6.1** | 5 U | NA | NA | NA | NA | 5 U |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | 0.37 J | 0.19 J | **5.2** | NA | NA | NA | NA | **8** |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | 110 J | 430 | 250 | NA | NA | NA | NA | 32 |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | 0.2 U | **0.39** | 0.2 U | NA | NA | NA | NA | 0.2 U |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | 20 | NA | NA | 6.3 | 20 | 19 | NA | NA | NA | NA | 16 |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | 1.4 U | 2.7 J | 1.6 U | NA | NA | NA | NA | 5 U |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | 0.4 U | 0.4 U | 0.4 U | NA | NA | NA | NA | 0.5 U |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | 0.2 U | 0.42 | 0.23 | NA | NA | NA | NA | 2 U |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | 0.8 U | 0.8 U | 2.3 | NA | NA | NA | NA | 4 U |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | 7.1 J | 12 J | 95 J | NA | NA | NA | NA | 8 |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | 1.2 U | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | 1.4 | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | 170 | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | 0.37 | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | 1.4 | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | 0.78 | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | 2.1 | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | **10** | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | 120 J | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-02 10/13/04 | RFI-36-02 11/02/06 | RFI-36-02 11/14/07 | RFI-36-03 09/27/01 | RFI-36-03 06/18/02 | RFI-36-03 03/25/03 | RFI-36-03 06/09/05 | RFI-36-03 11/02/06 | RFI-36-03 04/23/07 | RFI-36-03 06/26/07 | RFI-36-03 10/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | 6.4 | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | 4.2 J | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | 0.8 U | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | 6 U | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-14 10/02/01 | RFI-36-14 02/20/02 | RFI-36-14 06/17/02 | RFI-36-14 03/25/03 | RFI-36-14 10/11/04 | RFI-36-14 11/02/06 | RFI-36-14 10/26/07 | RFI-36-14 09/15/08 | RFI-36-14 09/23/09 | RFI-36-14 10/27/11 | RFI-36-14-ULF 10/02/01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 UJ [1 UJ] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U [1 U] | NA | 1 U | NA | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U [5 U] | NA | 5 U | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 0.2 | 1 U | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U [25 U] | NA | 25 U | NA | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U [50 U] | NA | 50 U | NA | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U [50 U] | NA | 50 U | NA | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U [25 U] | NA | 25 U | NA | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U [1 U] | NA | 1 U | NA | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 U [1 U] | NA | 1 U | NA | 2 UJ | 2 U | 2 U | 2 U | 2 U | 2 U | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U [5 U] | NA | 5 U | NA | 5 UJ | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U [1 U] | NA | 1 U | NA | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U [5 U] | NA | 5 U | NA | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U [5 U] | NA | 5 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U [2 U] | NA | 2 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U [5 U] | NA | 5 U | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U [5 U] | NA | 5 U | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U [1 U] | NA | 1 U | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U [5 U] | NA | 5 UJ | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U [1 U] | NA | 1 UJ | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-14 10/02/01 | RFI-36-14 02/20/02 | RFI-36-14 06/17/02 | RFI-36-14 03/25/03 | RFI-36-14 10/11/04 | RFI-36-14 11/02/06 | RFI-36-14 10/26/07 | RFI-36-14 09/15/08 | RFI-36-14 09/23/09 | RFI-36-14 10/27/11 | RFI-36-14-ULF 10/02/01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 0.2 | 1 U | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U [1 U] | NA | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | 4.1 U [4 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 UJ [10 UJ] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | 2.1 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | 2.1 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2.1 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | 4.1 U [4 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | 2.1 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-14 10/02/01 | RFI-36-14 02/20/02 | RFI-36-14 06/17/02 | RFI-36-14 03/25/03 | RFI-36-14 10/11/04 | RFI-36-14 11/02/06 | RFI-36-14 10/26/07 | RFI-36-14 09/15/08 | RFI-36-14 09/23/09 | RFI-36-14 10/27/11 | RFI-36-14-ULF 10/02/01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2.1 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | 2.1 U [2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | 21 U [20 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | 5.2 U [5 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | 0.1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | 1.2 U [1.2 U] | NA | 1.2 U | 1.2 U [1.2 U] | NA | NA | NA | NA | NA | NA | 2.1 U |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | 1.4 U [1.6 J] | NA | 0.48 J | 3.8 [3.5] | NA | NA | NA | NA | NA | NA | 1.8 U |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 290 J [350] | NA | 110 | 26 [26] | NA | NA | NA | NA | NA | NA | 560 J |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | **0.34 J [6.9]** | NA | 0.4 UJ | 0.4 U [0.4 U] | 1 U | NA | NA | NA | NA | NA | 0.4 U |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | 0.38 J [0.75] | NA | 0.1 J | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | NA | 0.72 J |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | 0.92 [1.6] | NA | 0.48 J | 0.77 [0.85] | NA | NA | NA | NA | NA | NA | 1.1 J |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | 2.4 [3.6] | NA | 0.56 | 1.9 [1.8] | NA | NA | NA | NA | NA | NA | 5 J |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | 2.9 [3.8] | NA | 2.8 U | 2.3 [2.4] | NA | NA | NA | NA | NA | NA | **27 J** |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 1.5 J [5 U] | NA | **29** | 3 J [3.3 J] | NA | NA | NA | NA | NA | NA | 1.2 J |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | 0.38 J [0.17 J] | NA | 0.25 J | 0.4 U [0.34 J] | NA | NA | NA | NA | NA | NA | 0.54 J |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | **1,500 J [2,500]** | 620 | 280 J | 720 [720] | 683 | NA | NA | NA | NA | NA | **3,700 J** |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | 0.2 U [0.2 U] | NA | 0.2 U | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | NA | 0.2 U |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | 11 [17] | 5.5 | 3.3 | 11 [11] | 12 | NA | NA | NA | NA | NA | 21 J |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | 0.49 J [4.8 J] | NA | 3.2 | 1.6 U [1.6 U] | NA | NA | NA | NA | NA | NA | 2.8 U |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | 0.4 U [0.4 U] | NA | 0.4 U | **0.37 J [0.12 J]** | NA | NA | NA | NA | NA | NA | **1.5 J** |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | 0.2 U [0.27 U] | NA | 0.088 J | 0.052 J [0.2 U] | NA | NA | NA | NA | NA | NA | 0.24 J |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | 0.8 U [0.8 U] | NA | 0.8 U | 0.12 J [0.8 U] | NA | NA | NA | NA | NA | NA | 0.8 U |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | 14 J [21] | NA | 32 | 8.3 [8.9] | NA | NA | NA | NA | NA | NA | 32 J |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | 1.2 U [1.2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 250 [240] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | 0.4 U [0.4 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | 0.39 [0.37] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | 0.6 U [0.6 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | 2 [2.1] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | 5 U [1.8 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 1.3 J [1.5 J] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | 0.4 U [0.4 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | **1,500 [1,500]** | 650 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-14 10/02/01 | RFI-36-14 02/20/02 | RFI-36-14 06/17/02 | RFI-36-14 03/25/03 | RFI-36-14 10/11/04 | RFI-36-14 11/02/06 | RFI-36-14 10/26/07 | RFI-36-14 09/15/08 | RFI-36-14 09/23/09 | RFI-36-14 10/27/11 | RFI-36-14-ULF 10/02/01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | **7.2 [170]** | 5.3 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | **35 [32]** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | 0.4 U [0.4 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | 0.2 U [0.2 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | 0.8 U [0.8 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | 17 [14] | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-19 09/28/01 | RFI-36-19 10/06/04 | RFI-36-19 12/08/05 | RFI-36-19 06/26/07 | RFI-36-19 10/30/07 | RFI-36-19 03/20/08 | RFI-36-19 06/18/08 | RFI-36-19 09/17/08 | RFI-36-19 12/04/08 | RFI-36-19 09/25/09 | RFI-36-19 10/15/10 | RFI-36-19 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | 30 U | 30 U | 30 UJ | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | NA | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ | 20 U | 30 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 50 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | 30 U | 30 U | R | 20 U | 20 U | 20 U | 20 U | 20 UJ | 20 U | 50 U | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 U | 2 UJ | 2 U | 2 U | 2 U | 2 UJ | 2 UJ | 2 UJ | 2 U | 2 U | 5 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 UJ | 1 U | 1 UJ | 1 U | 1 UJ | 1 UJ | 1 UJ | 1 U | 1 U | 5 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | R | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 90 U | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-19 09/28/01 | RFI-36-19 10/06/04 | RFI-36-19 12/08/05 | RFI-36-19 06/26/07 | RFI-36-19 10/30/07 | RFI-36-19 03/20/08 | RFI-36-19 06/18/08 | RFI-36-19 09/17/08 | RFI-36-19 12/04/08 | RFI-36-19 09/25/09 | RFI-36-19 10/15/10 | RFI-36-19 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 3.2 | 0.8 J | 1 U | 1 UJ | 3 J | 2 | 2 | 2 | 2 | 1 | 1 U | 2 |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-19 09/28/01 | RFI-36-19 10/06/04 | RFI-36-19 12/08/05 | RFI-36-19 06/26/07 | RFI-36-19 10/30/07 | RFI-36-19 03/20/08 | RFI-36-19 06/18/08 | RFI-36-19 09/17/08 | RFI-36-19 12/04/08 | RFI-36-19 09/25/09 | RFI-36-19 10/15/10 | RFI-36-19 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-19 09/28/01 | RFI-36-19 10/06/04 | RFI-36-19 12/08/05 | RFI-36-19 06/26/07 | RFI-36-19 10/30/07 | RFI-36-19 03/20/08 | RFI-36-19 06/18/08 | RFI-36-19 09/17/08 | RFI-36-19 12/04/08 | RFI-36-19 09/25/09 | RFI-36-19 10/15/10 | RFI-36-19 10/25/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-20 09/28/01 | RFI-36-20 06/22/02 | RFI-36-20 10/06/04 | RFI-36-20 10/14/10 | RFI-36-37 09/28/01 | RFI-36-37 06/22/02 | RFI-36-37 06/10/05 | RFI-36-37 06/26/07 | RFI-36-37 10/30/07 | RFI-36-37 09/18/08 | RFI-36-37 09/25/09 | RFI-36-37 10/15/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 0.6 J | 0.1 J | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | NA | 30 U | NA | 1 U | 1 U | 30 U | 30 UJ | 30 U | 30 U | 30 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | NA | 1 U | 1 U | 220 D | 53 | 1 | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | NA | 1 U | 1 U | 5.7 | 1.5 | 2 | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | NA | 2 U | 5 U | 5 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | NA | 1 U | 1 U | 4 | 1.7 | 1 U | 1 U | 1 | 1 | 1 U | 3 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | NA | 30 U | 30 U | 25 U | 2.6 J | 30 U | 20 U | 20 U | 20 U | 20 U | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | NA | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | NA | 1 U | 50 U | 50 U | 50 U | 1 U | 10 U | 10 U | 10 U | 10 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | NA | 30 U | 50 U | 25 U | 25 U | 30 U | R | 20 U | 20 U | 20 U | 50 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | NA | 1 U | 1 U | 3.2 | 1 U | **9** | **9** | **13** | **15** | **15** | **48** |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | NA | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 U | NA | 2 UJ | 5 U | 1 U | 1 U | 2 U | 2 U | 2 U | 2 UJ | 2 U | 5 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | NA | 1 UJ | 5 U | 180 D | 100 | 5 J | 1 UJ | 1 U | 1 UJ | 1 U | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | NA | 1 U | 1 U | 2.8 | 1 | 0.4 J | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | 1 U | NA | 5 U | 5 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | NA | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | NA | 1 U | 5 U | 1 U | 1 U | 1 U | R | 1 U | 1 U | 1 U | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | NA | 1 U | 5 U | 5 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | NA | 1 U | 2 U | 2 U | 2 U | 1 U | 0.3 J | 1 U | 1 U | 1 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | 10 U | NA | 5 U | 5 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 20 U | NA | 1 U | 1 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | NA | NA | 90 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-20 09/28/01 | RFI-36-20 06/22/02 | RFI-36-20 10/06/04 | RFI-36-20 10/14/10 | RFI-36-37 09/28/01 | RFI-36-37 06/22/02 | RFI-36-37 06/10/05 | RFI-36-37 06/26/07 | RFI-36-37 10/30/07 | RFI-36-37 09/18/08 | RFI-36-37 09/25/09 | RFI-36-37 10/15/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 J | 1 U | 0.2 | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 2.6 | NA | 2 | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | NA | 1 U | 1 U | **2.7** | 0.56 J | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | 4.1 U | NA | NA | NA | 4.2 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | 10 U | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | NA | NA | NA | 11 UJ | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 UJ | NA | NA | NA | 5.3 UJ | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | 1 U | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | 2.1 U | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | 2.1 U | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | 1 U | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | 10 U | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | 10 U | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2.1 U | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | 4.1 U | NA | NA | NA | 4.2 U | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | 2.1 U | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | 1 U | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-20 09/28/01 | RFI-36-20 06/22/02 | RFI-36-20 10/06/04 | RFI-36-20 10/14/10 | RFI-36-37 09/28/01 | RFI-36-37 06/22/02 | RFI-36-37 06/10/05 | RFI-36-37 06/26/07 | RFI-36-37 10/30/07 | RFI-36-37 09/18/08 | RFI-36-37 09/25/09 | RFI-36-37 10/15/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2.1 U | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | 2.1 U | NA | NA | NA | 2.1 U | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | 21 U | NA | NA | NA | 21 U | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | 5.1 U | NA | NA | NA | 5.3 U | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | 1.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | 23 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | 0.56 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | 0.14 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | 4.6 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | 5 U | NA | NA | 1.4 J | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | 0.089 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | 0.54 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | 2.8 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | 1.4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | 0.4 UJ | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | 0.8 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | 7.6 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | 2.2 | NA | NA | 1.2 U | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | 1 U | NA | NA | 3.1 U | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | 19 | NA | NA | 210 | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | 0.4 U | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | 1.3 | NA | NA | 0.6 U | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | 0.2 U | NA | NA | 0.93 | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | 3.9 | NA | NA | 0.6 U | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | 5 U | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | 0.4 U | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | 0.48 J | NA | NA | 380 | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-20 09/28/01 | RFI-36-20 06/22/02 | RFI-36-20 10/06/04 | RFI-36-20 10/14/10 | RFI-36-37 09/28/01 | RFI-36-37 06/22/02 | RFI-36-37 06/10/05 | RFI-36-37 06/26/07 | RFI-36-37 10/30/07 | RFI-36-37 09/18/08 | RFI-36-37 09/25/09 | RFI-36-37 10/15/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | 2.3 | NA | NA | 6.4 | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | 1.4 U | NA | NA | **7.1** | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | 0.4 UJ | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | 0.2 U | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | 0.8 U | NA | NA | 0.8 U | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | 6 U | NA | NA | 14 | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-44 02/20/02 | RFI-36-44 06/20/02 | RFI-36-44 03/25/03 | RFI-36-44 10/07/04 | RFI-36-44 06/08/05 | RFI-36-47 12/13/02 | RFI-36-47 03/25/03 | RFI-36-47 06/10/05 | RFI-36-47 12/09/05 | RFI-36-47 04/23/07 | RFI-36-47 06/26/07 | RFI-36-47 10/30/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 51 | 33 | 42 | 48 | 28 | 1 U | 1 U | 1 U | **190** | 1 U | 1 U | 1 U [1 U] |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | 1 U | 1 U | 30 U | 30 U | 3 U | 1 U | 30 U | 300 U | 30 U | 30 UJ | 30 U [30 U] |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 30 | 25 | 37 | 33 | 29 | 8.5 | 4 | 6 | 560 | 3 | 14 | 19 [17] |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 2.2 | 1.7 | 2.4 | 0.8 J | 1 | 1 U | 1 U | 1 U | **70** | 1 U | 1 U | 1 U [1 U] |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | 5 U | 5 U | 2 U | 2 U | 5 U | 5 U | 2 U | 20 U | 2 U | 2 U | 2 U [2 U] |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 UJ | 1 U [1 U] |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 0.61 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | 25 U | 25 U | 30 U | 30 U | 25 U | 25 U | 30 U | 300 U | 20 U | 20 U | 20 U [20 U] |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 16 J | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 500 U | 50 U | 50 U | 50 U [50 U] |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | 50 U | 50 U | 1 U | 1 U | 50 U | 50 U | 1 U | 10 UJ | 10 U | 10 U | 10 U [10 U] |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | 25 U | 25 U | 30 UJ | 30 U | 1.3 J | 25 U | 30 U | 300 U | 20 UJ | R | 20 U [20 U] |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 UJ | 1 U | 1 UJ | 2 UJ | 2 U | 1 UJ | 1 U | 2 U | 20 U | 2 U | 2 U | 2 U [2 U] |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 UJ | 5 UJ | 5 U | 5 U | 5 U | 5 U | 50 U | 5 U | 5 U | 5 U [5 U] |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 12 | 6.4 | 13 | 1 UJ | 3 | 1 U | 1 U | 1 U | 120 | 1 U | 1 UJ | 1 U [1 U] |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 UJ | 1 U | 1 U | 10 U | 1 U | 1 UJ | 1 U [1 U] |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 0.83 J | 0.73 J | 1.1 | 1 U | 1 U | 1 U | 1 U | 1 U | 10 | 1 U | 1 U | 1 U [1 U] |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 5 U | 5 U | 1 UJ | 1 U | 3 U | 5 U | 1 U | 10 U | 1 UJ | 1 UJ | 1 U [1 U] |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | R | 1 U [1 U] |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | 5 U | 5 U | 1 U | 1 U | 5 U | 5 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | 2 U | 2 U | 1 U | 1 U | 2 U | 2 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | 5 U | 5 U | 10 U | 10 U | 3 U | 5 U | 10 U | 100 U | 10 U | 10 U | 10 U [10 U] |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 50 U | 5 U | 0.2 J | 5 U [5 U] |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 20 U | 20 U | 3 U | 1 UJ | 20 U | 200 U | 20 U | 20 U | 20 U [20 U] |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 50 U | 5 U | 5 U | 5 U [5 U] |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-44 02/20/02 | RFI-36-44 06/20/02 | RFI-36-44 03/25/03 | RFI-36-44 10/07/04 | RFI-36-44 06/08/05 | RFI-36-47 12/13/02 | RFI-36-47 03/25/03 | RFI-36-47 06/10/05 | RFI-36-47 12/09/05 | RFI-36-47 04/23/07 | RFI-36-47 06/26/07 | RFI-36-47 10/30/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 0.2 J | 1 U | 1 U [1 U] |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | **5.4** | 3.1 | 3.9 | 2 | 1 | 1 U | 1 U | 1 U | 10 U | 1 U | 1 U | 1 U [1 U] |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 10 U | 1 U | 1 UJ | 1 U [1 U] |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 2 | 1.6 | **2.1** | 1 U | 1 U | 1 U | 1 U | 1 U | **20** | 1 U | 1 UJ | 1 U [1 U] |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-44 02/20/02 | RFI-36-44 06/20/02 | RFI-36-44 03/25/03 | RFI-36-44 10/07/04 | RFI-36-44 06/08/05 | RFI-36-47 12/13/02 | RFI-36-47 03/25/03 | RFI-36-47 06/10/05 | RFI-36-47 12/09/05 | RFI-36-47 04/23/07 | RFI-36-47 06/26/07 | RFI-36-47 10/30/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | 1.1 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | 4.7 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-44 02/20/02 | RFI-36-44 06/20/02 | RFI-36-44 03/25/03 | RFI-36-44 10/07/04 | RFI-36-44 06/08/05 | RFI-36-47 12/13/02 | RFI-36-47 03/25/03 | RFI-36-47 06/10/05 | RFI-36-47 12/09/05 | RFI-36-47 04/23/07 | RFI-36-47 06/26/07 | RFI-36-47 10/30/07 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-47 03/20/08 | RFI-36-47 06/19/08 | RFI-36-47 09/18/08 | RFI-36-47 12/04/08 | RFI-36-47 10/15/10 | RFI-36-48 12/13/02 | RFI-36-48 02/28/05 | RFI-36-48 06/10/05 | RFI-36-48 12/09/05 | RFI-36-48 09/30/07 | RFI-36-48 03/20/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U [1 U] | **118** | 1 U | **122** | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 0.2 J |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U [30 U] | 30 U | 30 U | NA | 3 U | 30 U [30 U] | 30 U | 30 U [30 U] | 30 U [30 U] | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U [1 U] | 0.3 J | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 10 | 12 [11] | 112 | 12 | 87 | 1 U | 3 [2] | 2 | 170 [183] | 25 [24] | 17 |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U [1 U] | **31** | 1 U | **26** | 1 U | 1 U [1 U] | 1 U | 5 [5] | 0.6 J [0.6 J] | 0.9 J |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U [2 U] | 2 U | 2 U | 5 U | 5 U | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 0.77 J | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U [20 U] | 20 U | 20 UJ | 30 U | 25 U | 30 U [30 U] | 30 U | 30 U [30 U] | 20 UJ [20 UJ] | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U [50 U] | 50 UJ | 50 UJ | 50 U | 50 U | 50 UJ [50 UJ] | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U [10 U] | 10 U | 10 U | 50 U | 50 U | 1 U [1 U] | 1 U | 1 U [1 U] | 10 UJ [10 UJ] | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U [20 U] | 20 U | 20 UJ | 50 U | 1.7 J | 30 U [30 U] | 30 U | 30 U [30 U] | 20 UJ [20 UJ] | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U [1 U] | 0.3 J | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 UJ [2 UJ] | 2 UJ | 2 U | 5 U | 1 UJ | R [R] | 2 U | 2 U [2 U] | 2 U [2 U] | 2 UJ |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 UJ [1 UJ] | 26 J | 1 U | 10 | 1 U | 2 [1] | 1 U | 5 [6] | 1 U [1 U] | 1 UJ |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 UJ [1 UJ] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 UJ | 1 U [1 U] | 1 U | 1 U [1 U] | 1 UJ [1 UJ] | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U [1 U] | 5 | 1 U | 4 | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | NA | 3 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 5 U | 5 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 2 U | 2 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U [10 U] | 10 U | 10 U | NA | 3 U | 10 U [10 U] | 10 U | 10 U [10 U] | 10 UJ [10 UJ] | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U [5 U] | 0.4 J | 5 U | 5 U | 5 U | 0.2 J [0.3 J] | 5 U | 4 J [4 J] | 5 U [5 U] | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U [20 U] | 20 U | 20 U | NA | 3 U | 20 U [20 U] | 20 U | 20 U [20 U] | 20 UJ [20 UJ] | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 UJ [5 UJ] | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-47 03/20/08 | RFI-36-47 06/19/08 | RFI-36-47 09/18/08 | RFI-36-47 12/04/08 | RFI-36-47 10/15/10 | RFI-36-48 12/13/02 | RFI-36-48 02/28/05 | RFI-36-48 06/10/05 | RFI-36-48 12/09/05 | RFI-36-48 09/30/07 | RFI-36-48 03/20/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 0.1 J [1 U] | 1 U | 1 U | 1 U | 0.86 J | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U [1 U] | 0.4 J | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U [1 U] | **3** | 1 U | 2 | 1 U | **5 [6]** | **4** | **64 [64]** | **3 [3]** | **3** |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-47 03/20/08 | RFI-36-47 06/19/08 | RFI-36-47 09/18/08 | RFI-36-47 12/04/08 | RFI-36-47 10/15/10 | RFI-36-48 12/13/02 | RFI-36-48 02/28/05 | RFI-36-48 06/10/05 | RFI-36-48 12/09/05 | RFI-36-48 09/30/07 | RFI-36-48 03/20/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-47 03/20/08 | RFI-36-47 06/19/08 | RFI-36-47 09/18/08 | RFI-36-47 12/04/08 | RFI-36-47 10/15/10 | RFI-36-48 12/13/02 | RFI-36-48 02/28/05 | RFI-36-48 06/10/05 | RFI-36-48 12/09/05 | RFI-36-48 09/30/07 | RFI-36-48 03/20/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-48 06/19/08 | RFI-36-48 09/17/08 | RFI-36-48 12/04/08 | RFI-36-48 10/15/10 | RFI-36-48 10/26/11 | RFI-36-55 07/06/05 | RFI-36-55 12/09/05 | RFI-36-55 06/26/07 | RFI-36-55 10/30/07 | RFI-36-55 03/20/08 | RFI-36-55 06/18/08 | RFI-36-55 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 0.6 J | 0.9 J | 3 | 7 | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | NA | 30 U | 30 U | 30 U | 30 UJ | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 27 | 27 | 16 | 49 | 15 | 1 U | 1 U | 2 | 2 | 13 | 33 | 45 |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 2 | 2 | 4 | 6 | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 UJ | 30 U | 20 U | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 50 U | 10 U | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 UJ | 50 U | 20 U | 30 U | 30 U | 7 J | 5 J | 20 U | 3 J | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 UJ | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 UJ | 2 UJ |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 UJ | 1 U | 5 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 UJ | 1 UJ | 1 UJ |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 0.2 J | 0.2 J | 0.4 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | NA | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | R | 1 U | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 0.2 J | 1 U | 1 | 0.9 J | 0.3 J | 0.3 J | 0.6 J |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 1 J | 0.2 J | 0.4 J | 0.3 J | 5 U | 0.3 J |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 J | 1 U | 1 U | 0.2 J | 5 | **6** | 5 |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-48 06/19/08 | RFI-36-48 09/17/08 | RFI-36-48 12/04/08 | RFI-36-48 10/15/10 | RFI-36-48 10/26/11 | RFI-36-55 07/06/05 | RFI-36-55 12/09/05 | RFI-36-55 06/26/07 | RFI-36-55 10/30/07 | RFI-36-55 03/20/08 | RFI-36-55 06/18/08 | RFI-36-55 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 2 | **3** | 1 U | **3** | 1 U | 1 U | 1 U | 1 UJ | 0.9 J | 0.6 J | 1 U | 0.2 J |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-48 06/19/08 | RFI-36-48 09/17/08 | RFI-36-48 12/04/08 | RFI-36-48 10/15/10 | RFI-36-48 10/26/11 | RFI-36-55 07/06/05 | RFI-36-55 12/09/05 | RFI-36-55 06/26/07 | RFI-36-55 10/30/07 | RFI-36-55 03/20/08 | RFI-36-55 06/18/08 | RFI-36-55 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-48 06/19/08 | RFI-36-48 09/17/08 | RFI-36-48 12/04/08 | RFI-36-48 10/15/10 | RFI-36-48 10/26/11 | RFI-36-55 07/06/05 | RFI-36-55 12/09/05 | RFI-36-55 06/26/07 | RFI-36-55 10/30/07 | RFI-36-55 03/20/08 | RFI-36-55 06/18/08 | RFI-36-55 09/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-55 12/04/08 | RFI-36-55R 10/27/11 | RFI-36-56 07/21/05 | RFI-36-56 12/09/05 | RFI-36-56 06/26/07 | RFI-36-56 10/30/07 | RFI-36-56 03/20/08 | RFI-36-56 06/18/08 | RFI-36-56 09/17/08 | RFI-36-56 12/04/08 | RFI-36-56 10/24/11 | RFI-38-02 10/11/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 J | 0.4 J | 3 | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | 30 UJ | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 61 | 121 | 4 | 5 | 4 | 4 | 0.3 J | 3 | 8 | 7 | 9 | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 25 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 UJ | 20 U | 30 U | 30 U | R | 20 U | 20 U | 20 U | 20 U | 20 UJ | 20 U | 50 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 UJ | 2 UJ | 2 U | 2 U | 5 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 UJ | 1 UJ | 1 UJ | 1 U | 1 U | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 UJ | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 U | R | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 0.7 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 0.4 J | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 0.5 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 90 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-55 12/04/08 | RFI-36-55R 10/27/11 | RFI-36-56 07/21/05 | RFI-36-56 12/09/05 | RFI-36-56 06/26/07 | RFI-36-56 10/30/07 | RFI-36-56 03/20/08 | RFI-36-56 06/18/08 | RFI-36-56 09/17/08 | RFI-36-56 12/04/08 | RFI-36-56 10/24/11 | RFI-38-02 10/11/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J | 0.1 J | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 0.3 J | 0.8 J | 0.5 J | 0.5 J | 1 U | 0.2 J | 0.7 J | 0.4 J | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 J | **9** | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4 U |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4 U |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-55 12/04/08 | RFI-36-55R 10/27/11 | RFI-36-56 07/21/05 | RFI-36-56 12/09/05 | RFI-36-56 06/26/07 | RFI-36-56 10/30/07 | RFI-36-56 03/20/08 | RFI-36-56 06/18/08 | RFI-36-56 09/17/08 | RFI-36-56 12/04/08 | RFI-36-56 10/24/11 | RFI-38-02 10/11/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 U |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9 |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 352 |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.5 U |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **1,070** |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 52 |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 U |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-36-55 12/04/08 | RFI-36-55R 10/27/11 | RFI-36-56 07/21/05 | RFI-36-56 12/09/05 | RFI-36-56 06/26/07 | RFI-36-56 10/30/07 | RFI-36-56 03/20/08 | RFI-36-56 06/18/08 | RFI-36-56 09/17/08 | RFI-36-56 12/04/08 | RFI-36-56 10/24/11 | RFI-38-02 10/11/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-44-05 09/14/01 | RFI-44-05 12/20/02 | RFI-44-05 03/24/03 | RFI-44-05 10/05/04 | RFI-44-05 10/26/10 | RFI-44-05 10/21/11 | RFI-81-50 04/04/05 | RFI-81-50 11/02/06 | RFI-81-50 10/31/07 | RFI-81-50 09/16/08 | RFI-81-50 09/24/09 | RFI-81-50 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 1 U | NA | NA | 30 U | NA | NA | NA | 30 U | 30 U | 30 U | 30 U | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | NA | NA | 2 U | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 25 U | NA | NA | 30 U | NA | NA | NA | 20 UJ | 20 U | 20 U | 20 U | 30 UJ |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | NA | NA | 50 UJ | NA | NA | NA | 50 UJ | 50 U | 50 UJ | 50 U | 50 UJ |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | NA | NA | 1 U | NA | NA | NA | 10 U | 10 U | 10 U | 10 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 25 U | NA | NA | 6 J | NA | NA | NA | 20 UJ | 20 U | 20 U | 20 U | 50 UJ |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | NA | NA | 1 UJ | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 1 U | NA | NA | 2 UJ | NA | NA | NA | 2 U | 2 U | 2 UJ | 2 U | 5 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | NA | NA | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | NA | NA | 1 UJ | NA | NA | NA | 1 U | 1 U | 1 UJ | 1 U | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | NA | 1 UJ | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | NA | NA | 1 U | NA | NA | NA | 0.1 J | 1 U | 1 U | 0.3 | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | 10 U | NA | NA | NA | 10 U | 10 U | 10 U | 10 U | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | NA | NA | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 20 U | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | NA | NA | 5 U | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 90 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-44-05 09/14/01 | RFI-44-05 12/20/02 | RFI-44-05 03/24/03 | RFI-44-05 10/05/04 | RFI-44-05 10/26/10 | RFI-44-05 10/21/11 | RFI-81-50 04/04/05 | RFI-81-50 11/02/06 | RFI-81-50 10/31/07 | RFI-81-50 09/16/08 | RFI-81-50 09/24/09 | RFI-81-50 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 0.2 | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 0.4 J | 0.2 J | 1 U | 0.8 | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | NA | NA | 1 U | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 UJ | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | R | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-44-05 09/14/01 | RFI-44-05 12/20/02 | RFI-44-05 03/24/03 | RFI-44-05 10/05/04 | RFI-44-05 10/26/10 | RFI-44-05 10/21/11 | RFI-81-50 04/04/05 | RFI-81-50 11/02/06 | RFI-81-50 10/31/07 | RFI-81-50 09/16/08 | RFI-81-50 09/24/09 | RFI-81-50 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.12 UJ | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | 0.1 U | 0.12 U | 0.1 U [0.1 U] | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.86 | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.23 | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.1 U | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | **1.09** | 0.11 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | **42 J** | 2.7 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | **33 J** | 6.9 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | 290 | 43 J | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | 0.4 U | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | 4.3 J | 0.13 J | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | **380 J** | 2.7 | 5 | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | 25 J | 4.2 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | **220 J** | 9.9 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | **6.7 JDM** | **19** | NA | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | **75 J** | 1.6 | 3 U | NA | NA | 3 U [3 U] | NA | 3 U | NA | 3 U | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | 410 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | **510 J** | 12 | 26 | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | **34** | **9.6** | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | 0.085 J | 0.4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | 0.2 U | 0.2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | **5 J** | 1.6 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | **620 J** | 42 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | 1.2 U | **29 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | 3.1 | **36 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | 220 | 180 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | 0.4 U | R | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | 0.2 U | 2.2 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | 2 U | **220 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | 2.2 | 17 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | 3.4 U | **130 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | 5 U | **5.4 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | 0.4 U | **18 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | 150 | 430 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | 0.2 U | R | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-44-05 09/14/01 | RFI-44-05 12/20/02 | RFI-44-05 03/24/03 | RFI-44-05 10/05/04 | RFI-44-05 10/26/10 | RFI-44-05 10/21/11 | RFI-81-50 04/04/05 | RFI-81-50 11/02/06 | RFI-81-50 10/31/07 | RFI-81-50 09/16/08 | RFI-81-50 09/24/09 | RFI-81-50 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | 27 | **360 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | **52** | **51 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | 0.4 U | R | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | 0.2 U | R | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | 0.8 U | **7.4 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | 14 J | 190 J | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-81-50 10/24/11 | RFI-81-51 04/04/05 | RFI-81-51 10/29/07 | RFI-81-51 09/16/08 | RFI-81-51 09/24/09 | RFI-81-51 10/24/11 | RFI-84-06R 04/02/03 | RFI-84-06R 04/03/03 | RFI-84-06R 02/25/05 | RFI-84-06R 07/22/05 | RFI-84-06R 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | NA | 1 U [1 U] | 0.8 J | 2 | 5 U | 2 | 1 U | NA | NA | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | NA | 30 U [30 U] | 30 U | 30 U | 200 U | 30 U | 1 U | NA | NA | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | NA | 4 [4] | 4 | 1 | 5 | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | NA | 0.6 J [0.5 J] | 0.4 J | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | 2 U [2 U] | 2 U | 2 U | 10 U | 2 U | 5 U | NA | NA | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 UJ [1 UJ] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | NA | 30 U [30 U] | 20 U | 20 U | 100 U | 20 U | 25 U | NA | NA | 30 U | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | NA | 50 U [50 U] | 50 U | 50 UJ | 300 U | 50 U | 50 U | NA | NA | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | NA | 1 U [1 U] | 10 U | 10 U | 50 U | 10 U | 50 U | NA | NA | 1 U | 1 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | NA | 30 U [30 U] | 20 U | 20 UJ | 100 U | 20 U | 25 U | NA | NA | 30 U | 30 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | NA | 1 U [1 U] | 1 U | 1 U | 0.6 | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | NA | 1 UJ [1 UJ] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | NA | R [R] | 2 U | 2 UJ | 10 U | 2 U | 1 U | NA | NA | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | NA | 5 UJ [5 UJ] | 5 U | 5 U | 30 U | 5 U | 5 U | NA | NA | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | NA | 1 U [1 U] | 1 U | 1 UJ | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | NA | 1 U [1 U] | 1 U | 1 UJ | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | NA | **162 [159]** | **161** | 3 | **229** | 3 | 1 U | NA | NA | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 UJ [1 UJ] | 1 U | 1 UJ | 5 U | 1 U | 5 U | NA | NA | 1 UJ | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | NA | 1 UJ [1 UJ] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 5 U | NA | NA | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 2 U | 2 U | NA | NA | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 10 U [10 U] | 10 U | 10 U | 50 U | 10 U | 5 U | NA | NA | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | NA | 5 U [5 U] | 5 U | 5 U | 30 U | 5 U | 5 U | NA | NA | 0.3 J | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 20 UJ [20 UJ] | 20 U | 20 U | 100 U | 20 U | 1 U | NA | NA | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | NA | 5 U [5 U] | 5 U | 5 U | 30 U | 5 U | 5 U | NA | NA | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | NA | 1 U [1 U] | 1 U | 1 UJ | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | NA | 1 U [1 U] | 2 | **6** | 1 | **7** | 1 U | NA | NA | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-81-50 10/24/11 | RFI-81-51 04/04/05 | RFI-81-51 10/29/07 | RFI-81-51 09/16/08 | RFI-81-51 09/24/09 | RFI-81-51 10/24/11 | RFI-84-06R 04/02/03 | RFI-84-06R 04/03/03 | RFI-84-06R 02/25/05 | RFI-84-06R 07/22/05 | RFI-84-06R 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | NA | 7 [6] | 6 | 1 U | 10 | 1 U | 1 U | NA | NA | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | NA | 0.8 J [0.8 J] | **25** | **70** | **10** | **67** | 1 U | NA | NA | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | NA | 1 U [1 U] | 1 U | 1 U | 5 U | 1 U | 1 U | NA | NA | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | NA | **64 [65]** | **54** | 0.3 J | **68** | 1 U | 1 U | NA | NA | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | 4 U [4 U] | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | 10 U [10 U] | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 10 UJ [10 UJ] | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 UJ [20 UJ] | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 20 U [20 U] | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 UJ [5 UJ] | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | 1.5 U [1.5 U] | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | 10 U [10 U] | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | 10 U [10 U] | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | 4 U [4 U] | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | 1 U [1 U] | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-81-50 10/24/11 | RFI-81-51 04/04/05 | RFI-81-51 10/29/07 | RFI-81-51 09/16/08 | RFI-81-51 09/24/09 | RFI-81-51 10/24/11 | RFI-84-06R 04/02/03 | RFI-84-06R 04/03/03 | RFI-84-06R 02/25/05 | RFI-84-06R 07/22/05 | RFI-84-06R 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | 2 U [2 U] | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | 20 UJ [20 U] | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | 5 U [15.8] | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | 0.59 J | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | 3.5 J | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | 70 | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | 0.4 U | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | 0.049 J | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | 2.8 | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | 1.8 | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | 13 | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | **61** | **62** | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | 3 U | NA | NA | NA | NA | NA | NA | 0.94 | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | 51 J | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | 0.2 U | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | 9.2 | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | 2.9 J | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | 0.4 U | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | 0.048 J | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | 4 | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | 20 | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | 0.94 J | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | 3 | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | 58 | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | 0.4 U | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | 0.09 J | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | 6.6 | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | 1 | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | 13 | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | **71** | NA | **58** | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | 0.17 J | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | 50 | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-81-50 10/24/11 | RFI-81-51 04/04/05 | RFI-81-51 10/29/07 | RFI-81-51 09/16/08 | RFI-81-51 09/24/09 | RFI-81-51 10/24/11 | RFI-84-06R 04/02/03 | RFI-84-06R 04/03/03 | RFI-84-06R 02/25/05 | RFI-84-06R 07/22/05 | RFI-84-06R 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | 7.8 | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | 4 | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | **0.24 J** | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | 0.17 J | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | 1.6 | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | 9.5 | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06R 11/01/06 | RFI-84-06R 04/24/07 | RFI-84-06R 06/26/07 | RFI-84-06R 10/26/07 | RFI-84-06R 03/17/08 | RFI-84-06R 06/17/08 | RFI-84-06R 09/10/08 | RFI-84-06R 12/03/08 | RFI-84-06R 10/19/10 | RFI-84-06R 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 UJ | 30 U | 30 U | 30 U | 30 U | 30 U | NA | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 0.4 J | 0.8 J | 0.7 J | 0.5 J | 0.7 J | 0.8 J | 0.7 J | 1 U | NA |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 U | 2 U | 2 U | 5 U | NA |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | NA |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ | 30 U | NA |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 50 U | NA |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 10 J | 4 J | 20 U | 4 J | 20 U | 20 U | 20 UJ | 50 U | NA |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 3 | 5 | **7** | 1 | **6** | 4 | 2 | 2 | 2 | NA |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U | NA |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | NA |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 UJ | 1 U | 1 U | 5 U | NA |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 UJ | 1 UJ | 2 J | 1 U | 1 U | 1 U | 1 UJ | 1 U | NA | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | NA |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | R | 1 U | 1 U | 1 UJ | 1 UJ | 1 U | 5 U | NA |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 0.2 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 0.3 J | 0.4 J | 0.8 J | 0.2 J | 0.3 J | 0.4 J | 0.3 J | 0.3 J | 5 U | NA |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | NA |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 0.3 J | 0.7 J | 20 U | 20 UJ | 0.3 J | 0.2 J | 0.3 J | NA | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | 90 U | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06R 11/01/06 | RFI-84-06R 04/24/07 | RFI-84-06R 06/26/07 | RFI-84-06R 10/26/07 | RFI-84-06R 03/17/08 | RFI-84-06R 06/17/08 | RFI-84-06R 09/10/08 | RFI-84-06R 12/03/08 | RFI-84-06R 10/19/10 | RFI-84-06R 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| **SVOC** | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06R 11/01/06 | RFI-84-06R 04/24/07 | RFI-84-06R 06/26/07 | RFI-84-06R 10/26/07 | RFI-84-06R 03/17/08 | RFI-84-06R 06/17/08 | RFI-84-06R 09/10/08 | RFI-84-06R 12/03/08 | RFI-84-06R 10/19/10 | RFI-84-06R 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | **88 [86]** | **68** |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 5 U [5 U] | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | 0.5 U [0.5 U] | 0.5 U |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06R 11/01/06 | RFI-84-06R 04/24/07 | RFI-84-06R 06/26/07 | RFI-84-06R 10/26/07 | RFI-84-06R 03/17/08 | RFI-84-06R 06/17/08 | RFI-84-06R 09/10/08 | RFI-84-06R 12/03/08 | RFI-84-06R 10/19/10 | RFI-84-06R 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 07/21/05 | RFI-84-06RD 12/08/05 | RFI-84-06RD 11/02/06 | RFI-84-06RD 04/24/07 | RFI-84-06RD 06/27/07 | RFI-84-06RD 10/26/07 | RFI-84-06RD 03/17/08 | RFI-84-06RD 06/17/08 | RFI-84-06RD 09/10/08 | RFI-84-06RD 12/03/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 UJ | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 30 U | 30 U | 20 U | 20 UJ | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 UJ | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 0.1 J | 0.1 J | 1 U | 1 U | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 07/21/05 | RFI-84-06RD 12/08/05 | RFI-84-06RD 11/02/06 | RFI-84-06RD 04/24/07 | RFI-84-06RD 06/27/07 | RFI-84-06RD 10/26/07 | RFI-84-06RD 03/17/08 | RFI-84-06RD 06/17/08 | RFI-84-06RD 09/10/08 | RFI-84-06RD 12/03/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 07/21/05 | RFI-84-06RD 12/08/05 | RFI-84-06RD 11/02/06 | RFI-84-06RD 04/24/07 | RFI-84-06RD 06/27/07 | RFI-84-06RD 10/26/07 | RFI-84-06RD 03/17/08 | RFI-84-06RD 06/17/08 | RFI-84-06RD 09/10/08 | RFI-84-06RD 12/03/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 07/21/05 | RFI-84-06RD 12/08/05 | RFI-84-06RD 11/02/06 | RFI-84-06RD 04/24/07 | RFI-84-06RD 06/27/07 | RFI-84-06RD 10/26/07 | RFI-84-06RD 03/17/08 | RFI-84-06RD 06/17/08 | RFI-84-06RD 09/10/08 | RFI-84-06RD 12/03/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 10/19/10 | RFI-84-06RD 10/21/11 | RFI-84-09D 07/22/05 | RFI-84-09D 12/08/05 | RFI-84-09D 11/01/06 | RFI-84-09D 04/24/07 | RFI-84-09D 06/28/07 | RFI-84-09D 10/26/07 | RFI-84-09D 03/18/08 | RFI-84-09D 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | NA | NA | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 5 U | NA | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 UJ | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | NA | 30 U | 30 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | NA | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 50 U | NA | 1 U | 1 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 50 U | NA | 30 U | 30 U | 20 U | 9 J [10 J] | 20 U | 20 U | 20 U | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 5 U | NA | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | NA | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 5 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 5 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 UJ |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | NA | 4 | 4 | 4 | 3 [3] | 4 | 3 | 3 | 3 |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 UJ | 1 U | 1 UJ | 1 UJ [1 UJ] | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 5 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 5 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 UJ | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 5 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 2 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 0.1 J | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | NA | 2 J | 3 J | 3 J | 2 J [2 J] | 2 J | 1 J | 1 J | 1 J |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 20 U | 20 U | 20 U | 20 U [20 U] | 20 U | 20 U | 20 UJ | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | NA | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 UJ | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | 90 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 10/19/10 | RFI-84-06RD 10/21/11 | RFI-84-09D 07/22/05 | RFI-84-09D 12/08/05 | RFI-84-09D 11/01/06 | RFI-84-09D 04/24/07 | RFI-84-09D 06/28/07 | RFI-84-09D 10/26/07 | RFI-84-09D 03/18/08 | RFI-84-09D 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 0.2 J | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | NA | 1 U | 1 U | 1 U | 0.2 J [0.2 J] | 0.2 J | 0.1 J | 0.1 J | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | NA | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | NA | 1 U | **3** | **3** | **3 [3]** | **3** | **3** | **3** | **3** |
| **SVOC** | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 10/19/10 | RFI-84-06RD 10/21/11 | RFI-84-09D 07/22/05 | RFI-84-09D 12/08/05 | RFI-84-09D 11/01/06 | RFI-84-09D 04/24/07 | RFI-84-09D 06/28/07 | RFI-84-09D 10/26/07 | RFI-84-09D 03/18/08 | RFI-84-09D 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-06RD 10/19/10 | RFI-84-06RD 10/21/11 | RFI-84-09D 07/22/05 | RFI-84-09D 12/08/05 | RFI-84-09D 11/01/06 | RFI-84-09D 04/24/07 | RFI-84-09D 06/28/07 | RFI-84-09D 10/26/07 | RFI-84-09D 03/18/08 | RFI-84-09D 06/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09D 09/11/08 | RFI-84-09D 12/03/08 | RFI-84-09D 10/19/10 | RFI-84-09D 10/21/11 | RFI-84-09S 07/22/05 | RFI-84-09S 12/08/05 | RFI-84-09S 11/01/06 | RFI-84-09S 04/24/07 | RFI-84-09S 06/28/07 | RFI-84-09S 10/26/07 | RFI-84-09S 03/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 | 1 | 0.5 J | 0.1 J | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | NA | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 J | 0.4 J | 0.4 J | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 UJ |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 UJ | 30 U | 20 U | 30 U | 30 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 50 U | 10 U | 1 U | 1 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 UJ | 50 U | 20 U | 30 U | 30 U | 20 U | 20 UJ | 20 U | 20 U | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.8 J | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.3 J |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 3 | 4 | 3 | 4 | 1 U | 1 U | 0.3 J | 0.3 J | 0.5 J | 0.8 J | 0.4 J |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 UJ | 1 U | NA | 1 U | 1 UJ | 1 U | 1 UJ | 1 UJ | 1 U | 1 U | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 UJ | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 J | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 1 J | 1 J | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 0.5 J | 0.4 J | 0.3 J |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | 5 U | 5 U | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | 1 U | 1 U | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | 90 U | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09D 09/11/08 | RFI-84-09D 12/03/08 | RFI-84-09D 10/19/10 | RFI-84-09D 10/21/11 | RFI-84-09S 07/22/05 | RFI-84-09S 12/08/05 | RFI-84-09S 11/01/06 | RFI-84-09S 04/24/07 | RFI-84-09S 06/28/07 | RFI-84-09S 10/26/07 | RFI-84-09S 03/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.8 J | 0.5 J | 0.4 J | 0.2 J | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 2 | **3 J** | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09D 09/11/08 | RFI-84-09D 12/03/08 | RFI-84-09D 10/19/10 | RFI-84-09D 10/21/11 | RFI-84-09S 07/22/05 | RFI-84-09S 12/08/05 | RFI-84-09S 11/01/06 | RFI-84-09S 04/24/07 | RFI-84-09S 06/28/07 | RFI-84-09S 10/26/07 | RFI-84-09S 03/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09D 09/11/08 | RFI-84-09D 12/03/08 | RFI-84-09D 10/19/10 | RFI-84-09D 10/21/11 | RFI-84-09S 07/22/05 | RFI-84-09S 12/08/05 | RFI-84-09S 11/01/06 | RFI-84-09S 04/24/07 | RFI-84-09S 06/28/07 | RFI-84-09S 10/26/07 | RFI-84-09S 03/17/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09S 06/17/08 | RFI-84-09S 09/11/08 | RFI-84-09S 12/03/08 | RFI-84-09S 10/19/10 | RFI-84-09S 10/21/11 | RFI-84-11S 07/28/05 | RFI-84-11S 11/01/06 | RFI-84-11S 03/17/08 | RFI-84-11S 09/11/08 | RFI-84-11S 10/19/10 | RFI-84-11S 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | NA | 30 U | 30 U | 30 U | 30 U | 30 U | NA | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 0.3 J | 1 U | 1 U | 1 U | 1 U | 1 U | 0.3 J | 0.3 J | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 UJ | 2 U | 5 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 UJ | 30 U | 20 U | 30 U | 20 U | 20 U | 20 U | 30 U | 20 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 50 U | 10 U | 1 U | 10 U | 10 U | 10 U | 50 U | 10 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 UJ | 50 U | 20 U | 30 UJ | 20 U | 20 U | 20 U | 50 U | 20 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | 2 U | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 UJ | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 0.4 J | 0.6 J | 0.8 J | 1 U | 1 U | 1 U | 0.9 J | 0.7 J | 0.8 J | 3 | 2 |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 UJ | 1 U | NA | 1 U | 1 UJ | 1 UJ | 1 U | 1 UJ | NA | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 UJ | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 5 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 2 U | 2 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | NA | 10 U | 10 UJ | 10 U | 10 U | 10 U | NA | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 0.2 J | 0.5 J | 0.6 J | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | NA | 20 U | 20 U | 20 U | 20 UJ | 20 U | NA | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | 5 U | 5 U | NA | NA | NA | NA | 5 U | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | 1 U | 1 U | NA | NA | NA | NA | 1 U | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 J | 1 U | 0.6 J | 0.4 J | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | 90 U | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09S 06/17/08 | RFI-84-09S 09/11/08 | RFI-84-09S 12/03/08 | RFI-84-09S 10/19/10 | RFI-84-09S 10/21/11 | RFI-84-11S 07/28/05 | RFI-84-11S 11/01/06 | RFI-84-11S 03/17/08 | RFI-84-11S 09/11/08 | RFI-84-11S 10/19/10 | RFI-84-11S 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.1 J | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 0.1 J | 0.2 J | 1 U | 1 U | 1 U | 0.8 J | 2 | 1 | 2 | 2 | 1 |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 0.4 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09S 06/17/08 | RFI-84-09S 09/11/08 | RFI-84-09S 12/03/08 | RFI-84-09S 10/19/10 | RFI-84-09S 10/21/11 | RFI-84-11S 07/28/05 | RFI-84-11S 11/01/06 | RFI-84-11S 03/17/08 | RFI-84-11S 09/11/08 | RFI-84-11S 10/19/10 | RFI-84-11S 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-09S 06/17/08 | RFI-84-09S 09/11/08 | RFI-84-09S 12/03/08 | RFI-84-09S 10/19/10 | RFI-84-09S 10/21/11 | RFI-84-11S 07/28/05 | RFI-84-11S 11/01/06 | RFI-84-11S 03/17/08 | RFI-84-11S 09/11/08 | RFI-84-11S 10/19/10 | RFI-84-11S 10/21/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-12 12/03/08 | RFI-84-12 09/23/09 | RFI-84-12 10/19/10 | RFI-84-12 10/21/11 | RFI-86-01 09/20/01 | RFI-86-01R 06/25/02 | RFI-86-01R 04/02/03 | RFI-86-01R 10/07/04 | RFI-86-01R 10/28/10 | RFI-86-01R 10/25/11 | RFI-86-16R 09/16/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | NA | 30 U | 1 U | 1 U | 1 U | 30 U | NA | 30 U | 1 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 5 U | 2 U | 5 U | 5 U | 5 U | 2 U | 5 U | 2 U | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 0.2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 UJ | 20 U | 30 U | 20 U | 25 U | 25 UJ | 25 U | 30 U | 30 U | 20 U | 25 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 50 U | 10 U | 50 U | 50 U | 50 U | 1 U | 50 U | 10 U | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 UJ | 20 U | 50 U | 20 U | 25 U | 25 U | 25 U | 30 UJ | 50 U | 20 U | 25 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | 2 U | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 5 U | 2 U | 1 UJ | 1 U | 1 U | 2 UJ | 5 U | 2 U | 1 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 5 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 0.2 J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 0.3 J | 2 | 2 | 1 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | NA | 1 U | 5 U | 5 U | 5 U | 1 U | NA | 1 U | 5 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 5 U | 1 U | 5 U | 5 U | 5 U | 1 U | 5 U | 1 U | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 1 U | 2 U | 2 U | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | NA | 10 U | 5 U | 5 U | 5 U | 10 U | NA | 10 U | 5 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 1 J | 0.9 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | NA | 20 U | 1 U | 1 U | 1 U | 20 U | NA | 20 U | 1 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 0.3 J | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | 5 U | 5 U | NA | NA | NA | NA | 5 U | 5 U | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | 1 U | 1 U | NA | NA | NA | NA | 1 U | 1 U | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | 90 U | NA | NA | NA | NA | NA | 90 U | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-12 12/03/08 | RFI-84-12 09/23/09 | RFI-84-12 10/19/10 | RFI-84-12 10/21/11 | RFI-86-01 09/20/01 | RFI-86-01R 06/25/02 | RFI-86-01R 04/02/03 | RFI-86-01R 10/07/04 | RFI-86-01R 10/28/10 | RFI-86-01R 10/25/11 | RFI-86-16R 09/16/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 | 0.2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 2 J | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | 4.4 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 11 UJ | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | R | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | 11 U | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | 4.4 U | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | 1.1 U | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-12 12/03/08 | RFI-84-12 09/23/09 | RFI-84-12 10/19/10 | RFI-84-12 10/21/11 | RFI-86-01 09/20/01 | RFI-86-01R 06/25/02 | RFI-86-01R 04/02/03 | RFI-86-01R 10/07/04 | RFI-86-01R 10/28/10 | RFI-86-01R 10/25/11 | RFI-86-16R 09/16/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | 2.2 U | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | 22 U | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | 5.6 U | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.13 J | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.2 | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.1 U | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | **0.33 J** | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | 0.11 U | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | 1.2 U | 1.2 U | 1.2 U | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | **14 J** | 1.1 | 1.8 | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | 140 J | 16 | 61 | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | 2.8 J | 0.4 U | 0.4 U | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | 2 J | 0.92 | 0.37 | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | 10 | 0.89 | 1.7 | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | 17 J | 4.8 | 4 | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | 14 J | 3.9 | 5 | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | **10 J** | 0.75 | 1.3 | NA | 3 U [3 U] | 3 U | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | 760 J | **900** | 470 J | NA | 19 [18] | 5 U | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | 0.2 U | 0.2 U | 0.2 U | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | 26 J | 15 | 30 | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | 5 U | 5 U | 2.5 J | 2.3 J | **5.4** | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | 0.4 U | 0.4 UJ | 0.4 U | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | 0.35 U | 0.2 U | 0.2 U | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | **14 J** | 0.22 J | 0.21 J | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | 220 J | 60 | 220 | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | 1.2 U | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | 6.1 | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | 56 J | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | 0.6 U | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | 3.8 | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | 6.8 | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | 0.4 U | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | 280 | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |

**Appendix D** **2012 Annual Groundwater Sampling Event and Historical Groundwater Data, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-84-12 12/03/08 | RFI-84-12 09/23/09 | RFI-84-12 10/19/10 | RFI-84-12 10/21/11 | RFI-86-01 09/20/01 | RFI-86-01R 06/25/02 | RFI-86-01R 04/02/03 | RFI-86-01R 10/07/04 | RFI-86-01R 10/28/10 | RFI-86-01R 10/25/11 | RFI-86-16R 09/16/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | 6.7 | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | 1.5 J | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | **0.66 J** | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | 0.2 U | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | 0.8 U | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | 12 | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-86-16R 10/06/04 | RFI-86-16R 06/27/07 | RFI-86-16R 10/29/07 | RFI-86-16R 09/15/08 | RFI-86-16R 10/18/10 | RFI-86-16R 10/24/11 | RFI-94-10 12/15/03 | RFI-94-10 10/08/04 | RFI-94-10 10/25/11 | RFI-94-11 04/07/05 | RFI-94-11 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.3 J | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | NA | 30 U | 1 U | 30 U | 30 U | 30 U | 30 U |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.4 J | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 5 U | 2 U | 5 U | 2 U | 2 U | 2 U | 2 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 30 U | 20 U | 20 U | 20 U | 30 UJ | 20 U | 25 U | 30 U | 20 U | 30 U | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 UJ | 50 UJ | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 1 U | 10 U | 10 U | 10 U | 50 U | 10 U | 50 U | 1 U | 10 U | 1 U | 1 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 30 U | 20 U | 20 U | 20 U | 50 UJ | 20 U | 25 U | 30 U | 20 U | 30 UJ | 30 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 UJ | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U | 1 UJ | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 UJ | 2 U | 2 U | 2 U | 5 U | 2 U | 1 U | 2 UJ | 2 U | R | 2 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 UJ | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.7 J | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 UJ | NA | 1 U | 5 U | 1 U | 1 U | 1 UJ | 1 U |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 UJ | 1 U | 1 U | 5 U | 1 U | 1 U | 1 UJ | 1 U | 1 U | 1 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U | 5 U | 1 U | 5 U | 1 U | 1 U | 1 U | 1 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U | 2 U | 1 U | 2 U | 1 U | 1 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 UJ | 10 U | 10 U | 10 U | NA | 10 U | 5 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | NA | 20 U | 1 U | 20 U | 20 U | 20 U | 20 U |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | 5 U | 5 U | NA | NA | 5 U | NA | NA |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | 1 U | NA | NA | 1 U | NA | NA |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | 90 U | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-86-16R 10/06/04 | RFI-86-16R 06/27/07 | RFI-86-16R 10/29/07 | RFI-86-16R 09/15/08 | RFI-86-16R 10/18/10 | RFI-86-16R 10/24/11 | RFI-94-10 12/15/03 | RFI-94-10 10/08/04 | RFI-94-10 10/25/11 | RFI-94-11 04/07/05 | RFI-94-11 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2.5 | 3 | 1 | 1 U | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.9 J | 1 U | 1 U | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-86-16R 10/06/04 | RFI-86-16R 06/27/07 | RFI-86-16R 10/29/07 | RFI-86-16R 09/15/08 | RFI-86-16R 10/18/10 | RFI-86-16R 10/24/11 | RFI-94-10 12/15/03 | RFI-94-10 10/08/04 | RFI-94-10 10/25/11 | RFI-94-11 04/07/05 | RFI-94-11 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-86-16R 10/06/04 | RFI-86-16R 06/27/07 | RFI-86-16R 10/29/07 | RFI-86-16R 09/15/08 | RFI-86-16R 10/18/10 | RFI-86-16R 10/24/11 | RFI-94-10 12/15/03 | RFI-94-10 10/08/04 | RFI-94-10 10/25/11 | RFI-94-11 04/07/05 | RFI-94-11 12/08/05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-94-11 06/28/07 | RFI-94-11 11/02/07 | RFI-94-11 03/27/08 | RFI-94-11 06/19/08 | RFI-94-11 09/12/08 | RFI-94-11 12/05/08 | RFI-94-11 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ug/L | - - | - - | 30,000 | - - | 96,000 | 77 | 15,000 | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | ug/L | - - | 1,300,000 | 1,300,000 | 89 | 1,300,000 | 200 | 660,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1,2,2-Tetrachloroethane | ug/L | - - | - - | 4,700 | 78 | 77,000 | 8.5 | 12,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1,2-trichloro-1,2,2-trifluoroethane | ug/L | - - | 170,000 | 170,000 | 32 | 170,000 | 170,000 | 170,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U [30 U] | NA |
| 1,1,2-Trichloroethane | ug/L | - - | - - | 21,000 | 330 | 110,000 | 5 | 17,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1-Dichloroethane | ug/L | 380,000 | - - | 2,400,000 | 740 | 2,300,000 | 880 | 1,000,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,1-Dichloroethene | ug/L | 97,000 | 140,000 | 11,000 | 130 | 1,300 | 7 | 200 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2,3-Trichlorobenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | ug/L | - - | - - | 84,000 | - - | 18,000 | 42 | 8,300 | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 5 U |
| 1,2,4-Trimethylbenzene | ug/L | 56,000 | - - | 56,000 | 17 | 56,000 | 1,000 | 56,000 | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U |
| 1,2-Dibromoethane | ug/L | - - | - - | 25 | 5.7 | 15,000 | 0.05 | 2,400 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichloroethane | ug/L | 2,500,000 | - - | 19,000 | 360 | 59,000 | 5 | 9,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,2-Dichloropropane | ug/L | 550,000 | 2,800,000 | 16,000 | 230 | 36,000 | 5 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,3,5-Trimethylbenzene | ug/L | - - | - - | 61,000 | 45 | 61,000 | 1,000 | 61,000 | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| 2-Butanone | ug/L | - - | 240,000,000 | 240,000,000 | 2,200 | 240,000,000 | 13,000 | 240,000,000 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U [20 U] | 30 U |
| 2-Hexanone | ug/L | - - | - - | 5,200,000 | - - | 8,700,000 | 1,000 | 4,200,000 | 50 U | 50 U | 50 U | 50 U | 50 UJ | 50 UJ [50 UJ] | 50 U |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | ug/L | - - | 20,000,000 | 13,000,000 | - - | 20,000,000 | 1,800 | 20,000,000 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | 50 U |
| Acetone | ug/L | 15,000,000 | 1,000,000,000 | 31,000,000 | 1,700 | 1,000,000,000 | 730 | 1,000,000,000 | 20 U | 20 U | 20 U | 20 U | 20 U | 20 UJ [20 UJ] | 50 U |
| Acrylonitrile | ug/L | 6,400,000 | - - | 14,000 | 2 | 190,000 | 2.6 | 34,000 | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | ug/L | 68,000 | 67,000 | 11,000 | 200 | 35,000 | 5 | 5,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Bromobenzene | ug/L | - - | - - | 12,000 | - - | 390,000 | 18 | 180,000 | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | ug/L | - - | - - | 14,000 | - - | 37,000 | 80 | 4,800 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Bromoform | ug/L | - - | - - | 140,000 | - - | 3,100,000 | 80 | 470,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Bromomethane | ug/L | - - | - - | 70,000 | 35 | 9,000 | 10 | 4,000 | 2 U | 2 U | 2 UJ | 2 UJ | 2 U | 2 U [2 U] | 5 U |
| Carbon Disulfide | ug/L | 13,000 | - - | 1,200,000 | - - | 550,000 | 800 | 250,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Carbon Tetrachloride | ug/L | - - | 96,000 | 4,600 | 45 | 2,400 | 5 | 370 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Chlorobenzene | ug/L | 160,000 | - - | 86,000 | 25 | 470,000 | 100 | 210,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Chloroethane | ug/L | 110,000 | - - | 440,000 | 1,100 | 5,700,000 | 430 | 5,700,000 | 1 U | 1 U | 1 UJ | 1 UJ | 1 U | 1 U [1 U] | 5 U |
| Chloroform | ug/L | - - | - - | 150,000 | 350 | 180,000 | 80 | 28,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Chloromethane | ug/L | 36,000 | 210,000 | 490,000 | - - | 45,000 | 260 | 8,600 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U |
| cis-1,2-Dichloroethene | ug/L | 530,000 | - - | 200,000 | 620 | 210,000 | 70 | 93,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| cis-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Cyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 U [1 U] | NA |
| Dibromochloromethane | ug/L | - - | - - | 18,000 | - - | 110,000 | 80 | 14,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U |
| Dibromomethane | ug/L | - - | - - | 530,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | ug/L | - - | - - | 300,000 | - - | 300,000 | 1,700 | 220,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U |
| Diethyl ether | ug/L | 650,000 | 61,000,000 | 35,000,000 | - - | 61,000,000 | 3,700 | 61,000,000 | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | ug/L | 43,000 | 170,000 | 170,000 | 18 | 170,000 | 700 | 110,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | ug/L | 29,000 | - - | 56,000 | 28 | 56,000 | 800 | 56,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 5 U |
| m&p-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 0.2 J | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 2 U |
| Methyl acetate | ug/L | - - | - - | - - | - - | - - | - - | - - | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | NA |
| Methyl tert-butyl ether | ug/L | - - | - - | 610,000 | 7,100 | 47,000,000 | 240 | 47,000,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Methylcyclohexane | ug/L | - - | - - | - - | - - | - - | - - | - - | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U [20 U] | NA |
| Methylene Chloride | ug/L | - - | - - | 220,000 | 1,500 | 1,400,000 | 5 | 220,000 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | ug/L | - - | - - | 5,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | ug/L | - - | - - | 15,000 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U |
| o-Xylene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| p-Isopropyltoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | ug/L | - - | - - | 4,400 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | ug/L | 140,000 | 310,000 | 9,700 | 80 | 310,000 | 100 | 170,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ [1 U] | 1 U |
| tert-Butylbenzene | ug/L | - - | - - | 8,900 | - - | - - | 80 | - - | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | ug/L | - - | 200,000 | 12,000 | 60 | 170,000 | 5 | 25,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Tetrahydrofuran | ug/L | 60,000 | 3,600,000 | 1,600,000 | 11,000 | 16,000,000 | 95 | 6,900,000 | NA | NA | NA | NA | NA | NA | 90 U |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-94-11 06/28/07 | RFI-94-11 11/02/07 | RFI-94-11 03/27/08 | RFI-94-11 06/19/08 | RFI-94-11 09/12/08 | RFI-94-11 12/05/08 | RFI-94-11 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | ug/L | 61,000 | - - | 530,000 | 270 | 530,000 | 1,000 | 530,000 | 0.2 J | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| trans-1,2-Dichloroethene | ug/L | 230,000 | - - | 220,000 | 1,500 | 200,000 | 100 | 85,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| trans-1,3-Dichloropropene | ug/L | - - | - - | - - | - - | - - | - - | - - | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| trans-1,4-Dichloro-2-butene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | ug/L | - - | 1,100,000 | 22,000 | 200 | 97,000 | 5 | 15,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Trichlorofluoromethane | ug/L | - - | 1,100,000 | 1,100,000 | - - | 1,100,000 | 2,600 | 1,100,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Vinyl Chloride | ug/L | 33,000 | - - | 1,000 | 13 | 13,000 | 2 | 1,100 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| **SVOC** | | | | | | | | | | | | | | | |
| 1,1'-Biphenyl | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | ug/L | - - | 300,000 | 19,000 | 99 | 300,000 | 70 | 300,000 | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | ug/L | - - | 160,000 | 160,000 | 13 | 160,000 | 600 | 160,000 | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | ug/L | - - | - - | 2,000 | 28 | 41,000 | 6.6 | 18,000 | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | ug/L | - - | - - | 6,400 | 17 | 74,000 | 75 | 16,000 | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | ug/L | - - | - - | 170,000 | - - | - - | 730 | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | ug/L | - - | - - | 10,000 | 5 | - - | 120 | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | ug/L | - - | - - | 48,000 | 11 | - - | 73 | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | ug/L | - - | - - | 520,000 | 380 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | ug/L | - - | - - | 8,600 | - - | - - | 7.7 | - - | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | ug/L | - - | - - | 6,700 | - - | - - | 1,800 | - - | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | ug/L | - - | - - | 94,000 | 18 | 1,100,000 | 45 | 490,000 | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ug/L | - - | - - | 25,000 | 19 | 25,000 | 260 | 25,000 | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | ug/L | - - | - - | 79,000 | - - | - - | 20 | - - | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | ug/L | - - | - - | 180 | 0.3 | - - | 1.1 | - - | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | ug/L | - - | - - | 79,000 | 7.4 | - - | 150 | - - | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ug/L | - - | - - | 4,200 | 38 | 4,200 | 1,300 | 4,200 | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | ug/L | - - | - - | 3,900 | - - | 3,900 | 52 | 3,900 | NA | NA | NA | NA | NA | NA | NA |
| Acetophenone | ug/L | - - | - - | 6,100,000 | - - | 6,100,000 | 1,500 | 6,100,000 | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ug/L | - - | - - | 43 | - - | 43 | 43 | 43 | NA | NA | NA | NA | NA | NA | NA |
| Atrazine | ug/L | - - | - - | 5,400 | 7.3 | - - | 3 | - - | NA | NA | NA | NA | NA | NA | NA |
| Benzaldehyde | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ug/L | - - | - - | 9.4 | - - | - - | 2.1 | - - | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ug/L | - - | - - | 1 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ug/L | - - | - - | 1.5 | - - | - - | 1.5 | - - | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ug/L | - - | - - | 1 | - - | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | ug/L | 17,000,000 | 17,000,000 | 5,700 | 1 | 210,000 | 2 | 38,000 | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | ug/L | - - | 340 | 320 | 25 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | ug/L | - - | - - | 2,700 | 67 | - - | 1,200 | - - | NA | NA | NA | NA | NA | NA | NA |
| Caprolactam | ug/L | - - | 1,000,000,000 | 390,000,000 | - - | - - | 5,800 | - - | NA | NA | NA | NA | NA | NA | NA |
| Carbazole | ug/L | - - | - - | 7,400 | 10 | - - | 85 | - - | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ug/L | - - | - - | 1.6 | - - | - - | 1.6 | - - | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | ug/L | - - | - - | - - | 4 | 10,000 | - - | 10,000 | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | ug/L | - - | - - | 1,100,000 | 110 | - - | 5,500 | - - | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | ug/L | - - | - - | 4,200,000 | - - | - - | 73,000 | - - | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | ug/L | - - | - - | 11,000 | 9.7 | - - | 880 | - - | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | ug/L | - - | - - | 400 | - - | - - | 130 | - - | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | ug/L | - - | - - | 210 | 1.6 | 210 | 210 | 210 | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ug/L | - - | - - | 2,000 | 12 | 2,000 | 880 | 2,000 | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | ug/L | - - | - - | 4.6 | 0.2 | 3,000 | 1 | 440 | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-94-11 06/28/07 | RFI-94-11 11/02/07 | RFI-94-11 03/27/08 | RFI-94-11 06/19/08 | RFI-94-11 09/12/08 | RFI-94-11 12/05/08 | RFI-94-11 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | ug/L | - - | - - | 400 | 0.053 | 3,200 | 15 | 1,600 | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | ug/L | - - | - - | 1,600 | - - | 420 | 50 | 130 | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | ug/L | - - | - - | 1,900 | 6.7 | 50,000 | 7.3 | 27,000 | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ug/L | - - | - - | 2 | - - | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA |
| Isophorone | ug/L | - - | 12,000,000 | 990,000 | 1,300 | - - | 770 | - - | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | ug/L | - - | - - | 810,000 | 30 | - - | 370 | - - | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | ug/L | - - | 31,000 | 31,000 | 11 | 31,000 | 520 | 31,000 | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | ug/L | - - | - - | 11,000 | 180 | 550,000 | 3.4 | 280,000 | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | ug/L | - - | - - | 360 | - - | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | ug/L | - - | - - | 35,000 | - - | - - | 270 | - - | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | ug/L | - - | - - | 200 | 2.8 | - - | 1 | - - | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ug/L | - - | - - | 1,000 | 2 | 1,000 | 52 | 1,000 | NA | NA | NA | NA | NA | NA | NA |
| Phenol | ug/L | - - | - - | 29,000,000 | 450 | - - | 4,400 | - - | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ug/L | - - | - - | 140 | - - | 140 | 140 | 140 | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | | | |
| Aroclor-1016 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA |
| **PCB-Dissolved** | | | | | | | | | | | | | | | |
| Aroclor-1016 (PCB-1016) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 (PCB-1221) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 (PCB-1232) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 (PCB-1242) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 (PCB-1248) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 (PCB-1254) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 (PCB-1260) (Dissolved) | ug/L | - - | - - | - - | - - | - - | - - | - - | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs (Dissolved) | ug/L | - - | - - | 3.3 | 0.2 | 45 | 0.5 | 45 | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | | | |
| Antimony | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA |
| Arsenic | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA |
| Barium | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA |
| Beryllium | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA |
| Cadmium | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA |
| Cobalt | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA |
| Copper | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA |
| Lead | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA |
| Manganese | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA |
| Mercury | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA |
| Nickel | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA |
| Selenium | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA |
| Silver | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA |
| Thallium | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA |
| Zinc | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic-Dissolved** | | | | | | | | | | | | | | | |
| Antimony (Dissolved) | ug/L | - - | - - | 68,000 | 130 | - - | 6 | - - | NA | NA | NA | NA | NA | NA | NA |
| Arsenic (Dissolved) | ug/L | - - | - - | 4,300 | 10 | - - | 10 | - - | NA | NA | NA | NA | NA | NA | NA |
| Barium (Dissolved) | ug/L | - - | - - | 14,000,000 | 1,308 | - - | 2,000 | - - | NA | NA | NA | NA | NA | NA | NA |
| Beryllium (Dissolved) | ug/L | - - | - - | 290,000 | 32.3 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA |
| Cadmium (Dissolved) | ug/L | - - | - - | 190,000 | 4.8 | - - | 5 | - - | NA | NA | NA | NA | NA | NA | NA |
| Chromium Total (Dissolved) | ug/L | - - | - - | 460,000 | 11 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA |
| Cobalt (Dissolved) | ug/L | - - | - - | 2,400,000 | 100 | - - | 40 | - - | NA | NA | NA | NA | NA | NA | NA |
| Copper (Dissolved) | ug/L | - - | - - | 7,400,000 | 21.6 | - - | 1,400 | - - | NA | NA | NA | NA | NA | NA | NA |
| Cyanide (dissolved) | ug/L | - - | - - | 57,000 | 5.2 | - - | 200 | - - | NA | NA | NA | NA | NA | NA | NA |
| Lead (Dissolved) | ug/L | - - | - - | - - | 30.9 | - - | 4 | - - | NA | NA | NA | NA | NA | NA | NA |
| Manganese (Dissolved) | ug/L | - - | - - | 9,100,000 | 4,767 | - - | 860 | - - | NA | NA | NA | NA | NA | NA | NA |
| Mercury (Dissolved) | ug/L | - - | - - | 56 | 0.0013 | 56 | 2 | 56 | NA | NA | NA | NA | NA | NA | NA |

| Location ID: / Date Collected: | Units | FE | GAI | GCC | GSI | NGVIA | RDW | RGVIA | RFI-94-11 06/28/07 | RFI-94-11 11/02/07 | RFI-94-11 03/27/08 | RFI-94-11 06/19/08 | RFI-94-11 09/12/08 | RFI-94-11 12/05/08 | RFI-94-11 10/18/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel (Dissolved) | ug/L | - - | - - | 74,000,000 | 124.3 | - - | 100 | - - | NA | NA | NA | NA | NA | NA | NA |
| Selenium (Dissolved) | ug/L | - - | - - | 970,000 | 5 | - - | 50 | - - | NA | NA | NA | NA | NA | NA | NA |
| Silver (Dissolved) | ug/L | - - | - - | 1,500,000 | 0.2 | - - | 34 | - - | NA | NA | NA | NA | NA | NA | NA |
| Thallium (Dissolved) | ug/L | - - | - - | 13,000 | 3.7 | - - | 2 | - - | NA | NA | NA | NA | NA | NA | NA |
| Vanadium (Dissolved) | ug/L | - - | - - | 970,000 | 12 | - - | 4.5 | - - | NA | NA | NA | NA | NA | NA | NA |
| Zinc (Dissolved) | ug/L | - - | - - | 110,000,000 | 282.7 | - - | 2,400 | - - | NA | NA | NA | NA | NA | NA | NA |

Notes:
FE - Flammability and Explosivity Screening Level
GAI - Groundwater Acute Inhalation Screening Level
GCC - Groundwater Contact Criteria
GSI - Groundwater/Surface Water Interface Criteria.
NGVIA - Non-Residential Groundwater Volatilization to Indoor Air Inhalation
RDW - Residential Drinking Water
RGVIA - Residential Groundwater Volatilization to Indoor Air Inhalation
NA - Not Analyzed
ug/L - micrograms per liter
Shaded and Bolded results exceeds one or more criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J - Indicates an estimated value.
R - Rejected.
UJ - A non-quatifiable hint of something below detection limit
D - Compound quantitated using a secondary dilution.
EJ - Exceed calibration range of GC/MS instrument. Estimated value.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>04/01/10 | Outfall 001<br>MP001<br>09/20/10 | Outfall 001<br>MP001<br>02/24/11 | Outfall 001<br>MP001<br>03/24/11 | Outfall 001<br>MP001<br>05/31/11 | Outfall 001<br>MP001<br>06/27/11 | Outfall 001<br>MP001<br>07/14/11 | Outfall 001<br>MP001<br>08/15/11 | Outfall 001<br>MP001<br>09/14/11 | Outfall 001<br>MP001<br>10/12/11 | Outfall 001<br>MP001<br>11/02/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 30 U | 30 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 | 1 U | 1 U | 1 | 1 U | 1 U | 1 U | 1 U | 2 | 2 | 1 |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>04/01/10 | Outfall 001<br>MP001<br>09/20/10 | Outfall 001<br>MP001<br>02/24/11 | Outfall 001<br>MP001<br>03/24/11 | Outfall 001<br>MP001<br>05/31/11 | Outfall 001<br>MP001<br>06/27/11 | Outfall 001<br>MP001<br>07/14/11 | Outfall 001<br>MP001<br>08/15/11 | Outfall 001<br>MP001<br>09/14/11 | Outfall 001<br>MP001<br>10/12/11 | Outfall 001<br>MP001<br>11/02/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA |
| 2,4-Dichlorophenol | 11 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| 2,4-Dimethylphenol | 380 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4-Dinitrophenol | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA |
| 2,4-Dinitrotoluene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2,6-Dinitrotoluene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Chloronaphthalene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Chlorophenol | 18 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Methylphenol | - - | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| 2-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA |
| 2-Nitrophenol | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 3&4-Methylphenol | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 3-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Chloroaniline | - - | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA |
| 4-Nitrophenol | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA |
| Acenaphthene | 38 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Acenaphthylene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Anthracene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Benzo(a)anthracene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(a)pyrene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(b)fluoranthene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(g,h,i)perylene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(k)fluoranthene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Butylbenzylphthalate | 67 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Chrysene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Dibenzofuran | 4 | ug/L | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA |
| Diethylphthalate | 110 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Dimethylphthalate | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Di-n-Octylphthalate | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Fluoranthene | 1.6 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA |
| Fluorene | 12 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachlorobenzene | 0.2 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachlorobutadiene | 0.053 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Hexachlorocyclopentadiene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>04/01/10 | Outfall 001<br>MP001<br>09/20/10 | Outfall 001<br>MP001<br>02/24/11 | Outfall 001<br>MP001<br>03/24/11 | Outfall 001<br>MP001<br>05/31/11 | Outfall 001<br>MP001<br>06/27/11 | Outfall 001<br>MP001<br>07/14/11 | Outfall 001<br>MP001<br>08/15/11 | Outfall 001<br>MP001<br>09/14/11 | Outfall 001<br>MP001<br>10/12/11 | Outfall 001<br>MP001<br>11/02/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Methylphenols, Total | 30 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA |
| Naphthalene | 11 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Nitrobenzene | 180 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| N-Nitrosodiphenylamine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Pentachlorophenol | 2.8 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Phenanthrene | 2 | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA |
| Phenol | 450 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| Pyrene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 1 | 1 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 1 U | 5 | 2 U | 2 U | 2 U | 2 U | 2 | 2 U | 3 | 2 U | 2 U |
| Barium | 1,308 | ug/L | 96 | 23 | 126 | 92 | 66 | 83 | 152 | 63 | 70 | 25 | 80 |
| Beryllium | 32.3 | ug/L | 1 U | 0.8 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.2 U | 0.5 U | 2 | 1.6 | 0.5 U | 0.5 U | 1.2 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | **45** | 5 U | 5 U | 5 U | **28** | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 3 | 6 | **31** | 6 | 4 U | 4 | **22** | 4 U | 6 | 12 | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | **12** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | 140 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 1 U | 1 U | 27 | 16 | 3 U | 5 | **73** | 14 | 20 | **37** | 3 U |
| Manganese | 4,767 | ug/L | 5 U | 5 | 95 | 35 | 10 | 18 | 298 | 5 U | 13 | 43 | 7 |
| Mercury | 1.3 | ng/L | 1.1 | **2.41** | **13** | **4.6** | **1.8** | **2.9** | **12** | **1.4** | 1.2 | **210** | **3.1** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 12 | 5 U | 5 U | 5 U | 5 U |
| Selenium | 5 | ug/L | 1 U | 5 U | 5 U | 5 U | 5 U | 5 U | **6** | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 0.4 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 1 U | 2 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | 20 U | 20 U | 61 | 20 U | 20 U | 20 U | 20 U |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 5 | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 12 | 48 | 235 | 36 | 5 U | 38 | 240 | 11 | 21 | 31 | 28 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | 1,000 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | 64,000 | 10,000 | 3,000 | 123,000 | 53,000 | 1,000 | 3,000 | 32,000 | 1,000 U |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>12/13/11 | Outfall 001<br>MP001<br>01/03/12 | Outfall 001<br>MP001<br>02/06/12 | Outfall 001<br>MP001<br>03/22/12 | Outfall 001<br>MP001<br>04/09/12 | Outfall 001<br>MP001<br>05/10/12 | Outfall 001<br>MP001<br>06/04/12 | Outfall 001<br>MP001<br>09/10/12 | Outfall 001<br>MP001<br>10/22/12 | Outfall 001<br>MP001<br>11/19/12 | Outfall 001<br>MP001<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 | 1 | 2 | 1 U | 1 | 1 U | 2 | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | NA | NA | NA | NA |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>12/13/11 | Outfall 001<br>MP001<br>01/03/12 | Outfall 001<br>MP001<br>02/06/12 | Outfall 001<br>MP001<br>03/22/12 | Outfall 001<br>MP001<br>04/09/12 | Outfall 001<br>MP001<br>05/10/12 | Outfall 001<br>MP001<br>06/04/12 | Outfall 001<br>MP001<br>09/10/12 | Outfall 001<br>MP001<br>10/22/12 | Outfall 001<br>MP001<br>11/19/12 | Outfall 001<br>MP001<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>12/13/11 | Outfall 001<br>MP001<br>01/03/12 | Outfall 001<br>MP001<br>02/06/12 | Outfall 001<br>MP001<br>03/22/12 | Outfall 001<br>MP001<br>04/09/12 | Outfall 001<br>MP001<br>05/10/12 | Outfall 001<br>MP001<br>06/04/12 | Outfall 001<br>MP001<br>09/10/12 | Outfall 001<br>MP001<br>10/22/12 | Outfall 001<br>MP001<br>11/19/12 | Outfall 001<br>MP001<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 3 | 2 U | 2 U | 2 U |
| Barium | 1,308 | ug/L | 87 | 96 | 104 | 90 | 89 | 69 | 75 | 56 | 45 | 60 | 61 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 11 | 4 U | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 10 | 6 | 14 | 8 | 4 | 3 U | 3 U | 3 U | 5 | 9 | 3 U |
| Manganese | 4,767 | ug/L | 7 | 7 | 5 U | 5 U | 5 U | 5 U | 5 U | 10 | 5 U | 5 U | 5 U |
| Mercury | 1.3 | ng/L | **1.6** | 0.51 O | 0.50 UO | 0.81 O | **2.4 O** | **2.6 O** | 1.2 O | **6.7 O** | **1.4 O** | 0.50 O | **1.5 O** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Thallium | 3.7 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | **14** | 2 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 7 | 14 | 5 U | 5 U | 5 | 10 | 5 U | **704** | 5 U | 6 | 8 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 4,000 | 3,000 | 3,000 | 4,000 | 9,000 | 2,000 | 5,000 | 19,000 | 4,000 | 3,000 | 2,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>04/01/10 | Outfall 002<br>MP002<br>09/20/10 | Outfall 002<br>MP002<br>10/27/10 | Outfall 002<br>MP002<br>11/22/10 | Outfall 002<br>MP002<br>12/20/10 | Outfall 002<br>MP002<br>01/26/11 | Outfall 002<br>MP002<br>02/24/11 | Outfall 002<br>MP002<br>03/24/11 | Outfall 002<br>MP002<br>04/29/11 | Outfall 002<br>MP002<br>05/31/11 | Outfall 002<br>MP002<br>06/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 13 | 10 [10] | 12 | 5 | 11 | 11 | 9 | 6 [6] | 8 | 4 | 4 |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 23 | 19 [19] | 14 | 4 | 21 | 25 | 17 | 12 [12] | 8 | 8 | 8 |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U | 30 U | 25 U | 25 U [25 U] | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 23 | 16 [15] | 9 | 5 U | 20 | 17 | 19 | 15 [14] | 9 | 12 | 15 |
| Chloroform | 350 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 9 | 10 [10] | 5 | 2 | 11 | 12 | 9 | 6 [6] | 3 | 5 | 5 |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 | 3 |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 4 |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>04/01/10 | Outfall 002<br>MP002<br>09/20/10 | Outfall 002<br>MP002<br>10/27/10 | Outfall 002<br>MP002<br>11/22/10 | Outfall 002<br>MP002<br>12/20/10 | Outfall 002<br>MP002<br>01/26/11 | Outfall 002<br>MP002<br>02/24/11 | Outfall 002<br>MP002<br>03/24/11 | Outfall 002<br>MP002<br>04/29/11 | Outfall 002<br>MP002<br>05/31/11 | Outfall 002<br>MP002<br>06/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 2 | 2 [2] | 1 | 1 U | 2 | 3 | 3 | 2 [2] | 2 | 3 | 2 |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 2 | 2 [2] | 1 | 1 U | 2 | 1 | 2 | 1 U [1] | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>04/01/10 | Outfall 002<br>MP002<br>09/20/10 | Outfall 002<br>MP002<br>10/27/10 | Outfall 002<br>MP002<br>11/22/10 | Outfall 002<br>MP002<br>12/20/10 | Outfall 002<br>MP002<br>01/26/11 | Outfall 002<br>MP002<br>02/24/11 | Outfall 002<br>MP002<br>03/24/11 | Outfall 002<br>MP002<br>04/29/11 | Outfall 002<br>MP002<br>05/31/11 | Outfall 002<br>MP002<br>06/27/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 6 | 1 U [1 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | **11** | 10 [9] | **18** | **47** | **224** | **19** | 10 | 6 [7] | 5 | 6 | 6 |
| Barium | 1,308 | ug/L | 521 | 449 [439] | 650 | 307 | 1,140 | 534 | 454 | 231 [234] | 196 | 254 | 222 |
| Beryllium | 32.3 | ug/L | 1 U | 0.8 U [0.8 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.2 U | 0.5 U [0.5 U] | 0.5 | 0.8 | 1.5 | 0.8 | 1.8 | 1.4 [1.5] | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U [5 U] | 5 U | **18** | **27** | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 8 | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 1 U | 1 U [1 U] | 14 | **69** | **161** | 10 | 4 U | 8 [8] | 14 | 6 | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | **11** | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | 4,940 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 1 U | 1 U [1 U] | 4 | **53** | **129** | 12 | 8 | 14 [13] | 17 | 6 | 3 U |
| Manganese | 4,767 | ug/L | 890 | 553 [550] | 904 | 1,400 | 3,470 | 945 | 689 | 394 [394] | 346 | 454 | 406 |
| Mercury | 1.3 | ng/L | 0.50 U | **1.21 [1.45]** | **2.3** | **9.8** | **57** | 0.81 | 0.52 | **5.6 [5.1]** | **4.6** | **2.7** | **88** |
| Nickel | 124.3 | ug/L | 5 U | 5 U [5 U] | 5 | 15 | 13 | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Selenium | 5 | ug/L | 1 | 5 U [5 U] | 5 | 5 U | 5 U | 5 U | **7** | 5 U [5 U] | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | **1.4** | 0.5 U [0.5 U] | 0.5 U | **0.6** | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 0.4 U [0.4 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | 20 U |
| Vanadium | 12 | ug/L | 4 U | 4 U [4 U] | 4 U | 12 | **13** | 4 U | 4 U | 4 U [4 U] | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 8 | 13 [13] | 68 | **335** | **1,290** | 35 | 5 U | 28 [28] | 29 | 15 | 13 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | 1,000 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | NA | NA | NA | NA | 7,000 | 11,000 [13,000] | 24,000 | 11,000 | 32,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>07/14/11 | Outfall 002<br>MP002<br>08/15/11 | Outfall 002<br>MP002<br>09/14/11 | Outfall 002<br>MP002<br>10/12/11 | Outfall 002<br>MP002<br>11/02/11 | Outfall 002<br>MP002<br>12/13/11 | Outfall 002<br>MP002<br>01/03/12 | Outfall 002<br>MP002<br>02/06/12 | Outfall 002<br>MP002<br>03/22/12 | Outfall 002<br>MP002<br>04/09/12 | Outfall 002<br>MP002<br>05/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | 5 | 22 [29] | 5 | 5 [5] | 5 [5] | 5 [5] | 7 | 4 | 4 | 4 [4] | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,1-Dichloroethane | 740 | ug/L | 13 | 13 [14] | 8 | 12 [11] | 11 [11] | 9 [10] | 10 | 8 | 8 | 11 [11] | NA |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 [2] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 | 1 U [1 U] | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U [25 U] | 25 U | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U | 25 U | 25 U | 25 U [25 U] | NA |
| 2-Hexanone | - - | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U [50 U] | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U [50 U] | NA |
| Acetone | 1,700 | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U [50 U] | NA |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U [2 U] | NA |
| Benzene | 200 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 2 | 1 U [1 U] | NA |
| Bromobenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromochloromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromoform | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Bromomethane | 35 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Chloroethane | 1,100 | ug/L | 16 | 12 [11] | 8 | 14 [14] | 14 [14] | 13 [15] | 11 | 9 | 12 | 12 [12] | NA |
| Chloroform | 350 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Chloromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | 8 | 8 [7] | 5 | 10 [10] | 9 [9] | 19 [20] | 24 | 29 | 62 | 48 [48] | NA |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Dibromomethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Diethyl ether | - - | ug/L | 10 U | 10 U [10 U] | 10 U | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U [10 U] | NA |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 2 | 1 U [1 U] | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Iodomethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| m&p-Xylene | - - | ug/L | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U [2 U] | 2 U | 2 U | 4 | 2 U [2 U] | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| Naphthalene | 11 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| o-Xylene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 2 | 1 U [1 U] | NA |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | NA |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Styrene | 80 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 | 4 | 2 [2] | NA |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U [90 U] | 90 U | 90 U [90 U] | 90 U [90 U] | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U [90 U] | NA |
| Toluene | 270 | ug/L | 1 U | 1 [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 3 | 1 U [1 U] | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>07/14/11 | Outfall 002<br>MP002<br>08/15/11 | Outfall 002<br>MP002<br>09/14/11 | Outfall 002<br>MP002<br>10/12/11 | Outfall 002<br>MP002<br>11/02/11 | Outfall 002<br>MP002<br>12/13/11 | Outfall 002<br>MP002<br>01/03/12 | Outfall 002<br>MP002<br>02/06/12 | Outfall 002<br>MP002<br>03/22/12 | Outfall 002<br>MP002<br>04/09/12 | Outfall 002<br>MP002<br>05/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Trichloroethene | 200 | ug/L | 3 | 2 [2] | 1 U | 2 [2] | 2 [2] | 4 [4] | 4 | 4 | 8 | 7 [6] | NA |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | NA |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 [1] | 1 | 2 | 3 | 2 [2] | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | 4 U [4 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | 25 U [25 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | 25 U [25 U] | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | 20 U [20 U] | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | 25 U [25 U] | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | 20 U [20 U] | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | 25 U [25 U] | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | 25 U [25 U] | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | 1 U [1] | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | 1 U [1] | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | 1 U [1] | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | 2 U [2 U] | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | 4 U [4 U] | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | 1 U [1 U] | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | 2 U [2 U] | NA | NA | NA | NA | NA | NA | NA |

| Outfall: Sample Location: Date Collected: | GSI | Units | Outfall 002 MP002 07/14/11 | Outfall 002 MP002 08/15/11 | Outfall 002 MP002 09/14/11 | Outfall 002 MP002 10/12/11 | Outfall 002 MP002 11/02/11 | Outfall 002 MP002 12/13/11 | Outfall 002 MP002 01/03/12 | Outfall 002 MP002 02/06/12 | Outfall 002 MP002 03/22/12 | Outfall 002 MP002 04/09/12 | Outfall 002 MP002 05/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | 10 U [10 U] | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | 2 U [2 U] | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | 5 U [5 U] | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Arsenic | 10 | ug/L | 7 | 10 [10] | 7 | **11 [11]** | **16 [11]** | 9 [9] | 10 | 9 | 9 | **12 [9]** | 9 |
| Barium | 1,308 | ug/L | 311 | 298 [298] | 148 | 317 [319] | 332 [310] | 307 [307] | 300 | 273 | 293 | 298 [280] | 231 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.7 [0.7] | 0.5 U | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U | 0.5 | 0.5 U | 0.5 U [0.5 U] | 0.5 U |
| Chromium Total | 11 | ug/L | 11 | 5 U [5 U] | 5 U | **11 [12]** | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Copper | 21.6 | ug/L | 5 | 4 U [4 U] | 16 | 4 U [4 U] | **230 [148]** | 4 U [4 U] | 4 | 4 U | 4 U | 10 [4 U] | **40** |
| Cyanide (total) | 5.2 | ug/L | 5 U | **10 [7]** | 5 U | 5 U [5 U] | **7 [8]** | **20 [5 U]** | **7** | 5 U | **9** | **9 [10]** | **9** |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | 15 [13] | 28 | 3 U [3 U] | 12 [4] | 6 [5] | 7 | 9 | 6 | 10 [3 U] | 8 |
| Manganese | 4,767 | ug/L | 477 | 529 [527] | 467 | 523 [528] | 779 [565] | 590 [595] | 554 | 542 | 777 | 764 [601] | 673 |
| Mercury | 1.3 | ng/L | **2.0** | **2.3** | **6.9** | **11** | **7.5** | 1.3 | **3.0 O** | **2.9 O** | **1.6 O** | **3.1 O** | **1.6 O** |
| Nickel | 124.3 | ug/L | 9 | 5 U [5 U] | 5 U | 8 [8] | 5 U [5 U] | 5 U [6] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 |
| Selenium | 5 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Silver | 0.2 | ug/L | **0.6** | 0.5 U [0.5 U] | 0.5 U | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 1 U [1 U] | 2 U | 1 U [1 U] | 2 U [2 U] | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U |
| Titanium | - - | ug/L | 20 U | 20 U [20 U] | 20 U | 20 U [20 U] | 20 U [20 U] | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U [7] | 9 | 4 U [4 U] | 4 U [4 U] | 4 U [4 U] | 4 U | 4 U | 4 U | 4 U [4 U] | 4 U |
| Zinc | 282.7 | ug/L | 8 | 8 [8] | 21 | 5 U [5 U] | 24 [5 U] | 5 U [5 U] | 32 | 5 U | 7 | 27 [6] | 40 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 8,000 | 12,000 [12,000] | 914,000 | 16,000 [16,000] | 386,000 [68,000] | 13,000 [9,000] | 22,000 | 10,000 | 8,000 | 22,000 [18,000] | 36,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>06/04/12 | Outfall 002<br>MP002<br>07/09/12 | Outfall 002<br>MP002<br>08/06/12 | Outfall 002<br>MP002<br>09/10/12 | Outfall 002<br>MP002<br>10/22/12 | Outfall 002<br>MP002<br>11/19/12 | Outfall 002<br>MP002<br>12/18/12 | Outfall 003<br>MP003<br>03/31/10 | Outfall 003<br>MP003<br>09/20/10 | Outfall 003<br>MP003<br>10/27/10 | Outfall 003<br>MP003<br>11/22/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | NA | NA | NA | 30 U | 30 U | 30 U | 30 U |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | NA | NA | NA | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 | 1 U | 1 U |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | NA | NA | NA | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>06/04/12 | Outfall 002<br>MP002<br>07/09/12 | Outfall 002<br>MP002<br>08/06/12 | Outfall 002<br>MP002<br>09/10/12 | Outfall 002<br>MP002<br>10/22/12 | Outfall 002<br>MP002<br>11/19/12 | Outfall 002<br>MP002<br>12/18/12 | Outfall 003<br>MP003<br>03/31/10 | Outfall 003<br>MP003<br>09/20/10 | Outfall 003<br>MP003<br>10/27/10 | Outfall 003<br>MP003<br>11/22/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 30 U | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 30 U | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 30 U | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 30 U | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 30 U | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 002<br>MP002<br>06/04/12 | Outfall 002<br>MP002<br>07/09/12 | Outfall 002<br>MP002<br>08/06/12 | Outfall 002<br>MP002<br>09/10/12 | Outfall 002<br>MP002<br>10/22/12 | Outfall 002<br>MP002<br>11/19/12 | Outfall 002<br>MP002<br>12/18/12 | Outfall 003<br>MP003<br>03/31/10 | Outfall 003<br>MP003<br>09/20/10 | Outfall 003<br>MP003<br>10/27/10 | Outfall 003<br>MP003<br>11/22/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | **0.064 O** | **0.051 O** | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | NA | NA | NA | NA | NA | NA | NA | 3 | 1 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 9 | 10 | 9 | 8 | **47** | **11** | 9 | 2 | 2 U | 3 | 4 |
| Barium | 1,308 | ug/L | NA | NA | NA | NA | NA | NA | NA | 115 | 67 | 71 | 169 |
| Beryllium | 32.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 0.8 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | 0.2 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | **28** | 5 U | 5 U | 5 U | 5 U | 5 U | 7 |
| Cobalt | 100 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 7 | 4 U | 4 U | 21 | **124** | 4 U | 4 U | 2 | 2 | 4 U | 4 |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | **6** | **8** | 5 U | **8** | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 810 | NA | NA | NA |
| Lead | 30.9 | ug/L | NA | 3 U | NA | NA | **80** | NA | NA | 1 U | 1 U | 4 | 3 U |
| Manganese | 4,767 | ug/L | NA | NA | NA | NA | NA | NA | NA | 231 | 61 | 73 | 213 |
| Mercury | 1.3 | ng/L | **29 O** | **8.4 O** | 0.94 | NA | NA | **1.7 O** | **1.8 O** | 0.50 U | **1.35** | **5.8** | **3.2** |
| Nickel | 124.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U | 9 |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 1 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.2 U | 0.2 U | **0.3** | 0.2 U | **0.4** | **0.3** | 0.2 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | 0.4 U | 1 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | NA | 4 U | NA | NA | **13** | NA | NA | 4 U | 4 U | 4 U | 7 |
| Zinc | 282.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 9 | 8 | 27 | 30 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1,000 U | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 19,000 | 166,000 | 13,000 | 153,000 | 687,000 | 8,000 | 11,000 | NA | NA | NA | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>12/20/10 | Outfall 003<br>MP003<br>01/26/11 | Outfall 003<br>MP003<br>02/24/11 | Outfall 003<br>MP003<br>03/24/11 | Outfall 003<br>MP003<br>04/29/11 | Outfall 003<br>MP003<br>05/31/11 | Outfall 003<br>MP003<br>06/27/11 | Outfall 003<br>MP003<br>07/14/11 | Outfall 003<br>MP003<br>08/15/11 | Outfall 003<br>MP003<br>09/14/11 | Outfall 003<br>MP003<br>10/12/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 30 U | 30 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>12/20/10 | Outfall 003<br>MP003<br>01/26/11 | Outfall 003<br>MP003<br>02/24/11 | Outfall 003<br>MP003<br>03/24/11 | Outfall 003<br>MP003<br>04/29/11 | Outfall 003<br>MP003<br>05/31/11 | Outfall 003<br>MP003<br>06/27/11 | Outfall 003<br>MP003<br>07/14/11 | Outfall 003<br>MP003<br>08/15/11 | Outfall 003<br>MP003<br>09/14/11 | Outfall 003<br>MP003<br>10/12/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 | 2 | 2 | 1 | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4 U |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 25 U |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4 U |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>12/20/10 | Outfall 003<br>MP003<br>01/26/11 | Outfall 003<br>MP003<br>02/24/11 | Outfall 003<br>MP003<br>03/24/11 | Outfall 003<br>MP003<br>04/29/11 | Outfall 003<br>MP003<br>05/31/11 | Outfall 003<br>MP003<br>06/27/11 | Outfall 003<br>MP003<br>07/14/11 | Outfall 003<br>MP003<br>08/15/11 | Outfall 003<br>MP003<br>09/14/11 | Outfall 003<br>MP003<br>10/12/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | 0.2 | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 3 | 3 | 2 U | 3 | 2 U | 3 | 3 | 7 | 5 | 7 | 4 |
| Barium | 1,308 | ug/L | 155 | 155 | 60 | 83 | 71 | 125 | 155 | 221 | 151 | 278 | 164 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1.7 | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.6 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 10 | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 4 U | 4 U | 7 | 8 | 4 | 4 | 4 U | 9 | 8 | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | **10** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 7 | 3 U | 17 | 28 | 9 | 6 | 3 U | 11 | 26 | **34** | 3 U |
| Manganese | 4,767 | ug/L | 205 | 253 | 88 | 704 | 91 | 197 | 268 | 1,450 | 852 | 436 | 229 |
| Mercury | 1.3 | ng/L | 0.66 | 0.92 | **3.6** | **4.1** | **6.3** | **2.5** | **1.8** | 1.2 | **3.3** | **8.3** | **2.5** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 7 | 11 | 7 | 15 | 11 |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | **0.7** | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 15 | 29 | 50 | 82 | 50 | 32 | 14 | 73 | 44 | 14 | 11 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | 15,000 | 22,000 | 6,000 | 6,000 | 4,000 | 7,000 | 39,000 | 5,000 | 3,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>11/02/11 | Outfall 003<br>MP003<br>12/13/11 | Outfall 003<br>MP003<br>01/03/12 | Outfall 003<br>MP003<br>02/06/12 | Outfall 003<br>MP003<br>03/22/12 | Outfall 003<br>MP003<br>04/09/12 | Outfall 003<br>MP003<br>05/10/12 | Outfall 003<br>MP003<br>06/04/12 | Outfall 003<br>MP003<br>07/09/12 | Outfall 003<br>MP003<br>08/06/12 | Outfall 003<br>MP003<br>09/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U [25 U] | NA | NA | NA |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA | NA | NA |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | NA | NA | NA |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U | 1 | 1 U | 1 | 1 | 1 | 1 U | 1 [1] | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U [90 U] | NA | NA | NA |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>11/02/11 | Outfall 003<br>MP003<br>12/13/11 | Outfall 003<br>MP003<br>01/03/12 | Outfall 003<br>MP003<br>02/06/12 | Outfall 003<br>MP003<br>03/22/12 | Outfall 003<br>MP003<br>04/09/12 | Outfall 003<br>MP003<br>05/10/12 | Outfall 003<br>MP003<br>06/04/12 | Outfall 003<br>MP003<br>07/09/12 | Outfall 003<br>MP003<br>08/06/12 | Outfall 003<br>MP003<br>09/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Trichloroethene | 200 | ug/L | 1 | 2 | 1 U | 2 | 1 | 2 | 1 U | 1 [1] | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>11/02/11 | Outfall 003<br>MP003<br>12/13/11 | Outfall 003<br>MP003<br>01/03/12 | Outfall 003<br>MP003<br>02/06/12 | Outfall 003<br>MP003<br>03/22/12 | Outfall 003<br>MP003<br>04/09/12 | Outfall 003<br>MP003<br>05/10/12 | Outfall 003<br>MP003<br>06/04/12 | Outfall 003<br>MP003<br>07/09/12 | Outfall 003<br>MP003<br>08/06/12 | Outfall 003<br>MP003<br>09/10/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | 0.2 | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U |
| Arsenic | 10 | ug/L | 4 | 8 | 5 | 4 | 3 | 7 | 3 | 3 [3] | **14 [4]** | 4 [4] | 5 |
| Barium | 1,308 | ug/L | 173 | 186 | 151 | 135 | 150 | 170 | 97 | 139 [136] | 265 [183] | 156 [164] | 153 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U |
| Copper | 21.6 | ug/L | 4 U | 8 | 5 | 4 U | 4 U | 6 | 7 | 4 U [4 U] | 16 [4 U] | 4 U [4 U] | 5 |
| Cyanide (total) | 5.2 | ug/L | **7** | **10** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 [5] | **8** |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 9 | 20 | 9 | 15 | 8 | 6 | 3 U | 3 U [3 U] | 22 [3 U] | 6 [6] | 5 |
| Manganese | 4,767 | ug/L | 224 | 686 | 421 | 234 | 341 | 734 | 143 | 227 [224] | 2,140 [275] | 242 [243] | 238 |
| Mercury | 1.3 | ng/L | **17** | **1.7** | **1.7 O** | 1.2 O | 1.3 O | 1.0 O | **3.4 O** | **1.4 O** | **30 O** | 1.1 | **4.3 O** |
| Nickel | 124.3 | ug/L | 8 | 10 | 10 | 7 | 8 | 9 | 9 | 10 [10] | 19 [16] | 13 [13] | 9 |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U [0.2 U] | 0.2 U [0.2 U] | **0.3 [0.2 U]** | 0.2 U |
| Thallium | 3.7 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U [2 U] | 2 U |
| Titanium | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 [4 U] | 4 U [4 U] | 4 U |
| Zinc | 282.7 | ug/L | 9 | 50 | 42 | 11 | 8 | 32 | 16 | 7 [7] | 79 [8] | 15 [7] | 9 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 29,000 | 18,000 | 7,000 | 4,000 | 2,000 | 87,000 | 6,000 | 8,000 [9,000] | 21,000 [6,000] | 10,000 [35,000] | 9,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>10/22/12 | Outfall 003<br>MP003<br>11/19/12 | Outfall 003<br>MP003<br>12/18/12 | Outfall 004<br>MP004<br>03/31/10 | Outfall 004<br>MP004<br>09/20/10 | Outfall 004<br>MP004<br>10/29/10 | Outfall 004<br>MP004<br>11/22/10 | Outfall 004<br>MP004<br>12/20/10 | Outfall 004<br>MP004<br>01/26/11 | Outfall 005<br>MP005<br>03/31/10 | Outfall 005<br>MP005<br>09/20/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | 30 U | 30 U | NA | 30 U | 30 U [30 U] | 30 U | NA | NA |
| 2-Hexanone | - - | ug/L | NA | NA | NA | 50 U | 50 U | NA | 50 U | 50 U [50 U] | 50 U | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | 50 U | 50 U | NA | 50 U | 50 U [50 U] | 50 U | NA | NA |
| Acetone | 1,700 | ug/L | NA | NA | NA | 50 U | 50 U | NA | 50 U | 50 U [50 U] | 50 U | NA | NA |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | 2 U | 2 U | NA | 2 U | 2 U [2 U] | 2 U | NA | NA |
| Benzene | 200 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Bromobenzene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Bromochloromethane | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 | 1 U [1 U] | 1 U | NA | NA |
| Bromoform | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Bromomethane | 35 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Chloroform | 350 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 2 | 1 U [1 U] | 1 U | NA | NA |
| Chloromethane | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | 2 | 2 | NA | 1 U | 3 [3] | 1 U | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Dibromomethane | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Diethyl ether | - - | ug/L | NA | NA | NA | 10 U | 10 U | NA | 10 U | 10 U [10 U] | 10 U | NA | NA |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Iodomethane | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| m&p-Xylene | - - | ug/L | NA | NA | NA | 2 U | 2 U | NA | 2 U | 2 U [2 U] | 2 U | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| o-Xylene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | NA | NA |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Styrene | 80 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | 90 U | 90 U | NA | 90 U | 90 U [90 U] | 90 U | NA | NA |
| Toluene | 270 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>10/22/12 | Outfall 003<br>MP003<br>11/19/12 | Outfall 003<br>MP003<br>12/18/12 | Outfall 004<br>MP004<br>03/31/10 | Outfall 004<br>MP004<br>09/20/10 | Outfall 004<br>MP004<br>10/29/10 | Outfall 004<br>MP004<br>11/22/10 | Outfall 004<br>MP004<br>12/20/10 | Outfall 004<br>MP004<br>01/26/11 | Outfall 005<br>MP005<br>03/31/10 | Outfall 005<br>MP005<br>09/20/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Trichloroethene | 200 | ug/L | NA | NA | NA | 1 | 4 | NA | 1 | 4 [4] | 1 U | NA | NA |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 U [1 U] | 1 U | NA | NA |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | 1 U | 1 U | NA | 1 U | 1 [1] | 1 U | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | 4 U | NA | NA | NA | NA | NA | 4 U | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | 30 U | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | 30 U | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | 20 U | NA | NA | NA | NA | NA | 20 U | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | 30 U | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | 20 U | NA | NA | NA | NA | NA | 20 U | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | 30 U | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | 30 U | NA | NA | NA | NA | NA | 30 U | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Anthracene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Chrysene | - - | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | 2 U | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | 4 U | NA | NA | NA | NA | NA | 4 U | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | 1 U | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | 2 U | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 003<br>MP003<br>10/22/12 | Outfall 003<br>MP003<br>11/19/12 | Outfall 003<br>MP003<br>12/18/12 | Outfall 004<br>MP004<br>03/31/10 | Outfall 004<br>MP004<br>09/20/10 | Outfall 004<br>MP004<br>10/29/10 | Outfall 004<br>MP004<br>11/22/10 | Outfall 004<br>MP004<br>12/20/10 | Outfall 004<br>MP004<br>01/26/11 | Outfall 005<br>MP005<br>03/31/10 | Outfall 005<br>MP005<br>09/20/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | 10 U | NA | NA | NA | NA | NA | 10 U | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | 2 U | NA |
| Phenol | 450 | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| Pyrene | - - | ug/L | NA | NA | NA | 5 U | NA | NA | NA | NA | NA | 5 U | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | 0.2 | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 2 | 1 U | NA | 5 U | 5 U [5 U] | 5 U | 1 | 1 U |
| Arsenic | 10 | ug/L | 3 | 5 | 5 | 1 | 2 U | NA | 2 U | 2 U [2 U] | 5 | 6 | 7 |
| Barium | 1,308 | ug/L | 133 | 208 | 165 | 96 | 84 | NA | 52 | 100 [98] | 140 | 110 | 95 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 0.8 U | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 0.8 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.2 U | 0.5 U | NA | 0.5 U | 0.5 U [0.5 U] | 1.6 | 0.2 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U | 5 U [5 U] | **18** | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 4 U | 4 U | 4 U | 2 | 2 | NA | 4 | 4 U [4 U] | **45** | 1 U | 1 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | **6** | 5 U | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | 340 | NA | NA | NA | NA | NA | 1,510 | NA |
| Lead | 30.9 | ug/L | 13 | 14 | 3 U | 1 U | 1 U | NA | 3 U | 9 [3 U] | **109** | 1 U | 1 U |
| Manganese | 4,767 | ug/L | 182 | 376 | 288 | 117 | 27 | NA | 93 | 54 [52] | 1,070 | 173 | 126 |
| Mercury | 1.3 | ng/L | **1.5 O** | **7.9 O** | **1.5 O** | 0.76 | 0.947 | NA | **4.2** | 0.51 U [0.51 U] | **92** | 0.50 U | 0.533 |
| Nickel | 124.3 | ug/L | 10 | 16 | 13 | 5 U | 5 U | NA | 5 U | 5 U [5 U] | 11 | 5 U | 5 U |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 2 | 5 U | NA | 5 U | 5 U [5 U] | 5 U | 1 U | 5 U |
| Silver | 0.2 | ug/L | 0.2 U | 0.2 U | 0.2 U | 0.5 U | 0.5 U | NA | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 2 U | 3 | 2 U | 1 U | 0.4 U | NA | 1 U | 1 U [1 U] | 1 U | 1 U | 0.4 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | NA | 4 U | 4 U [4 U] | 10 | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 16 | 10 | 7 | 11 | 12 | NA | 33 | 7 [10] | **486** | 8 | 7 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | 1,000 U | NA | NA | NA | NA | NA | 1,000 U | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 9,000 | 3,000 | 15,000 | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>10/27/10 | Outfall 005<br>MP005<br>11/22/10 | Outfall 005<br>MP005<br>12/20/10 | Outfall 005<br>MP005<br>01/26/11 | Outfall 005<br>MP005<br>02/24/11 | Outfall 005<br>MP005<br>03/24/11 | Outfall 005<br>MP005<br>04/29/11 | Outfall 005<br>MP005<br>05/31/11 | Outfall 005<br>MP005<br>06/27/11 | Outfall 005<br>MP005<br>07/14/11 | Outfall 005<br>MP005<br>08/15/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | 80 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Toluene | 270 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>10/27/10 | Outfall 005<br>MP005<br>11/22/10 | Outfall 005<br>MP005<br>12/20/10 | Outfall 005<br>MP005<br>01/26/11 | Outfall 005<br>MP005<br>02/24/11 | Outfall 005<br>MP005<br>03/24/11 | Outfall 005<br>MP005<br>04/29/11 | Outfall 005<br>MP005<br>05/31/11 | Outfall 005<br>MP005<br>06/27/11 | Outfall 005<br>MP005<br>07/14/11 | Outfall 005<br>MP005<br>08/15/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>10/27/10 | Outfall 005<br>MP005<br>11/22/10 | Outfall 005<br>MP005<br>12/20/10 | Outfall 005<br>MP005<br>01/26/11 | Outfall 005<br>MP005<br>02/24/11 | Outfall 005<br>MP005<br>03/24/11 | Outfall 005<br>MP005<br>04/29/11 | Outfall 005<br>MP005<br>05/31/11 | Outfall 005<br>MP005<br>06/27/11 | Outfall 005<br>MP005<br>07/14/11 | Outfall 005<br>MP005<br>08/15/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | 0.2 | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 5 | **24** | **54** | **19 [123]** | 8 | 6 | 5 | 8 | 9 | **11** | 9 |
| Barium | 1,308 | ug/L | 94 | 276 | 166 | 123 [267] | 92 | 71 | 58 | 73 | 78 | 88 | 86 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 1.5 | 0.5 | 0.5 U [0.6] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | **21** | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 9 | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 4 U | **37** | 7 | 4 U [7] | 4 U | 4 U | 5 | 4 | 4 U | 4 | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | **132** | **34** | 3 U [7] | 11 | 18 | 6 | 4 | 3 U | 6 | 17 |
| Manganese | 4,767 | ug/L | 126 | 2,560 | 784 | 229 [744] | 165 | 145 | 127 | 195 | 189 | 201 | 123 |
| Mercury | 1.3 | ng/L | 0.86 | 1.3 | 0.56 | 0.52 [0.51 U] | 0.76 | **1.8** | **8.1** | **4.4** | **8.1** | **37** | **2.9** |
| Nickel | 124.3 | ug/L | 5 U | **245** | 5 U | 5 U [5 U] | 5 U | 5 U | 6 | 5 | 5 U | 8 | 5 U |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | **0.8** | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 20 U | 20 U | 20 U | 20 U |
| Vanadium | 12 | ug/L | 4 U | 6 | 4 U | 4 U [4 U] | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 15 | **816** | 171 | 23 [196] | 5 U | 12 | 23 | 9 | 5 | 22 | 6 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | NA | NA | 6,000 | 1,000 | 12,000 | 7,000 | 5,000 | 4,000 | 6,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>09/14/11 | Outfall 005<br>MP005<br>10/12/11 | Outfall 005<br>MP005<br>11/02/11 | Outfall 005<br>MP005<br>12/13/11 | Outfall 005<br>MP005<br>01/03/12 | Outfall 005<br>MP005<br>02/06/12 | Outfall 005<br>MP005<br>03/22/12 | Outfall 005<br>MP005<br>04/09/12 | Outfall 005<br>MP005<br>05/10/12 | Outfall 005<br>MP005<br>06/04/12 | Outfall 005<br>MP005<br>08/06/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | 80 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Toluene | 270 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>09/14/11 | Outfall 005<br>MP005<br>10/12/11 | Outfall 005<br>MP005<br>11/02/11 | Outfall 005<br>MP005<br>12/13/11 | Outfall 005<br>MP005<br>01/03/12 | Outfall 005<br>MP005<br>02/06/12 | Outfall 005<br>MP005<br>03/22/12 | Outfall 005<br>MP005<br>04/09/12 | Outfall 005<br>MP005<br>05/10/12 | Outfall 005<br>MP005<br>06/04/12 | Outfall 005<br>MP005<br>08/06/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>09/14/11 | Outfall 005<br>MP005<br>10/12/11 | Outfall 005<br>MP005<br>11/02/11 | Outfall 005<br>MP005<br>12/13/11 | Outfall 005<br>MP005<br>01/03/12 | Outfall 005<br>MP005<br>02/06/12 | Outfall 005<br>MP005<br>03/22/12 | Outfall 005<br>MP005<br>04/09/12 | Outfall 005<br>MP005<br>05/10/12 | Outfall 005<br>MP005<br>06/04/12 | Outfall 005<br>MP005<br>08/06/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1221 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1232 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1242 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1248 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1254 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Aroclor-1260 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| Total PCBs | 0.2 | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U | 0.1 U |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Arsenic | 10 | ug/L | **79** | **131** | **17** | **13** | **39** | 9 | **11** | 8 | 7 | 9 | 8 |
| Barium | 1,308 | ug/L | 256 | 170 | 93 | 102 | 101 | 98 | 91 | 81 | 78 | NA | NA |
| Beryllium | 32.3 | ug/L | 1.6 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Cadmium | 4.8 | ug/L | 2.2 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA |
| Chromium Total | 11 | ug/L | 7 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U |
| Cobalt | 100 | ug/L | 7 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Copper | 21.6 | ug/L | **51** | 9 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | **377** | 30 | 8 | **191** | 8 | 10 | 7 | 3 U | 3 U | 3 U | 7 |
| Manganese | 4,767 | ug/L | 2,950 | 547 | 131 | 226 | 490 | 144 | 159 | 127 | 121 | 115 | 104 |
| Mercury | 1.3 | ng/L | 1.3 | 0.50 U | **3.7** | **8.7** | **7.8 O** | **8.6 O** | 1.1 O | 0.50 UO | 1.3 O | **7.3 O** | **1.4** |
| Nickel | 124.3 | ug/L | 103 | 6 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U | 0.2 U |
| Thallium | 3.7 | ug/L | 2 U | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA |
| Titanium | - - | ug/L | 20 | 20 U | 20 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 | 4 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | NA | NA |
| Zinc | 282.7 | ug/L | **668** | 58 | 6 | 16 | 22 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 11,000 | 8,000 | 13,000 | 59,000 | 36,000 | 5,000 | 40,000 | 5,000 | 6,000 | 12,000 | 106,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>09/10/12 | Outfall 005<br>MP005<br>10/22/12 | Outfall 005<br>MP005<br>11/19/12 | Outfall 005<br>MP005<br>12/18/12 | Outfall 006<br>MP006<br>03/31/10 | Outfall 006<br>MP006<br>09/21/10 | Outfall 006<br>MP006<br>10/27/10 | Outfall 006<br>MP006<br>11/22/10 | Outfall 006<br>MP006<br>12/20/10 | Outfall 006<br>MP006<br>01/26/11 | Outfall 006<br>MP006<br>02/24/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U | 25 U |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>09/10/12 | Outfall 005<br>MP005<br>10/22/12 | Outfall 005<br>MP005<br>11/19/12 | Outfall 005<br>MP005<br>12/18/12 | Outfall 006<br>MP006<br>03/31/10 | Outfall 006<br>MP006<br>09/21/10 | Outfall 006<br>MP006<br>10/27/10 | Outfall 006<br>MP006<br>11/22/10 | Outfall 006<br>MP006<br>12/20/10 | Outfall 006<br>MP006<br>01/26/11 | Outfall 006<br>MP006<br>02/24/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 005<br>MP005<br>09/10/12 | Outfall 005<br>MP005<br>10/22/12 | Outfall 005<br>MP005<br>11/19/12 | Outfall 005<br>MP005<br>12/18/12 | Outfall 006<br>MP006<br>03/31/10 | Outfall 006<br>MP006<br>09/21/10 | Outfall 006<br>MP006<br>10/27/10 | Outfall 006<br>MP006<br>11/22/10 | Outfall 006<br>MP006<br>12/20/10 | Outfall 006<br>MP006<br>01/26/11 | Outfall 006<br>MP006<br>02/24/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | 0.1 U | 0.1 U | 0.1 U | 0.1 U | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | NA | NA | NA | NA | 1 | 1 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | **17** | 7 | **314** | **21** | 2 | 3 | 2 | 2 | 2 U | 2 U | 2 U |
| Barium | 1,308 | ug/L | NA | NA | NA | NA | 85 | 89 | 80 | 95 | 83 | 74 | 68 |
| Beryllium | 32.3 | ug/L | NA | NA | NA | NA | 1 U | 0.8 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | NA | NA | NA | NA | 0.2 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | NA | 5 U | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 4 U | 4 U | **32** | 4 U | 1 | 1 | 4 U | 4 U | 4 U | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | NA | NA | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | 630 | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 13 | 7 | **99** | 9 | 1 U | 1 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| Manganese | 4,767 | ug/L | NA | NA | NA | NA | 214 | 170 | 170 | 806 | 360 | 249 | 373 |
| Mercury | 1.3 | ng/L | **1.6 O** | 0.50 UO | 0.70 O | 0.70 O | **3.5** | 1.12 | 1.2 | **6.0** | 0.77 | 0.61 | **1.7** |
| Nickel | 124.3 | ug/L | NA | 5 U | NA | NA | 5 U | 5 U | 5 U | 6 | 5 U | 5 U | 5 U |
| Selenium | 5 | ug/L | NA | NA | NA | NA | 1 U | 5 U | **10** | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.2 U | 0.2 | 0.2 | 0.2 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | NA | NA | NA | NA | 1 U | 0.4 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | NA | NA | NA | NA | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 12 | 5 U | 189 | 16 | 5 U | 5 U | 5 U | 16 | 6 | 5 U | 5 U |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 17,000 | 2,000 | 204,000 | 36,000 | NA | NA | NA | NA | NA | NA | 1,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 006<br>MP006<br>03/24/11 | Outfall 006<br>MP006<br>04/29/11 | Outfall 006<br>MP006<br>05/31/11 | Outfall 006<br>MP006<br>06/27/11 | Outfall 006<br>MP006<br>07/14/11 | Outfall 006<br>MP006<br>08/15/11 | Outfall 006<br>MP006<br>09/14/11 | Outfall 006<br>MP006<br>10/12/11 | Outfall 006<br>MP006<br>11/02/11 | Outfall 006<br>MP006<br>12/13/11 | Outfall 006<br>MP006<br>01/03/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U [25 U] | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 006<br>MP006<br>03/24/11 | Outfall 006<br>MP006<br>04/29/11 | Outfall 006<br>MP006<br>05/31/11 | Outfall 006<br>MP006<br>06/27/11 | Outfall 006<br>MP006<br>07/14/11 | Outfall 006<br>MP006<br>08/15/11 | Outfall 006<br>MP006<br>09/14/11 | Outfall 006<br>MP006<br>10/12/11 | Outfall 006<br>MP006<br>11/02/11 | Outfall 006<br>MP006<br>12/13/11 | Outfall 006<br>MP006<br>01/03/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 006<br>MP006<br>03/24/11 | Outfall 006<br>MP006<br>04/29/11 | Outfall 006<br>MP006<br>05/31/11 | Outfall 006<br>MP006<br>06/27/11 | Outfall 006<br>MP006<br>07/14/11 | Outfall 006<br>MP006<br>08/15/11 | Outfall 006<br>MP006<br>09/14/11 | Outfall 006<br>MP006<br>10/12/11 | Outfall 006<br>MP006<br>11/02/11 | Outfall 006<br>MP006<br>12/13/11 | Outfall 006<br>MP006<br>01/03/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 2 U | 2 U [2 U] | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 U |
| Barium | 1,308 | ug/L | 56 | 52 [49] | 65 | 72 | 91 | 86 | 82 | 79 | 80 | 93 | 85 |
| Beryllium | 32.3 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 10 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 7 | 4 U [4 U] | 4 U | 4 U | 12 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | 3 U [3 U] | 3 U | 3 U | 13 | 3 U | 3 | 3 U | 3 U | 4 | 3 U |
| Manganese | 4,767 | ug/L | 176 | 234 [117] | 235 | 242 | 288 | 209 | 97 | 162 | 202 | 515 | 339 |
| Mercury | 1.3 | ng/L | **1.7** | **3.7 [3.2]** | **1.8** | **1.5** | **200** | **2.3** | 1.1 | 0.80 | 1.0 | **2.7** | 0.93 O |
| Nickel | 124.3 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 6 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Selenium | 5 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 | 2 U | 1 U | 2 U | 2 U | 2 U |
| Titanium | - - | ug/L | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U [4 U] | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 7 | 21 [21] | 7 | 5 U | 57 | 18 | 5 U | 5 U | 5 U | 9 | 5 U |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 2,000 | 1,000 U [5,000] | 5,000 | 1,000 | 71,000 | 4,000 | 1,000 | 3,000 | 4,000 | 3,000 | 9,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 006<br>MP006<br>02/06/12 | Outfall 006<br>MP006<br>03/22/12 | Outfall 006<br>MP006<br>04/09/12 | Outfall 006<br>MP006<br>05/10/12 | Outfall 006<br>MP006<br>06/04/12 | Outfall 006<br>MP006<br>08/06/12 | Outfall 006<br>MP006<br>09/10/12 | Outfall 006<br>MP006<br>10/22/12 | Outfall 006<br>MP006<br>11/19/12 | Outfall 006<br>MP006<br>12/18/12 | Outfall 007<br>MP007<br>03/31/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U [1 U] | 2 | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 |
| 1,1-Dichloroethene | 130 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| 2-Butanone | 2,200 | ug/L | 25 U [25 U] | 25 U | 25 U | 25 U | NA | NA | NA | NA | NA | NA | 30 U |
| 2-Hexanone | - - | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U | NA | NA | NA | NA | NA | NA | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U | NA | NA | NA | NA | NA | NA | 50 U |
| Acetone | 1,700 | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U | NA | NA | NA | NA | NA | NA | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA | NA | 2 U |
| Benzene | 200 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Bromobenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Bromochloromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Bromoform | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Bromomethane | 35 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Chloroform | 350 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Chloromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U [1 U] | 1 | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Dibromomethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Diethyl ether | - - | ug/L | 10 U [10 U] | 10 U | 10 U | 10 U | NA | NA | NA | NA | NA | NA | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Iodomethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| m&p-Xylene | - - | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA | NA | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Naphthalene | 11 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| o-Xylene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Styrene | 80 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U [90 U] | 90 U | 90 U | 90 U | NA | NA | NA | NA | NA | NA | 90 U |
| Toluene | 270 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 006<br>MP006<br>02/06/12 | Outfall 006<br>MP006<br>03/22/12 | Outfall 006<br>MP006<br>04/09/12 | Outfall 006<br>MP006<br>05/10/12 | Outfall 006<br>MP006<br>06/04/12 | Outfall 006<br>MP006<br>08/06/12 | Outfall 006<br>MP006<br>09/10/12 | Outfall 006<br>MP006<br>10/22/12 | Outfall 006<br>MP006<br>11/19/12 | Outfall 006<br>MP006<br>12/18/12 | Outfall 007<br>MP007<br>03/31/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Trichloroethene | 200 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Trichlorofluoromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Vinyl Chloride | 13 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4 U |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 30 U |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 30 U |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 30 U |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 20 U |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 30 U |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 30 U |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4 U |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 006<br>MP006<br>02/06/12 | Outfall 006<br>MP006<br>03/22/12 | Outfall 006<br>MP006<br>04/09/12 | Outfall 006<br>MP006<br>05/10/12 | Outfall 006<br>MP006<br>06/04/12 | Outfall 006<br>MP006<br>08/06/12 | Outfall 006<br>MP006<br>09/10/12 | Outfall 006<br>MP006<br>10/22/12 | Outfall 006<br>MP006<br>11/19/12 | Outfall 006<br>MP006<br>12/18/12 | Outfall 007<br>MP007<br>03/31/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 10 U |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2 U |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5 U |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 2 |
| Arsenic | 10 | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U | 2 | 3 | NA | NA | NA | NA | 1 |
| Barium | 1,308 | ug/L | 69 [86] | 68 | 66 | 80 | NA | NA | NA | NA | NA | NA | 57 |
| Beryllium | 32.3 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA | NA | 0.2 U |
| Chromium Total | 11 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | 5 U | NA | 5 U | NA | NA | 5 U |
| Cobalt | 100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Copper | 21.6 | ug/L | 4 U [4 U] | 4 U | 4 U | 4 U | NA | 4 U | NA | 4 U | NA | NA | 3 |
| Cyanide (total) | 5.2 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 280 |
| Lead | 30.9 | ug/L | 3 U [3 U] | 3 U | 3 U | 3 U | 3 U | 3 U | NA | NA | NA | NA | 3 |
| Manganese | 4,767 | ug/L | 239 [253] | 276 | 207 | 97 | NA | NA | NA | NA | NA | NA | 11 |
| Mercury | 1.3 | ng/L | 1.00 O | 0.97 O | **1.4 O** | 1.3 O | 1.3 O | 1.1 | **1.5 O** | **1.5 O** | **3.0 O** | **3.3 O** | **21** |
| Nickel | 124.3 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 5 U |
| Selenium | 5 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 1 |
| Silver | 0.2 | ug/L | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U |
| Thallium | 3.7 | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA | NA | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U [4 U] | 4 U | 4 U | 4 U | NA | NA | NA | NA | NA | NA | 4 U |
| Zinc | 282.7 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA | 20 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 1,000 [34,000] | 1,000 | 2,000 | 1,000 U | 3,000 | 82,000 | 4,000 | 15,000 | 5,000 | 6,000 | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 007<br>MP007<br>09/21/10 | Outfall 007<br>MP007<br>11/22/10 | Outfall 007<br>MP007<br>02/24/11 | Outfall 007<br>MP007<br>04/29/11 | Outfall 007<br>MP007<br>05/31/11 | Outfall 007<br>MP007<br>06/27/11 | Outfall 007<br>MP007<br>07/14/11 | Outfall 007<br>MP007<br>08/15/11 | Outfall 007<br>MP007<br>10/12/11 | Outfall 007<br>MP007<br>11/02/11 | Outfall 007<br>MP007<br>12/13/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U [1 U] | 2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 4 | 5 | 1 U | 2 | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 30 U [30 U] | 30 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U [1 U] | 2 | 1 U | 1 U | 2 | 3 | 1 U | 1 | 1 U | 1 U | 1 U |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 007<br>MP007<br>09/21/10 | Outfall 007<br>MP007<br>11/22/10 | Outfall 007<br>MP007<br>02/24/11 | Outfall 007<br>MP007<br>04/29/11 | Outfall 007<br>MP007<br>05/31/11 | Outfall 007<br>MP007<br>06/27/11 | Outfall 007<br>MP007<br>07/14/11 | Outfall 007<br>MP007<br>08/15/11 | Outfall 007<br>MP007<br>10/12/11 | Outfall 007<br>MP007<br>11/02/11 | Outfall 007<br>MP007<br>12/13/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 1 U [1 U] | 7 | 7 | 1 | 2 | 1 | 1 U | 1 | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 007<br>MP007<br>09/21/10 | Outfall 007<br>MP007<br>11/22/10 | Outfall 007<br>MP007<br>02/24/11 | Outfall 007<br>MP007<br>04/29/11 | Outfall 007<br>MP007<br>05/31/11 | Outfall 007<br>MP007<br>06/27/11 | Outfall 007<br>MP007<br>07/14/11 | Outfall 007<br>MP007<br>08/15/11 | Outfall 007<br>MP007<br>10/12/11 | Outfall 007<br>MP007<br>11/02/11 | Outfall 007<br>MP007<br>12/13/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 2 [2] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 2 U [2 U] | 2 U | 2 U | 5 | 2 | 3 | 3 | 3 | 2 | 3 | 7 |
| Barium | 1,308 | ug/L | 70 [69] | 65 | 58 | 30 | 52 | 59 | 77 | 69 | 76 | 82 | 87 |
| Beryllium | 32.3 | ug/L | 0.8 U [0.8 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 7 | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 2 [2] | 4 U | 4 U | 4 U | 4 U | 4 U | 5 | 4 U | 4 U | 5 | 10 |
| Cyanide (total) | 5.2 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 1 U [1 U] | 3 U | 3 U | 3 U | 3 U | 4 | 5 | 6 | 3 U | 6 | 18 |
| Manganese | 4,767 | ug/L | 6 [5] | 9 | 13 | 23 | 25 | 17 | 41 | 20 | 28 | 86 | 394 |
| Mercury | 1.3 | ng/L | **2.04 [1.73]** | **1.9** | **3.1** | **5.7** | **2.9** | 1.0 | **16** | **42** | **28** | **3.3** | **4.2** |
| Nickel | 124.3 | ug/L | 5 U [5 U] | 6 | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Selenium | 5 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 0.4 U [0.4 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U | 2 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | 20 U | 20 U | 20 U | 20 U | 20 U | 20 U | NA |
| Vanadium | 12 | ug/L | 4 U [4 U] | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 5 U [5 U] | 5 U | 5 U | 12 | 8 | 21 | 25 | 33 | 12 | 43 | 88 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | 1,000 U | 6,000 | 26,000 | 330,000 | 26,000 | 12,000 | 10,000 | 46,000 | 31,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 007<br>MP007<br>01/03/12 | Outfall 007<br>MP007<br>02/06/12 | Outfall 007<br>MP007<br>03/22/12 | Outfall 007<br>MP007<br>04/09/12 | Outfall 007<br>MP007<br>05/10/12 | Outfall 007<br>MP007<br>06/04/12 | Outfall 007<br>MP007<br>08/06/12 | Outfall 007<br>MP007<br>09/10/12 | Outfall 007<br>MP007<br>10/22/12 | Outfall 007<br>MP007<br>11/19/12 | Outfall 007<br>MP007<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U | 2 | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U | 25 U | 25 U | 25 U | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA | NA |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U | 1 U | 15 | 1 U | 1 | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U | 10 U | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U | 90 U | NA | NA | NA | NA | NA | NA |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 007<br>MP007<br>01/03/12 | Outfall 007<br>MP007<br>02/06/12 | Outfall 007<br>MP007<br>03/22/12 | Outfall 007<br>MP007<br>04/09/12 | Outfall 007<br>MP007<br>05/10/12 | Outfall 007<br>MP007<br>06/04/12 | Outfall 007<br>MP007<br>08/06/12 | Outfall 007<br>MP007<br>09/10/12 | Outfall 007<br>MP007<br>10/22/12 | Outfall 007<br>MP007<br>11/19/12 | Outfall 007<br>MP007<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | 1 U | 1 U | 9 | 1 U | 1 | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 007<br>MP007<br>01/03/12 | Outfall 007<br>MP007<br>02/06/12 | Outfall 007<br>MP007<br>03/22/12 | Outfall 007<br>MP007<br>04/09/12 | Outfall 007<br>MP007<br>05/10/12 | Outfall 007<br>MP007<br>06/04/12 | Outfall 007<br>MP007<br>08/06/12 | Outfall 007<br>MP007<br>09/10/12 | Outfall 007<br>MP007<br>10/22/12 | Outfall 007<br>MP007<br>11/19/12 | Outfall 007<br>MP007<br>12/18/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Arsenic | 10 | ug/L | 3 | 4 | 3 | 3 | 3 | NA | NA | NA | NA | NA | NA |
| Barium | 1,308 | ug/L | 71 | 61 | 70 | 63 | 58 | NA | NA | NA | NA | NA | NA |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA | NA |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA | NA |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 7 | NA | NA | NA | NA |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Copper | 21.6 | ug/L | 4 U | 5 | 6 | 4 U | 4 U | NA | NA | NA | NA | NA | NA |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | 5 | 10 | 4 | 3 U | 3 U | **41** | NA | NA | NA | NA |
| Manganese | 4,767 | ug/L | 51 | 146 | 111 | 82 | 35 | NA | NA | NA | NA | NA | NA |
| Mercury | 1.3 | ng/L | **3.5 O** | **10 O** | **12 O** | **32 O** | **2.7 O** | **31 O** | **3.6** | **5.6 O** | **21 O** | **7.1 O** | **7.3 O** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA | NA |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA | NA |
| Thallium | 3.7 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA | NA |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | NA | NA | NA | NA | NA | NA |
| Zinc | 282.7 | ug/L | 13 | 22 | 40 | 33 | 10 | NA | NA | NA | NA | NA | NA |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 91,000 | 32,000 | 54,000 | 22,000 | 4,000 | 42,000 | 5,000 | 35,000 | 183,000 | 46,000 | 140,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>04/01/10 | Outfall 009<br>MP009<br>09/20/10 | Outfall 009<br>MP009<br>10/27/10 | Outfall 009<br>MP009<br>11/22/10 | Outfall 009<br>MP009<br>12/20/10 | Outfall 009<br>MP009<br>01/26/11 | Outfall 009<br>MP009<br>02/24/11 | Outfall 009<br>MP009<br>03/24/11 | Outfall 009<br>MP009<br>06/27/11 | Outfall 009<br>MP009<br>07/14/11 | Outfall 009<br>MP009<br>08/15/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 30 U | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 24 | 7 | 8 | 9 [9] | 13 | 16 | 12 | 11 | 14 | 15 | 8 |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>04/01/10 | Outfall 009<br>MP009<br>09/20/10 | Outfall 009<br>MP009<br>10/27/10 | Outfall 009<br>MP009<br>11/22/10 | Outfall 009<br>MP009<br>12/20/10 | Outfall 009<br>MP009<br>01/26/11 | Outfall 009<br>MP009<br>02/24/11 | Outfall 009<br>MP009<br>03/24/11 | Outfall 009<br>MP009<br>06/27/11 | Outfall 009<br>MP009<br>07/14/11 | Outfall 009<br>MP009<br>08/15/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 10 | 3 | 5 | 3 [3] | 5 | 7 | 6 | 8 | 7 | 6 | 3 |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 3 | 1 U | 1 U | 1 U [1 U] | 1 | 1 U | 1 | 1 | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | 30 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>04/01/10 | Outfall 009<br>MP009<br>09/20/10 | Outfall 009<br>MP009<br>10/27/10 | Outfall 009<br>MP009<br>11/22/10 | Outfall 009<br>MP009<br>12/20/10 | Outfall 009<br>MP009<br>01/26/11 | Outfall 009<br>MP009<br>02/24/11 | Outfall 009<br>MP009<br>03/24/11 | Outfall 009<br>MP009<br>06/27/11 | Outfall 009<br>MP009<br>07/14/11 | Outfall 009<br>MP009<br>08/15/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 1 | 1 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 1 | 2 U | 2 U | 2 U [2 U] | 2 U | **19** | 3 | 2 U | 5 | **14** | 3 |
| Barium | 1,308 | ug/L | 116 | 222 | 111 | 245 [210] | 222 | 698 | 207 | 93 | 140 | 331 | 271 |
| Beryllium | 32.3 | ug/L | 1 U | 0.8 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.2 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | **8.1** | 0.5 U | 0.5 U | 0.8 | 1.7 | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | **50** | 5 U | 5 U | 5 U | **16** | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 8 | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 1 | 2 | 4 U | 4 U [4 U] | 4 U | **62** | 4 U | 4 U | 5 | 10 | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | **10** | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | 500 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 1 U | 1 U | 3 U | 3 U [3 U] | 17 | **265** | 3 U | 7 | 11 | 22 | 7 |
| Manganese | 4,767 | ug/L | 185 | 207 | 90 | 558 [409] | 416 | 2,140 | 757 | 198 | 2,030 | **6,980** | 1,440 |
| Mercury | 1.3 | ng/L | **13** | **2.21** | **1.7** | 1.3 [1.2] | **6.5** | **2.9** | 1.3 | **1.8** | **36** | **750** | **3.0** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 8 [9] | 5 U | 23 | 5 U | 5 U | 5 U | 10 | 5 U |
| Selenium | 5 | ug/L | 1 | 5 U | **9** | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U | 0.4 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1.1 | 1 U | 1 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | 26 | 20 U |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U [4 U] | 4 U | **19** | 4 U | 4 U | 4 U | 8 | 4 U |
| Zinc | 282.7 | ug/L | 5 U | 13 | 14 | 5 U [5 U] | 77 | **1,140** | 5 U | 29 | 55 | 115 | 22 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | 1,000 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | NA | NA | NA | NA | 23,000 | 91,000 | 69,000 | 74,000 | 24,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>09/14/11 | Outfall 009<br>MP009<br>10/12/11 | Outfall 009<br>MP009<br>11/02/11 | Outfall 009<br>MP009<br>12/13/11 | Outfall 009<br>MP009<br>01/03/12 | Outfall 009<br>MP009<br>02/06/12 | Outfall 009<br>MP009<br>03/22/12 | Outfall 009<br>MP009<br>04/09/12 | Outfall 009<br>MP009<br>05/10/12 | Outfall 009<br>MP009<br>06/04/12 | Outfall 009<br>MP009<br>07/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U | 25 U | 25 U | 25 U [25 U] | 25 U | 25 U | 25 U | 25 U | NA | NA |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | NA | NA |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U | 50 U | NA | NA |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | NA | NA |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | 10 | 11 | 11 | 10 | 13 [12] | 13 | 1 | 14 | 12 | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U | 10 U | NA | NA |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U | 90 U | NA | NA |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>09/14/11 | Outfall 009<br>MP009<br>10/12/11 | Outfall 009<br>MP009<br>11/02/11 | Outfall 009<br>MP009<br>12/13/11 | Outfall 009<br>MP009<br>01/03/12 | Outfall 009<br>MP009<br>02/06/12 | Outfall 009<br>MP009<br>03/22/12 | Outfall 009<br>MP009<br>04/09/12 | Outfall 009<br>MP009<br>05/10/12 | Outfall 009<br>MP009<br>06/04/12 | Outfall 009<br>MP009<br>07/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Trichloroethene | 200 | ug/L | 3 | 3 | 4 | 5 | 7 [6] | 7 | 1 U | 7 | 7 | NA | NA |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 [1] | 2 | 1 U | 1 U | 1 | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | 4 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>09/14/11 | Outfall 009<br>MP009<br>10/12/11 | Outfall 009<br>MP009<br>11/02/11 | Outfall 009<br>MP009<br>12/13/11 | Outfall 009<br>MP009<br>01/03/12 | Outfall 009<br>MP009<br>02/06/12 | Outfall 009<br>MP009<br>03/22/12 | Outfall 009<br>MP009<br>04/09/12 | Outfall 009<br>MP009<br>05/10/12 | Outfall 009<br>MP009<br>06/04/12 | Outfall 009<br>MP009<br>07/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | 2 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | 5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Arsenic | 10 | ug/L | 2 | 2 | 2 | **12** | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | 2 | 2 U |
| Barium | 1,308 | ug/L | 207 | 159 | 118 | 654 | 114 [105] | 100 | 132 | 201 | 238 | NA | NA |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | **13.1** | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 6 | 5 U | **51** | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 9 | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Copper | 21.6 | ug/L | 4 U | 4 U | 4 U | **150** | 4 U [4 U] | 5 | 4 U | 4 U | 4 U | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | **11** | 5 U | **12 [10]** | 5 U | **8** | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 | 3 U | 3 U | **476** | 3 U [3 U] | 3 U | 3 U | 13 | 3 U | 3 U | 3 |
| Manganese | 4,767 | ug/L | 450 | 177 | 97 | 2,130 | 120 [110] | 133 | 409 | 846 | 1,660 | 3,900 | 1,080 |
| Mercury | 1.3 | ng/L | **3.6** | **450** | **1.6** | **7.7** | **35 O** | **150 O** | 1.1 O | **13 O** | **1.4 O** | 1.2 O | **5.3 O** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 36 | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA |
| Thallium | 3.7 | ug/L | 2 U | 1 U | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U | 2 U | NA | NA |
| Titanium | - - | ug/L | 20 U | 20 U | 20 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | **21** | 4 U [4 U] | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 9 | 8 | 7 | **1,890** | 16 [5 U] | 13 | 9 | 24 | 24 | 10 | 11 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 115,000 | 8,000 | 7,000 | 39,000 | 20,000 [7,000] | 6,000 | 4,000 | 8,000 | 10,000 | 15,000 | 12,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>08/06/12 | Outfall 009<br>MP009<br>09/10/12 | Outfall 009<br>MP009<br>10/22/12 | Outfall 009<br>MP009<br>11/19/12 | Outfall 009<br>MP009<br>12/18/12 | Outfall 010<br>MP010<br>03/31/10 | Outfall 010<br>MP010<br>09/21/10 | Outfall 010<br>MP010<br>10/27/10 | Outfall 010<br>MP010<br>11/22/10 | Outfall 010<br>MP010<br>12/20/10 | Outfall 010<br>MP010<br>01/26/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | NA | 30 U | 30 U | 30 U [30 U] | 30 U | 30 U | 30 U |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | NA | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | NA | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | NA | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | NA | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | NA | 1 | 2 | 2 [2] | 1 | 1 U | 1 U |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | NA | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | NA | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | NA | 90 U | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>08/06/12 | Outfall 009<br>MP009<br>09/10/12 | Outfall 009<br>MP009<br>10/22/12 | Outfall 009<br>MP009<br>11/19/12 | Outfall 009<br>MP009<br>12/18/12 | Outfall 010<br>MP010<br>03/31/10 | Outfall 010<br>MP010<br>09/21/10 | Outfall 010<br>MP010<br>10/27/10 | Outfall 010<br>MP010<br>11/22/10 | Outfall 010<br>MP010<br>12/20/10 | Outfall 010<br>MP010<br>01/26/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | NA | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | 4 U | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | 30 U | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | 30 U | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | 20 U | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | 30 U | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | 20 U | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenyletherr | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenyletherr | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | 30 U | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | 30 U | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | 4 U | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 009<br>MP009<br>08/06/12 | Outfall 009<br>MP009<br>09/10/12 | Outfall 009<br>MP009<br>10/22/12 | Outfall 009<br>MP009<br>11/19/12 | Outfall 009<br>MP009<br>12/18/12 | Outfall 010<br>MP010<br>03/31/10 | Outfall 010<br>MP010<br>09/21/10 | Outfall 010<br>MP010<br>10/27/10 | Outfall 010<br>MP010<br>11/22/10 | Outfall 010<br>MP010<br>12/20/10 | Outfall 010<br>MP010<br>01/26/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | 10 U | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | 5 U | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | NA | NA | NA | NA | NA | 1 | 1 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 3 | 2 | 2 U | 2 U | 3 | 2 | 2 U | 2 [2 U] | 3 | 2 U | 2 |
| Barium | 1,308 | ug/L | NA | NA | NA | NA | NA | 96 | 114 | 104 [106] | 111 | 108 | 101 |
| Beryllium | 32.3 | ug/L | NA | NA | NA | NA | NA | 1 U | 0.8 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.2 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 5 | 2 | 4 U [4 U] | 4 U | 4 U | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U | **15** | **14** | **6** | **9** | **9** | **10** | **8 [5 U]** | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | 700 | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | 5 | 3 U | 5 | 9 | 2 | 1 U | 3 U [3 U] | 3 U | 3 | 3 U |
| Manganese | 4,767 | ug/L | 3,500 | 401 | 80 | 460 | 1,170 | 61 | 33 | 48 [46] | 39 | 70 | 57 |
| Mercury | 1.3 | ng/L | **3.7** | **29 O** | **3.3 O** | **3.1 O** | **72 O** | **3.5 [1.7]** | 1.03 | **1.7 [1.5]** | 0.99 | 0.95 | 0.73 |
| Nickel | 124.3 | ug/L | NA | NA | NA | NA | NA | 5 U | 5 U | 5 U [5 U] | 7 | 5 U | 5 U |
| Selenium | 5 | ug/L | NA | NA | NA | NA | NA | 1 U | 5 U | **6 [5 U]** | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | NA | NA | NA | NA | NA | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | NA | NA | NA | NA | NA | 1 U | 0.4 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 U | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 37 | 13 | 8 | 10 | 37 | 43 | 6 | 9 [8] | 7 | 8 | 5 U |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | 1,000 U | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 28,000 | 10,000 | 11,000 | 8,000 | 267,000 | NA | NA | NA | NA | NA | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>02/24/11 | Outfall 010<br>MP010<br>03/24/11 | Outfall 010<br>MP010<br>04/29/11 | Outfall 010<br>MP010<br>05/31/11 | Outfall 010<br>MP010<br>06/27/11 | Outfall 010<br>MP010<br>07/14/11 | Outfall 010<br>MP010<br>08/15/11 | Outfall 010<br>MP010<br>09/14/11 | Outfall 010<br>MP010<br>10/12/11 | Outfall 010<br>MP010<br>11/02/11 | Outfall 010<br>MP010<br>12/13/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethane | 740 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,1-Dichloroethene | 130 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloroethane | 360 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,2-Dichloropropane | 230 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| 2-Butanone | 2,200 | ug/L | 25 U [25 U] | 25 U | 25 U | 25 U [25 U] | 25 U [25 U] | 25 U [25 U] | 25 U | 25 U [25 U] | 25 U | 25 U | 25 U |
| 2-Hexanone | - - | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| 2-Methylnaphthalene | 19 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| Acetone | 1,700 | ug/L | 50 U [50 U] | 50 U | 50 U | 50 U [50 U] | 50 U [50 U] | 50 U [50 U] | 50 U | 50 U [50 U] | 50 U | 50 U | 50 U |
| Acrylonitrile | 2 | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U |
| Benzene | 200 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromobenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromochloromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromodichloromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromoform | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Bromomethane | 35 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Disulfide | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Carbon Tetrachloride | 45 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chlorobenzene | 25 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloroethane | 1,100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Chloroform | 350 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Chloromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 [1] | 2 | 1 | 2 [1] | 2 [2] | 1 [2] | 2 | 1 [9] | 1 | 1 U | 1 |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Dibromochloromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Dibromomethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Dichlorodifluoromethane | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Diethyl ether | - - | ug/L | 10 U [10 U] | 10 U | 10 U | 10 U [10 U] | 10 U [10 U] | 10 U [10 U] | 10 U | 10 U [10 U] | 10 U | 10 U | 10 U |
| Ethylbenzene | 18 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Hexachloroethane | 6.7 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Iodomethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Isopropylbenzene | 28 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| m&p-Xylene | - - | ug/L | 2 U [2 U] | 2 U | 2 U | 2 U [2 U] | 2 U [2 U] | 2 U [2 U] | 2 U | 2 U [2 U] | 2 U | 2 U | 2 U |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Methylene Chloride | 1,500 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Naphthalene | 11 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| n-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| n-Propylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| o-Xylene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| p-Isopropyltoluene | - - | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| sec-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Styrene | 80 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| tert-Butylbenzene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrachloroethene | 60 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Tetrahydrofuran | 11,000 | ug/L | 90 U [90 U] | 90 U | 90 U | 90 U [90 U] | 90 U [90 U] | 90 U [90 U] | 90 U | 90 U [90 U] | 90 U | 90 U | 90 U |
| Toluene | 270 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>02/24/11 | Outfall 010<br>MP010<br>03/24/11 | Outfall 010<br>MP010<br>04/29/11 | Outfall 010<br>MP010<br>05/31/11 | Outfall 010<br>MP010<br>06/27/11 | Outfall 010<br>MP010<br>07/14/11 | Outfall 010<br>MP010<br>08/15/11 | Outfall 010<br>MP010<br>09/14/11 | Outfall 010<br>MP010<br>10/12/11 | Outfall 010<br>MP010<br>11/02/11 | Outfall 010<br>MP010<br>12/13/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Trichloroethene | 200 | ug/L | 1 U [1 U] | 1 U | 1 | 1 [1] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [3] | 1 U | 1 U | 1 U |
| Trichlorofluoromethane | - - | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Vinyl Chloride | 13 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>02/24/11 | Outfall 010<br>MP010<br>03/24/11 | Outfall 010<br>MP010<br>04/29/11 | Outfall 010<br>MP010<br>05/31/11 | Outfall 010<br>MP010<br>06/27/11 | Outfall 010<br>MP010<br>07/14/11 | Outfall 010<br>MP010<br>08/15/11 | Outfall 010<br>MP010<br>09/14/11 | Outfall 010<br>MP010<br>10/12/11 | Outfall 010<br>MP010<br>11/02/11 | Outfall 010<br>MP010<br>12/13/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 2 U [2 U] | 2 U | 2 | 2 U [2 U] | 3 [2] | 4 [2 U] | 3 | 2 [4] | 2 | **18** | 2 |
| Barium | 1,308 | ug/L | 102 [101] | 85 | 77 | 82 [85] | 99 [95] | 247 [101] | 110 | 113 [259] | 108 | 1,170 | 113 |
| Beryllium | 32.3 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.6 [0.5 U] | 2.4 [0.5 U] | 0.5 U | 0.5 U [0.7] | 0.5 U | **4.9** | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U [5 U] | 5 U | 5 | 5 U [5 U] | 5 U [5 U] | **36 [7]** | 5 U | 5 U [5 U] | 5 | **29** | 5 U |
| Cobalt | 100 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 [5 U] | 5 U | 5 U [5 U] | 5 U | 6 | 5 U |
| Copper | 21.6 | ug/L | 4 U [4 U] | 4 U | 4 U | 4 U [4 U] | 4 U [4 U] | **132 [4 U]** | 4 U | 4 U [13] | 4 U | **102** | 4 U |
| Cyanide (total) | 5.2 | ug/L | **10 [8]** | 5 U | **10** | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | **9** | 5 U [5 U] | **10** | **13** | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U [3 U] | 4 | 3 | 3 U [3 U] | 7 [3 U] | **196 [3 U]** | 4 | **3 [36]** | 3 U | **571** | 6 |
| Manganese | 4,767 | ug/L | 54 [53] | 78 | 117 | 84 [83] | 317 [159] | 2,550 [68] | 337 | 30 [1,110] | 28 | **5,240** | 306 |
| Mercury | 1.3 | ng/L | 0.90 [0.99] | **1.4** | **100** | **6.9 [1.4]** | **2.0 [1.2]** | **7.8 [1.4]** | **600** | **1.4** | 0.80 | **9.7** | **91** |
| Nickel | 124.3 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 34 [5] | 5 U | 5 U [5 U] | 5 U | 54 | 5 U |
| Selenium | 5 | ug/L | 5 U [5 U] | 5 U | 5 U | 5 U [5 U] | 5 U [5 U] | 5 U [5 U] | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U [0.5 U] | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 1 U [1 U] | 1 U | 1 U | 1 U [1 U] | 1 U [1 U] | 1 U [1 U] | 1 U | 2 U [2 U] | 1 U | 2 U | 2 U |
| Titanium | - - | ug/L | NA | NA | NA | 20 U [20 U] | 20 U [20 U] | 21 [20 U] | 20 U | 20 U [20 U] | 20 U | 30 | NA |
| Vanadium | 12 | ug/L | 4 U [4 U] | 4 U | 4 U | 4 U [4 U] | 4 U [4 U] | 7 [4 U] | 4 U | 4 U [4 U] | 4 U | 6 | 4 U |
| Zinc | 282.7 | ug/L | 5 U [5 U] | 12 | 20 | 10 [8] | 31 [14] | **508 [11]** | 19 | 5 U [83] | 5 U | **861** | 17 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 1,000 [1,000 U] | 4,000 | 12,000 | 1,000 [1,000 U] | 31,000 [76,000] | 224,000 [1,000] | 3,000 | 1,000 [416,000] | 3,000 | 7,000 | 7,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>01/03/12 | Outfall 010<br>MP010<br>02/06/12 | Outfall 010<br>MP010<br>03/22/12 | Outfall 010<br>MP010<br>04/09/12 | Outfall 010<br>MP010<br>05/10/12 | Outfall 010<br>MP010<br>06/04/12 | Outfall 010<br>MP010<br>07/09/12 | Outfall 010<br>MP010<br>08/06/12 | Outfall 010<br>MP010<br>09/10/12 | Outfall 010<br>MP010<br>10/22/12 | Outfall 010<br>MP010<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | 25 U | 25 U | 25 U [25 U] | 25 U | 25 U [25 U] | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | 50 U | 50 U | 50 U [50 U] | 50 U | 50 U [50 U] | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | NA | NA | NA | NA | NA | NA |
| Benzene | 200 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Bromoform | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | 1 U | 1 | 1 [1 U] | 1 | 1 [1] | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | 10 U | 10 U | 10 U [10 U] | 10 U | 10 U [10 U] | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Styrene | 80 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | 90 U | 90 U | 90 U [90 U] | 90 U | 90 U [90 U] | NA | NA | NA | NA | NA | NA |
| Toluene | 270 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>01/03/12 | Outfall 010<br>MP010<br>02/06/12 | Outfall 010<br>MP010<br>03/22/12 | Outfall 010<br>MP010<br>04/09/12 | Outfall 010<br>MP010<br>05/10/12 | Outfall 010<br>MP010<br>06/04/12 | Outfall 010<br>MP010<br>07/09/12 | Outfall 010<br>MP010<br>08/06/12 | Outfall 010<br>MP010<br>09/10/12 | Outfall 010<br>MP010<br>10/22/12 | Outfall 010<br>MP010<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>01/03/12 | Outfall 010<br>MP010<br>02/06/12 | Outfall 010<br>MP010<br>03/22/12 | Outfall 010<br>MP010<br>04/09/12 | Outfall 010<br>MP010<br>05/10/12 | Outfall 010<br>MP010<br>06/04/12 | Outfall 010<br>MP010<br>07/09/12 | Outfall 010<br>MP010<br>08/06/12 | Outfall 010<br>MP010<br>09/10/12 | Outfall 010<br>MP010<br>10/22/12 | Outfall 010<br>MP010<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Arsenic | 10 | ug/L | 2 | 2 | 2 U [2 U] | 3 | 6 [2 U] | 2 U | 2 U | 2 | 2 | **26** | 2 |
| Barium | 1,308 | ug/L | 103 | 108 | 98 [106] | 114 | 143 [96] | NA | 119 | NA | NA | 346 | NA |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U [1 U] | 1 U | 1 U [1 U] | NA | NA | NA | NA | NA | NA |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.9 [0.5 U] | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1.3 | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | **13 [5 U]** | 5 U | 5 U | 5 U | 5 U | **17** | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Copper | 21.6 | ug/L | 4 U | 4 U | 4 U [4 U] | 4 | 21 [4 U] | 4 U | 4 U | 6 | 4 U | **34** | 4 U |
| Cyanide (total) | 5.2 | ug/L | **10** | 5 U | **12 [11]** | **9** | **10 [10]** | **10** | **7** | **10** | **10** | **12** | **8** |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | 3 U | 3 U [3 U] | 8 | **33 [3 U]** | 3 U | 4 | 6 | 3 U | **85** | 3 |
| Manganese | 4,767 | ug/L | 133 | 92 | 125 [165] | 452 | 659 [123] | 91 | 111 | 203 | 157 | **6,130** | 66 |
| Mercury | 1.3 | ng/L | 0.50 UO | **6.4 O** | 1.2 O | **75 O** | **4.2 O** | **91 O** | **90 O** | **54** | **5.1 O** | 5.0 UO | 1.1 O |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 40 [5 U] | 5 U | 6 | NA | NA | NA | NA |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U [5 U] | 5 U | 5 U [5 U] | NA | NA | NA | NA | NA | NA |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U | 0.5 U [0.5 U] | NA | NA | NA | NA | NA | NA |
| Thallium | 3.7 | ug/L | 2 U | 2 U | 2 U [2 U] | 2 U | 2 U [2 U] | NA | NA | NA | NA | NA | NA |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U [4 U] | 4 U | 4 U [4 U] | 4 U | 4 U | NA | NA | NA | NA |
| Zinc | 282.7 | ug/L | 9 | 5 | 8 [10] | 29 | 157 [9] | 7 | 13 | 60 | 7 | **379** | 5 U |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 56,000 | 14,000 | 4,000 [3,000] | 12,000 | 6,000 [12,000] | 27,000 | 13,000 | 3,000 | 6,000 | 6,000 | 3,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>12/18/12 | Outfall 011<br>Outfall<br>09/21/10 | Outfall 011<br>Outfall<br>11/22/10 | Outfall 011<br>Outfall<br>01/26/11 | Outfall 011<br>Outfall<br>02/24/11 | Outfall 011<br>Outfall<br>07/14/11 | Outfall 011<br>Outfall<br>09/14/11 | Outfall 011<br>Outfall<br>10/12/11 | Outfall 011<br>Outfall<br>04/09/12 | Outfall 011<br>Outfall<br>07/09/12 | Outfall 013<br>MP013<br>03/31/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| 2-Butanone | 2,200 | ug/L | NA | NA | 30 U | 30 U | 25 U | 25 U | 25 U | 25 U | 25 U | NA | NA |
| 2-Hexanone | - - | ug/L | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA |
| Acetone | 1,700 | ug/L | NA | NA | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | 50 U | NA | NA |
| Acrylonitrile | 2 | ug/L | NA | NA | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA |
| Benzene | 200 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromobenzene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromochloromethane | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromodichloromethane | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromoform | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Bromomethane | 35 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Carbon Disulfide | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Chlorobenzene | 25 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Chloroethane | 1,100 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Chloroform | 350 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Chloromethane | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | 4 | 3 | 3 | 4 | 3 | 2 | 3 | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Dibromochloromethane | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Dibromomethane | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Diethyl ether | - - | ug/L | NA | NA | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | NA | NA |
| Ethylbenzene | 18 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Iodomethane | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Isopropylbenzene | 28 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| m&p-Xylene | - - | ug/L | NA | NA | 2 U | 2 U | 3 | 2 U | 2 U | 2 U | 2 U | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Methylene Chloride | 1,500 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| n-Butylbenzene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| n-Propylbenzene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| o-Xylene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| p-Isopropyltoluene | - - | ug/L | NA | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA |
| sec-Butylbenzene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Styrene | 80 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| tert-Butylbenzene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Tetrachloroethene | 60 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | 90 U | NA | NA |
| Toluene | 270 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>12/18/12 | Outfall 011<br>Outfall<br>09/21/10 | Outfall 011<br>Outfall<br>11/22/10 | Outfall 011<br>Outfall<br>01/26/11 | Outfall 011<br>Outfall<br>02/24/11 | Outfall 011<br>Outfall<br>07/14/11 | Outfall 011<br>Outfall<br>09/14/11 | Outfall 011<br>Outfall<br>10/12/11 | Outfall 011<br>Outfall<br>04/09/12 | Outfall 011<br>Outfall<br>07/09/12 | Outfall 013<br>MP013<br>03/31/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| Trichloroethene | 200 | ug/L | NA | NA | 2 | 2 | 1 | 2 | 2 | 2 | 2 | NA | NA |
| Trichlorofluoromethane | - - | ug/L | NA | NA | 6 | 6 | 5 | 6 | 6 | 5 | 6 | NA | NA |
| Vinyl Chloride | 13 | ug/L | NA | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 20 U | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 25 U | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | 4 U | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 010<br>MP010<br>12/18/12 | Outfall 011<br>Outfall<br>09/21/10 | Outfall 011<br>Outfall<br>11/22/10 | Outfall 011<br>Outfall<br>01/26/11 | Outfall 011<br>Outfall<br>02/24/11 | Outfall 011<br>Outfall<br>07/14/11 | Outfall 011<br>Outfall<br>09/14/11 | Outfall 011<br>Outfall<br>10/12/11 | Outfall 011<br>Outfall<br>04/09/12 | Outfall 011<br>Outfall<br>07/09/12 | Outfall 013<br>MP013<br>03/31/10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | 10 U | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | 5 U | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | **0.16 O** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | NA | 1 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 1 U |
| Arsenic | 10 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | 1 |
| Barium | 1,308 | ug/L | NA | 63 | 87 | 86 | 86 | 78 | 78 | 78 | 79 | NA | 84 |
| Beryllium | 32.3 | ug/L | NA | 0.8 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | 1 U |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | 0.2 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 10 | 5 U | 5 U | 9 | 5 U | 8 | 5 U | NA | 5 U |
| Cobalt | 100 | ug/L | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 5 U |
| Copper | 21.6 | ug/L | 4 U | 2 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 | 4 |
| Cyanide (total) | 5.2 | ug/L | **8** | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | **28** |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 300 |
| Lead | 30.9 | ug/L | 3 U | 1 U | 3 U | 3 U | 7 | 3 U | 10 | 3 U | 3 U | 7 | 1 U |
| Manganese | 4,767 | ug/L | 68 | 24 | 62 | 58 | 62 | 43 | 55 | 54 | 50 | NA | 60 |
| Mercury | 1.3 | ng/L | **370 O** | NA | 0.50 U | 0.51 U | 0.53 | 0.51 U | 0.92 | 0.50 | 1.0 O | 0.77 O | **2.0** |
| Nickel | 124.3 | ug/L | NA | 5 U | 9 | 5 U | 5 U | 5 | 5 U | 5 U | 5 U | NA | 5 U |
| Selenium | 5 | ug/L | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | 1 U |
| Silver | 0.2 | ug/L | NA | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | 0.5 U |
| Thallium | 3.7 | ug/L | NA | 0.4 U | 1 U | 1 U | 1 U | 1 U | 2 U | 1 U | 2 U | NA | 1 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | 20 U | 20 U | 20 U | NA | NA | NA |
| Vanadium | 12 | ug/L | NA | 4 U | 5 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | NA | 4 U |
| Zinc | 282.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 | 5 U | 5 U | 5 U | NA | 9 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 7,000 | NA | NA | NA | 1,000 U | 1,000 | 2,000 | 33,000 | 7,000 | 6,000 | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>09/21/10 | Outfall 013<br>MP013<br>10/27/10 | Outfall 013<br>MP013<br>11/22/10 | Outfall 013<br>MP013<br>12/20/10 | Outfall 013<br>MP013<br>01/26/11 | Outfall 013<br>MP013<br>04/29/11 | Outfall 013<br>MP013<br>05/31/11 | Outfall 013<br>MP013<br>06/27/11 | Outfall 013<br>MP013<br>07/14/11 | Outfall 013<br>MP013<br>08/15/11 | Outfall 013<br>MP013<br>09/14/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | 80 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Toluene | 270 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>09/21/10 | Outfall 013<br>MP013<br>10/27/10 | Outfall 013<br>MP013<br>11/22/10 | Outfall 013<br>MP013<br>12/20/10 | Outfall 013<br>MP013<br>01/26/11 | Outfall 013<br>MP013<br>04/29/11 | Outfall 013<br>MP013<br>05/31/11 | Outfall 013<br>MP013<br>06/27/11 | Outfall 013<br>MP013<br>07/14/11 | Outfall 013<br>MP013<br>08/15/11 | Outfall 013<br>MP013<br>09/14/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>09/21/10 | Outfall 013<br>MP013<br>10/27/10 | Outfall 013<br>MP013<br>11/22/10 | Outfall 013<br>MP013<br>12/20/10 | Outfall 013<br>MP013<br>01/26/11 | Outfall 013<br>MP013<br>04/29/11 | Outfall 013<br>MP013<br>05/31/11 | Outfall 013<br>MP013<br>06/27/11 | Outfall 013<br>MP013<br>07/14/11 | Outfall 013<br>MP013<br>08/15/11 | Outfall 013<br>MP013<br>09/14/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 1 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Arsenic | 10 | ug/L | 2 U | 2 U | 2 | 2 U | 9 | 2 U | 2 U | 2 U | 2 | 2 U | **23** |
| Barium | 1,308 | ug/L | 82 | 68 | 76 | 82 | 214 | 54 | 124 | 86 | 143 | 84 | 138 |
| Beryllium | 32.3 | ug/L | 0.8 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 | 0.5 U | 0.5 U |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 10 | 5 U | 7 | 5 U | **51** | 10 | **14** | 5 U | 5 |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Copper | 21.6 | ug/L | 3 | 4 U | **31** | 4 U | 5 | 4 U | **35** | **46** | **59** | 4 U | **72** |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | **8** | 5 U | 5 U | 5 U | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 1 U | 3 U | 12 | 3 U | 7 | 3 U | **248** | **38** | 14 | 5 | 24 |
| Manganese | 4,767 | ug/L | 26 | 28 | 70 | 46 | 1,920 | 76 | 693 | 173 | 528 | 40 | 318 |
| Mercury | 1.3 | ng/L | **2.47** | **1.9** | **42** | 0.55 | 0.51 U | 0.67 | **5.7** | **42** | **87** | **1.6** | **29** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 13 | 5 U | 7 | 5 U | 10 | 5 U | 8 | 5 U | 7 |
| Selenium | 5 | ug/L | 5 U | **6** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | **0.8** | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Thallium | 3.7 | ug/L | 0.4 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 2 U |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | 30 | 20 U | 20 U | 20 U | 20 U |
| Vanadium | 12 | ug/L | 4 U | 4 U | 7 | 4 U | 4 U | 4 U | 5 | 4 U | 4 | 4 U | 4 U |
| Zinc | 282.7 | ug/L | 7 | 30 | 45 | 5 U | 56 | 11 | 117 | 131 | 99 | 6 | 159 |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | NA | NA | NA | NA | NA | 2,000 | 61,000 | 43,000 | 12,000 | 1,000 | 10,000 |

Notes:
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ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>12/13/11 | Outfall 013<br>MP013<br>01/03/12 | Outfall 013<br>MP013<br>02/06/12 | Outfall 013<br>MP013<br>03/22/12 | Outfall 013<br>MP013<br>04/09/12 | Outfall 013<br>MP013<br>05/10/12 | Outfall 013<br>MP013<br>06/04/12 | Outfall 013<br>MP013<br>07/09/12 | Outfall 013<br>MP013<br>09/10/12 | Outfall 013<br>MP013<br>10/22/12 | Outfall 013<br>MP013<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOC** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Butanone | 2,200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetone | 1,700 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acrylonitrile | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromobenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromodichloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromoform | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Bromomethane | 35 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Disulfide | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Carbon Tetrachloride | 45 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chlorobenzene | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroethane | 1,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloroform | 350 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibromomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dichlorodifluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethyl ether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Iodomethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Isopropylbenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| m&p-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylene Chloride | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| n-Propylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| o-Xylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| p-Isopropyltoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| sec-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Styrene | 80 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| tert-Butylbenzene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrachloroethene | 60 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Toluene | 270 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>12/13/11 | Outfall 013<br>MP013<br>01/03/12 | Outfall 013<br>MP013<br>02/06/12 | Outfall 013<br>MP013<br>03/22/12 | Outfall 013<br>MP013<br>04/09/12 | Outfall 013<br>MP013<br>05/10/12 | Outfall 013<br>MP013<br>06/04/12 | Outfall 013<br>MP013<br>07/09/12 | Outfall 013<br>MP013<br>09/10/12 | Outfall 013<br>MP013<br>10/22/12 | Outfall 013<br>MP013<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichloroethene | 200 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **SVOC** | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chloronaphthalene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Chlorophenol | 18 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3&4-Methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 3-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chloroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitroaniline | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4-Nitrophenol | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | 38 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Butylbenzylphthalate | 67 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenzofuran | 4 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diethylphthalate | 110 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dimethylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Di-n-Octylphthalate | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 1.6 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 12 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Hexachloroethane | 6.7 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>12/13/11 | Outfall 013<br>MP013<br>01/03/12 | Outfall 013<br>MP013<br>02/06/12 | Outfall 013<br>MP013<br>03/22/12 | Outfall 013<br>MP013<br>04/09/12 | Outfall 013<br>MP013<br>05/10/12 | Outfall 013<br>MP013<br>06/04/12 | Outfall 013<br>MP013<br>07/09/12 | Outfall 013<br>MP013<br>09/10/12 | Outfall 013<br>MP013<br>10/22/12 | Outfall 013<br>MP013<br>11/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methylphenols, Total | 30 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 11 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrobenzene | 180 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pentachlorophenol | 2.8 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenol | 450 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB** | | | | | | | | | | | | | |
| Aroclor-1016 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1221 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1232 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1242 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1248 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1254 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Aroclor-1260 | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total PCBs | 0.2 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Inorganics** | | | | | | | | | | | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | **0.22 O** | **0.041 O** | NA |
| **Inorganic** | | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Arsenic | 10 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 | 2 | 3 | 2 U |
| Barium | 1,308 | ug/L | 88 | 93 | 87 | 86 | 72 | 61 | NA | NA | NA | NA | NA |
| Beryllium | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA | NA | NA | NA | NA |
| Cadmium | 4.8 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA |
| Chromium Total | 11 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Cobalt | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Copper | 21.6 | ug/L | 4 U | 4 U | 4 U | 4 U | 7 | 16 | 10 | **69** | **23** | **26** | 5 |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | **10** | 5 U | 5 U |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 3 U | 3 U | 4 | 3 U | 3 U | 3 U | 3 U | 6 | 3 U | 5 | 4 |
| Manganese | 4,767 | ug/L | 98 | 87 | 96 | 114 | 78 | 61 | NA | NA | NA | NA | NA |
| Mercury | 1.3 | ng/L | 0.70 | **92 O** | **220 O** | **74 O** | **48 O** | **51 O** | **99 O** | **>100 O** | NA | NA | **40 O** |
| Nickel | 124.3 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Selenium | 5 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA | NA | NA | NA | NA |
| Silver | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA | NA | NA | NA | NA |
| Thallium | 3.7 | ug/L | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | NA |
| Titanium | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Vanadium | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | NA | NA | NA | NA | NA |
| Zinc | 282.7 | ug/L | 5 U | 5 U | 5 U | 5 U | 6 | 26 | 12 | 46 | NA | NA | NA |
| **Miscellaneous** | | | | | | | | | | | | | |
| Oil and Grease | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 6,000 | 12,000 | 19,000 | 3,000 | 3,000 | 14,000 | 8,000 | 50,000 | 9,000 | 127,000 | 2,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>12/18/12 |
|---|---|---|---|
| **VOC** | | | |
| 1,1,1,2-Tetrachloroethane | - - | ug/L | NA |
| 1,1,1-Trichloroethane | 89 | ug/L | NA |
| 1,1,2,2-Tetrachloroethane | 78 | ug/L | NA |
| 1,1,2-Trichloroethane | 330 | ug/L | NA |
| 1,1-Dichloroethane | 740 | ug/L | NA |
| 1,1-Dichloroethene | 130 | ug/L | NA |
| 1,2,3-Trichlorobenzene | - - | ug/L | NA |
| 1,2,3-Trichloropropane | - - | ug/L | NA |
| 1,2,3-Trimethylbenzene | - - | ug/L | NA |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA |
| 1,2,4-Trimethylbenzene | 17 | ug/L | NA |
| 1,2-Dibromo-3-chloropropane | - - | ug/L | NA |
| 1,2-Dibromoethane | 5.7 | ug/L | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA |
| 1,2-Dichloroethane | 360 | ug/L | NA |
| 1,2-Dichloropropane | 230 | ug/L | NA |
| 1,3,5-Trimethylbenzene | 45 | ug/L | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA |
| 2-Butanone | 2,200 | ug/L | NA |
| 2-Hexanone | - - | ug/L | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA |
| 4-Methyl-2-pentanone | - - | ug/L | NA |
| Acetone | 1,700 | ug/L | NA |
| Acrylonitrile | 2 | ug/L | NA |
| Benzene | 200 | ug/L | NA |
| Bromobenzene | - - | ug/L | NA |
| Bromochloromethane | - - | ug/L | NA |
| Bromodichloromethane | - - | ug/L | NA |
| Bromoform | - - | ug/L | NA |
| Bromomethane | 35 | ug/L | NA |
| Carbon Disulfide | - - | ug/L | NA |
| Carbon Tetrachloride | 45 | ug/L | NA |
| Chlorobenzene | 25 | ug/L | NA |
| Chloroethane | 1,100 | ug/L | NA |
| Chloroform | 350 | ug/L | NA |
| Chloromethane | - - | ug/L | NA |
| cis-1,2-Dichloroethene | 620 | ug/L | NA |
| cis-1,3-Dichloropropene | - - | ug/L | NA |
| Dibromochloromethane | - - | ug/L | NA |
| Dibromomethane | - - | ug/L | NA |
| Dichlorodifluoromethane | - - | ug/L | NA |
| Diethyl ether | - - | ug/L | NA |
| Ethylbenzene | 18 | ug/L | NA |
| Hexachloroethane | 6.7 | ug/L | NA |
| Iodomethane | - - | ug/L | NA |
| Isopropylbenzene | 28 | ug/L | NA |
| m&p-Xylene | - - | ug/L | NA |
| Methyl tert-butyl ether | 7,100 | ug/L | NA |
| Methylene Chloride | 1,500 | ug/L | NA |
| Naphthalene | 11 | ug/L | NA |
| n-Butylbenzene | - - | ug/L | NA |
| n-Propylbenzene | - - | ug/L | NA |
| o-Xylene | - - | ug/L | NA |
| p-Isopropyltoluene | - - | ug/L | NA |
| sec-Butylbenzene | - - | ug/L | NA |
| Styrene | 80 | ug/L | NA |
| tert-Butylbenzene | - - | ug/L | NA |
| Tetrachloroethene | 60 | ug/L | NA |
| Tetrahydrofuran | 11,000 | ug/L | NA |
| Toluene | 270 | ug/L | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>12/18/12 |
|---|---|---|---|
| trans-1,2-Dichloroethene | 1,500 | ug/L | NA |
| trans-1,3-Dichloropropene | - - | ug/L | NA |
| trans-1,4-Dichloro-2-butene | - - | ug/L | NA |
| Trichloroethene | 200 | ug/L | NA |
| Trichlorofluoromethane | - - | ug/L | NA |
| Vinyl Chloride | 13 | ug/L | NA |
| **SVOC** | | | |
| 1,2,4-Trichlorobenzene | 99 | ug/L | NA |
| 1,2-Dichlorobenzene | 13 | ug/L | NA |
| 1,2-Diphenylhydrazine | - - | ug/L | NA |
| 1,3-Dichlorobenzene | 28 | ug/L | NA |
| 1,4-Dichlorobenzene | 17 | ug/L | NA |
| 2,2'-Oxybis(1-Chloropropane) | - - | ug/L | NA |
| 2,4,5-Trichlorophenol | - - | ug/L | NA |
| 2,4,6-Trichlorophenol | 5 | ug/L | NA |
| 2,4-Dichlorophenol | 11 | ug/L | NA |
| 2,4-Dimethylphenol | 380 | ug/L | NA |
| 2,4-Dinitrophenol | - - | ug/L | NA |
| 2,4-Dinitrotoluene | - - | ug/L | NA |
| 2,6-Dinitrotoluene | - - | ug/L | NA |
| 2-Chloronaphthalene | - - | ug/L | NA |
| 2-Chlorophenol | 18 | ug/L | NA |
| 2-Methylnaphthalene | 19 | ug/L | NA |
| 2-Methylphenol | - - | ug/L | NA |
| 2-Nitroaniline | - - | ug/L | NA |
| 2-Nitrophenol | - - | ug/L | NA |
| 3&4-Methylphenol | - - | ug/L | NA |
| 3,3'-Dichlorobenzidine | 0.3 | ug/L | NA |
| 3-Nitroaniline | - - | ug/L | NA |
| 4,6-Dinitro-2-methylphenol | - - | ug/L | NA |
| 4-Bromophenyl-phenylether | - - | ug/L | NA |
| 4-Chloro-3-Methylphenol | 7.4 | ug/L | NA |
| 4-Chloroaniline | - - | ug/L | NA |
| 4-Chlorophenyl-phenylether | - - | ug/L | NA |
| 4-Nitroaniline | - - | ug/L | NA |
| 4-Nitrophenol | - - | ug/L | NA |
| Acenaphthene | 38 | ug/L | NA |
| Acenaphthylene | - - | ug/L | NA |
| Anthracene | - - | ug/L | NA |
| Benzo(a)anthracene | - - | ug/L | NA |
| Benzo(a)pyrene | - - | ug/L | NA |
| Benzo(b)fluoranthene | - - | ug/L | NA |
| Benzo(g,h,i)perylene | - - | ug/L | NA |
| Benzo(k)fluoranthene | - - | ug/L | NA |
| bis(2-Chloroethoxy)methane | - - | ug/L | NA |
| bis(2-Chloroethyl)ether | 1 | ug/L | NA |
| bis(2-Ethylhexyl)phthalate | 25 | ug/L | NA |
| Butylbenzylphthalate | 67 | ug/L | NA |
| Chrysene | - - | ug/L | NA |
| Dibenzo(a,h)anthracene | - - | ug/L | NA |
| Dibenzofuran | 4 | ug/L | NA |
| Diethylphthalate | 110 | ug/L | NA |
| Dimethylphthalate | - - | ug/L | NA |
| Di-n-Butylphthalate | 9.7 | ug/L | NA |
| Di-n-Octylphthalate | - - | ug/L | NA |
| Fluoranthene | 1.6 | ug/L | NA |
| Fluorene | 12 | ug/L | NA |
| Hexachlorobenzene | 0.2 | ug/L | NA |
| Hexachlorobutadiene | 0.053 | ug/L | NA |
| Hexachlorocyclopentadiene | - - | ug/L | NA |
| Hexachloroethane | 6.7 | ug/L | NA |
| Indeno(1,2,3-cd)pyrene | - - | ug/L | NA |

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 013<br>MP013<br>12/18/12 |
|---|---|---|---|
| Isophorone | 1,300 | ug/L | NA |
| Methylphenols, Total | 30 | ug/L | NA |
| Naphthalene | 11 | ug/L | NA |
| Nitrobenzene | 180 | ug/L | NA |
| N-Nitroso-di-n-propylamine | - - | ug/L | NA |
| N-Nitrosodiphenylamine | - - | ug/L | NA |
| Pentachlorophenol | 2.8 | ug/L | NA |
| Phenanthrene | 2 | ug/L | NA |
| Phenol | 450 | ug/L | NA |
| Pyrene | - - | ug/L | NA |
| **PCB** | | | |
| Aroclor-1016 | - - | ug/L | NA |
| Aroclor-1221 | - - | ug/L | NA |
| Aroclor-1232 | - - | ug/L | NA |
| Aroclor-1242 | - - | ug/L | NA |
| Aroclor-1248 | - - | ug/L | NA |
| Aroclor-1254 | - - | ug/L | NA |
| Aroclor-1260 | - - | ug/L | NA |
| Total PCBs | 0.2 | ug/L | NA |
| **Inorganics** | | | |
| Mercury (Dissolved) | 0.0013 | ug/L | NA |
| **Inorganic** | | | |
| Antimony | 130 | ug/L | NA |
| Arsenic | 10 | ug/L | 2 U |
| Barium | 1,308 | ug/L | NA |
| Beryllium | 32.3 | ug/L | NA |
| Cadmium | 4.8 | ug/L | NA |
| Chromium Total | 11 | ug/L | 5 U |
| Cobalt | 100 | ug/L | NA |
| Copper | 21.6 | ug/L | 4 U |
| Cyanide (total) | 5.2 | ug/L | 5 U |
| Iron | - - | ug/L | NA |
| Lead | 30.9 | ug/L | 3 U |
| Manganese | 4,767 | ug/L | NA |
| Mercury | 1.3 | ng/L | **2.8 O** |
| Nickel | 124.3 | ug/L | NA |
| Selenium | 5 | ug/L | NA |
| Silver | 0.2 | ug/L | NA |
| Thallium | 3.7 | ug/L | NA |
| Titanium | - - | ug/L | NA |
| Vanadium | 12 | ug/L | NA |
| Zinc | 282.7 | ug/L | NA |
| **Miscellaneous** | | | |
| Oil and Grease | - - | ug/L | NA |
| Total Suspended Solids (TSS) | - - | ug/L | 1,000 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
NA - Not Analyzed
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

O - Indicates that the analysis was performed by an outside laboratory.

**Appendix D** **NPMP Dissolved Sampling Results, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Outfall:<br>Sample Location:<br>Date Collected: | GSI | Units | Outfall 001<br>MP001<br>02/24/11 | Outfall 002<br>MP002<br>02/24/11 | Outfall 003<br>MP003<br>02/24/11 | Outfall 005<br>MP005<br>02/24/11 | Outfall 006<br>MP006<br>02/24/11 | Outfall 007<br>MP007<br>02/24/11 | Outfall 009<br>MP009<br>02/24/11 | Outfall 010<br>MP010<br>02/24/11 | Outfall 013<br>MP013<br>04/29/11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Inorganic-Dissolved** | | | | | | | | | | | |
| Antimony (Dissolved) | 130 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Arsenic (Dissolved) | 10 | ug/L | 2 U | 6 | 2 U | 5 | 2 U | 2 U | 3 | 2 U [2 U] | 2 U |
| Barium (Dissolved) | 1,308 | ug/L | 91 | 430 | 50 | 88 | 65 | 55 | 219 | 100 [101] | 59 |
| Beryllium (Dissolved) | 32.3 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Cadmium (Dissolved) | 4.8 | ug/L | 2 | 1.8 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U |
| Chromium Total (Dissolved) | 11 | ug/L | **37** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Cobalt (Dissolved) | 100 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Copper (Dissolved) | 21.6 | ug/L | 9 | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 U |
| Lead (Dissolved) | 30.9 | ug/L | 5 | 6 | 13 | 10 | 3 U | 3 U | 3 U | 3 U [3 U] | 3 U |
| Manganese (Dissolved) | 4,767 | ug/L | 41 | 682 | 73 | 157 | 262 | 6 | 819 | 53 [54] | 70 |
| Mercury (Dissolved) | 1.3 | ng/L | NA | 0.51 U | 0.91 | 0.51 U | 0.60 | **1.4** | 0.51 U | 0.71 [0.51 U] | 0.94 |
| Nickel (Dissolved) | 124.3 | ug/L | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Selenium (Dissolved) | 5 | ug/L | 5 U | **6** | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U [5 U] | 5 U |
| Silver (Dissolved) | 0.2 | ug/L | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U [0.5 U] | 0.5 U |
| Thallium (Dissolved) | 3.7 | ug/L | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U [1 U] | 1 U |
| Vanadium (Dissolved) | 12 | ug/L | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U | 4 U [4 U] | 4 U |
| Zinc (Dissolved) | 282.7 | ug/L | 46 | 5 U | 25 | 5 U | 5 U | 5 U | 29 | 5 U [5 U] | 16 |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
O - Indicates that the analysis was performed by an outside laboratory.

**Appendix D** **NPMP Upgradient Sampling Results, 2012 CMI Annual Report**
**RACER Trust Buick City Site - Flint, Michigan**

| Upgradient Sampling Location: / Outfall Drainage Area: / Date Collected: | GSI | Units | MH 1-7 / Outfall 001 / 08/15/11 | MH 3-25-3 / Outfall 003 / 07/09/12 | MH 3-31 / Outfall 003 / 08/15/11 | MH 3-31 / Outfall 003 / 07/09/12 | MH 3-51 / Outfall 003 / 08/15/11 | MH 3-51 / Outfall 003 / 07/09/12 | MH 4-21 / Outfall 003 / 08/15/11 | MH 4-21 / Outfall 003 / 07/09/12 | MH 13-14 / Outfall 013 / 08/15/11 | MH 13-14 / Outfall 013 / 07/09/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Inorganic** | | | | | | | | | | | | |
| Antimony | 130 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Arsenic | 10 | ug/L | 2 | 2 U [2 U] | 5 | 8 | 2 U | 2 U | **20** | 3 | 2 U | NA |
| Barium | 1,308 | ug/L | 93 | 19 [19] | 212 | 303 | 26 | 30 | 177 | 143 | 43 | NA |
| Beryllium | 32.3 | ug/L | 1 U | 1 U [1 U] | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | NA |
| Cadmium | 4.8 | ug/L | 0.8 | 0.5 U [0.5 U] | 1.2 | 1.3 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | NA |
| Chromium Total | 11 | ug/L | 5 U | 5 U [5 U] | **26** | **49** | 5 U | 8 | 5 U | 5 U | 5 U | NA |
| Cobalt | 100 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Copper | 21.6 | ug/L | 8 | 4 U [4 U] | **24** | **113** | 4 U | 4 | **63** | 17 | 4 U | NA |
| Cyanide (total) | 5.2 | ug/L | 5 U | 5 U [5 U] | **17** | **28** | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Iron | - - | ug/L | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Lead | 30.9 | ug/L | 25 | 3 U [3 U] | **39** | **93** | 10 | 8 | **35** | **52** | 3 U | NA |
| Manganese | 4,767 | ug/L | 225 | 17 [18] | 230 | 1,070 | 5 U | 35 | 2,530 | 679 | 71 | NA |
| Mercury | 1.3 | ng/L | **3.6** | **110 O** | **11** | **41 O** | **1.5** | **1.6 O** | **42** | **11 O** | **1.5** | **16 O** |
| Nickel | 124.3 | ug/L | 5 U | 5 U [5 U] | 7 | 34 | 5 U | 5 U | 19 | 8 | 5 U | NA |
| Selenium | 5 | ug/L | 5 U | 5 U [5 U] | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | NA |
| Silver | 0.2 | ug/L | 0.5 U | 0.2 U [0.2 U] | 0.5 U | 0.2 U | 0.5 U | 0.2 U | 0.5 U | 0.2 U | 0.5 U | NA |
| Thallium | 3.7 | ug/L | 1 U | 2 U [2 U] | 1 U | 2 U | 1 U | 2 U | 1 U | 2 U | 1 U | NA |
| Titanium | - - | ug/L | 20 U | NA | 20 U | NA | 20 U | NA | 20 U | NA | 20 U | NA |
| Vanadium | 12 | ug/L | 4 | 4 U [4 U] | 9 | 7 | 4 U | 4 U | 4 U | 4 U | 4 U | NA |
| Zinc | 282.7 | ug/L | 70 | 8 [10] | 70 | **367** | 5 U | 94 | 78 | 159 | 5 U | NA |

Notes:
GSI - Groundwater/Surface Water Interface Criteria.
ug/L - micrograms per liter
ng/L - nanograms per liter
Shaded and Bolded results exceed GSI criteria.
U - The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
O - Indicates that the analysis was performed by an outside laboratory.

ARCADIS

**Appendix E**

Maintenance of Select Surface Cover Inspection Logs

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

DATE: 3/28/12 TIME: Throughout day

| **Quarterly Inspection** | | |
|---|---|---|
| **Is the Surface Cover Consistent with Existing Conditions?** | | |
| **Item** | **Condition Satisfactory (X)** | **Condition Unsatisfactory (X)** |
| AOI Group 12-A | ☒ | ☐ |
| AOI Group 2-C | ☒ | ☐ |
| AOI Group 29-A | ☒ | ☐ |
| AOI Group 09-A | ☒ | ☐ |
| AOI Group 09-B (Area 1) | ☒ | ☐ |
| AOI Group 09-B (Area 2) | ☒ | ☐ |

**Comments***
Areas appear to be in similar condition as previous inspection. No visible changes to surfaces including damage. Change in seasons, new vegetation growth and some dumping also noted. Many survey makers indicating boundaries are now gone. Photos taken from approximate areas in order to include all of the surfaces. In process of remarking all areas with paint and other semi-permanent means.

**Print Name (Inspector):** D.Newcom

**Inspector's Signature:** _____

*** Comments and photos attached**

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 12-A | • New growth vegetation<br>• Broken and intact concrete | Fair, no changes noted | **See attached photos with notes for all locations** |
| AOI Group 2-C | • Intact concrete<br>• Mix of broken concrete and asphalt<br>• New growth vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 29-A | • Broken and intact concrete<br>• New growth vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 09-A | • Broken and intact concrete<br>• New growth vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |
| AOI Group 09-B (Area 1) | • Intact concrete<br>• New growth vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 09-B (Area 2) | • Intact concrete and asphalt<br>• Deteriorating concrete and asphalt<br>• New growth vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5.<br>6. |

Select Surface Inspection
AOI – 29A
3/28/12

Corner A-4 facing the center

Corner A-1 facing the center

Corner A-3 facing the center

Corner A-2 facing the center

Select Surface Inspection
AOI – 12A
3/28/12

Photo not available,
damaged file.

Corner B-1 facing the center

Corner B-4 facing the center

Corner B-2 facing the center

Corner B-3 facing the center

Select Surface Inspection
AOI – 09 B2 (1 of 2)
3/28/12

Corner I-5 facing the center

Corner I-6 facing the center

Corner I-2 facing the center

Corner I-3 facing the center

Select Surface Inspection
AOI – 09 B2 (2 of 2)
3/28/12

Corner I-4 facing the center

Corner I-1 facing the center

Select Surface Inspection
AOI – 02C
3/28/12

Corner C-4 facing the center

Corner C-2 facing the center

Area is very small, only two photos were needed to cover entire AOI area.

Select Surface Inspection
AOI – 09 A
3/28/12

Corner G-2 facing the center

Corner G-4 facing the center

G-5 area facing the center

All 5 corners are included in the photos. Area is odd shaped and small allowing for entire area to be included in 3 photos.

Select Surface Inspection
AOI – 09 B1 (1 of 2)
3/28/12

Corner F-2 facing the center

Corner F-3 facing the center

Corner E-3 facing the center

Corner E-4 facing the center

Select Surface Inspection
AOI – 09 B1 (2 of 2)
3/28/12

Corner E-1 facing the center

Due to proximity, corners F-1 and F-4 are included in photos from F-2 and F-3.

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

DATE: 6/12/12 TIME: Throughout day

| **Quarterly Inspection** | | |
|---|---|---|
| **Is the Surface Cover Consistent with Existing Conditions?** | | |
| **Item** | **Condition Satisfactory (X)** | **Condition Unsatisfactory (X)** |
| AOI Group 12-A | ☒ | ☐ |
| AOI Group 2-C | ☒ | ☐ |
| AOI Group 29-A | ☒ | ☐ |
| AOI Group 09-A | ☒ | ☐ |
| AOI Group 09-B (Area 1) | ☒ | ☐ |
| AOI Group 09-B (Area 2) | ☒ | ☐ |

**Comments***
Areas appear to be in similar condition as previous inspection. No visible changes to surfaces including damage. Increased vegetation growth and some dumping also noted. Many survey makers indicating boundaries are now difficult to locate, remarked boundaries as needed.

**Print Name (Inspector):** D.Newcom

**Inspector's Signature:** _____

*** Comments and photos attached**

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 12-A | • Increased vegetation<br>• Broken and intact concrete | Fair, no changes noted | **See attached photos with notes for all locations** |
| AOI Group 2-C | • Intact concrete<br>• Mix of broken concrete and asphalt<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 29-A | • Broken and intact concrete<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 09-A | • Broken and intact concrete<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |
| AOI Group 09-B (Area 1) | • Intact concrete<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 09-B (Area 2) | • Intact concrete and asphalt<br>• Deteriorating concrete and asphalt<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5.<br>6. |

Select Surface Inspection
AOI – 12A
6/12/12

Corner B-1 facing the center

Corner B-2 facing the center

Corner B-3 facing the center

Corner B-4 facing the center

Select Surface Inspection
AOI – 02C
6/12/12

Corner C-1 facing the center

Corner C-2 facing the center

Corner C-3 facing the center

Corner C-4 facing the center

Select Surface Inspection
AOI – 29A
6/12/12

Corner A-1 facing the center

Corner A-2 facing the center

Corner A-3 facing the center

Corner A-4 facing the center

Select Surface Inspection
AOI – 09 A
6/12/12

Corner G-1 facing the center

Corner G-4 facing the center

Corner G-5 area facing the center

Corner G-6 area facing the center

Select Surface Inspection
AOI – 09 B1 (1 of 2)
6/12/12

Corner F-2 facing the center

Corner F-3 facing the center

Corner F-4 facing the center

Corner E-3 facing the center

Select Surface Inspection
AOI – 09 B1 (2 of 2)
6/12/12

Corner E-4 facing the center

Corner E-1 facing the center

Corner F-1 facing the center

Select Surface Inspection
AOI – 09 B2 (1 of 2)
6/12/12

Corner I-7 facing the center

Corner I-8 facing the center

Corner I-9 facing the center

Corner I-10 facing the center

Select Surface Inspection
AOI – 09 B2 (2 of 2)
6/12/12

Corner I-11 facing the center

## Nanzer, Bethany

**From:** Newcom, Deborah
**Sent:** Wednesday, July 11, 2012 12:04 PM
**To:** Nanzer, Bethany
**Subject:** RE: Select Surface

Beth,
The dumping observed was less than what I have seen at other parts of the site. There are some trash bags, litter, and some tires here and there. Nothing that directly will affect the cover conditions, but I wanted to note it for future reference.
Thanks.
Deb

---

**From:** Nanzer, Bethany
**Sent:** Wednesday, July 11, 2012 8:50 AM
**To:** Newcom, Deborah
**Subject:** RE: Select Surface

Hi Deb,

I took a look at your notes and I see that you wrote some dumping noted in your observation section. Can you tell me what kind of dumping that you observed? Just a brief explanation in an email will be fine. I will attach the email to the inspection notes for this quarter. Thanks!
Beth

---

**From:** Newcom, Deborah
**Sent:** Tuesday, July 10, 2012 2:55 PM
**To:** Nanzer, Bethany
**Subject:** Select Surface

Here you go Beth. Let me know if you need anything.
Thanks.
Deb

**Deborah Newcom** | Field Technician 2 |Deborah.Newcom@arcadis-us.com

ARCADIS U.S., Inc. | 10559 Citation Drive, Suite 100 | Brighton, MI 48116
T. 810.229.8594 | M. 810.623.6438 | F. 810.229.8837
www.arcadis-us.com

ARCADIS, Imagine the result
Please consider the environment before printing this email.

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

DATE: 9/18/12 TIME: Throughout day

| **Quarterly Inspection** | | |
|---|---|---|
| **Is the Surface Cover Consistent with Existing Conditions?** | | |
| **Item** | **Condition Satisfactory (X)** | **Condition Unsatisfactory (X)** |
| AOI Group 12-A | ☒ | ☐ |
| AOI Group 2-C | ☒ | ☐ |
| AOI Group 29-A | ☒ | ☐ |
| AOI Group 09-A | ☒ | ☐ |
| AOI Group 09-B (Area 1) | ☒ | ☐ |
| AOI Group 09-B (Area 2) | ☒ | ☐ |

**Comments***
Areas appear to be in similar condition as previous inspection. No visible changes to surfaces including damage. Areas showing slight increase in natural weathering. Increased vegetation growth and some dumping also noted. Remarked boundaries as needed.

**Print Name (Inspector):** D.Newcom

**Inspector's Signature:** _____

*** Comments and photos attached**

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 12-A | • Increased vegetation<br>• Broken and intact concrete | Fair, no changes noted | **See attached photos with notes for all locations** |
| AOI Group 2-C | • Intact concrete<br>• Mix of broken concrete and asphalt<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 29-A | • Broken and intact concrete<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 09-A | • Broken and intact concrete<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |
| AOI Group 09-B (Area 1) | • Intact concrete<br>• Increased vegetation<br>• Treatment system installed throughout area, cover not disturbed during install (all lines above ground) | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 09-B (Area 2) | • Intact concrete and asphalt<br>• Deteriorating concrete and asphalt<br>• Increased vegetation | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5.<br>6. |

Select Surface Inspection
AOI – 29A
9/18/2012

Corner A-1 facing the center

Corner A-2 facing the center

Corner A-3 facing the center

Corner A-4 facing the center

Select Surface Inspection
AOI – 12A
9/18/2012

Corner B-1 facing the center

Corner B-2 facing the center

Corner B-3 facing the center

Corner B-4 facing the center

Select Surface Inspection
AOI – 02C
9/18/2012

Corner C-1 facing the center

Corner C-2 facing the center

Corner C-3 facing the center

Corner C-4 facing the center

Select Surface Inspection
AOI – 09 B1
9/18/2012

Corners F-1/ F-2 facing the center

Corner E-3 facing the center

Corners F-3/F-4 facing the center

Corner E-4 facing the center

*Corners combined due to system locations

Select Surface Inspection
AOI – 09 A
9/18/2012

Corner G-1 facing the center

Corner G-4 facing the center

Corner G-5 area facing the center

Corner G-6 area facing the center

Select Surface Inspection
AOI – 09 B2
9/18/2012

Corner I-7 facing the center

Corner I-10 facing the center

Between corners I-8 and I-9 facing the center

Corner I-11 facing the center

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

DATE: 12/18/12 TIME: Throughout day

| **Quarterly Inspection** | | |
|---|---|---|
| **Is the Surface Cover Consistent with Existing Conditions?** | | |
| **Item** | **Condition Satisfactory (X)** | **Condition Unsatisfactory (X)** |
| AOI Group 12-A | ☒ | ☐ |
| AOI Group 2-C | ☒ | ☐ |
| AOI Group 29-A | ☒ | ☐ |
| AOI Group 09-A | ☒ | ☐ |
| AOI Group 09-B (Area 1) | ☒ | ☐ |
| AOI Group 09-B (Area 2) | ☒ | ☐ |

**Comments***
Areas appear to be in similar condition as previous inspection. No visible changes to surfaces including damage. Areas showing slight increase in natural weathering. Dead vegetation due to season and dumping also noted. Remarked boundaries as needed.

**Print Name (Inspector):** D.Newcom

**Inspector's Signature:** _____

*** Comments and photos attached**

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 12-A | • Dead vegetation due to season<br>• Broken and intact concrete | Fair, no changes noted | **See attached photos with notes for all locations** |
| AOI Group 2-C | • Intact concrete<br>• Mix of broken concrete and asphalt<br>• Dead vegetation due to season | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 29-A | • Broken and intact concrete<br>• Dead vegetation due to season | Fair, no changes noted | 1.<br>2.<br>3.<br>4. |
| AOI Group 09-A | • Broken and intact concrete<br>• Dead vegetation due to season | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |
| AOI Group 09-B (Area 1) | • Intact concrete<br>• Dead vegetation due to season<br>• Treatment system installed throughout area, cover not disturbed during install (all lines above ground) | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5. |

MAINTENANCE OF SELECT SURFACE COVERS
INSPECTION LOG SHEET

NAO FLINT NORTH (OTHERWISE KNOWN AS BUICK CITY) – SOUTHEND
FLINT, MICHIGAN

| Item | Groundcover | Condition | Photo Notes |
|---|---|---|---|
| AOI Group 09-B (Area 2) | • Intact concrete and asphalt<br>• Deteriorating concrete and asphalt<br>• Dead vegetation due to season | Fair, no changes noted | 1.<br>2.<br>3.<br>4.<br>5.<br>6. |

Select Surface Inspection
AOI – 29A
12/18/2012

Corner A-1 facing the center

Corner A-2 facing the center

Corner A-3 facing the center

Corner A-4 facing the center

Select Surface Inspection
AOI – 12A
12/18/2012

Corner B-1 facing the center

Corner B-2 facing the center

Corner B-3 facing the center

Corner B-4 facing the center

Select Surface Inspection
AOI – 02C
12/18/2012

Corner C-1 facing the center

Corner C-2 facing the center

Corner C-3 facing the center

Corner C-4 facing the center

Select Surface Inspection
AOI – 09 B1
12/18/2012

Corners F-1/ F-2 facing the center

Corner E-3 facing the center

Corners F-3/F-4 facing the center

Corner E-4 facing the center

*Corners combined due to system locations

Select Surface Inspection
AOI – 09 A
12/18/2012

Corner G-1 facing the center

Corner G-4 facing the center

Corner G-5 area facing the center

Corner G-6 area facing the center

Select Surface Inspection
AOI – 09 B2
12/18/2012

Corner I-7 facing the center

Corner I-10 facing the center

Between corners I-8 and I-9 facing the center

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**Appendix F**

AOI 29-A Investigation Summary

ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

**MEMO**

To:
Chris Black, USEPA Region 5

Copies:
Chris Peters, ARCADIS
Grant Trigger, RACER
Dave Favero, RACER
Micki Maki, ARCADIS

From:
Tony Maffeo

Date:
February 19, 2013

ARCADIS Project No.:
B0064410.2013.01001

Subject:
Select Surface Cover AOI 29-A Investigation Summary of Results
Buick City Site - Flint, MI

---

## Introduction

This memorandum was prepared by ARCADIS on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Buick City Site (Site) located in Flint, Michigan to summarize the field activities and laboratory analytical results associated with the Select Surface Cover AOI 29-A Sampling Investigation. The objective of this investigation is to better define the extent of lead surficial soil impacts at AOI 29-A in order to minimize the area requiring additional surface cover. The surface cover is an engineering control to protect future Site users from near surface soils that exceed non-residential direct contact (NDC) criteria. The investigation was completed on December 19, 2012 in accordance with the approved Select Surface Cover AOI 29-A Sampling Plan (sampling plan). The approximate location of AOI 29-A is shown on the Site Location Map presented as **Figure 1**.

## Investigation

Soil borings were attempted at six locations (SB-29-01 through SB-29-06) to a depth of two feet below ground surface (bgs) in accordance with the sampling plan as shown of **Figure 2**. These locations were chosen to further delineate two historical borings (RFI-12-31 and RFI-29-01) which exceeded NDC criteria for lead. At locations SB-29-01 and SB-29-02, hand auguring was completed to a depth of one foot bgs

due to the presence of concrete obstructions. A grab sample was collected from each location. Locations SB-29-03 and SB-29-04 were not sampled as only minimal surficial debris above the existing concrete slab was encountered. At locations SB-29-05 and SB-29-06, hand auguring was completed to a depth of 0.5 feet bgs due to the presence of concrete obstructions. A grab sample was collected from each location.

Soil samples SB-29-01, SB-29-02, SB-29-05, and SB-29-06 were submitted to Merit Laboratories Inc. in East Lansing, Michigan for the analysis of lead via EPA Method SW6020.

**Analytical Results and Conclusions**

Although, lead was detected in each of the samples the results ranged from 97.2 milligrams per kilogram (mg/kg) to 156 mg/kg which is below the NDC criteria of 900 mg/kg. Laboratory analytical results for the samples collected during this investigation are included as **Attachment 1**. **Attachment 2** presents the lead results from the historical soil borings located in this area.

The data collected during this investigation were reviewed in conjunction with historic Site data to determine the portions of AOI 29-A requiring surface cover. The extent of the delineated areas requiring surface cover is shown on **Figure 2**. The areas requiring surface cover were evaluated in conjunction with information gathered during Site walks at AOI 29-A and the areas that currently do not have sufficient surface cover were identified The areas requiring additional surface cover are shown on **Figure 2**. The area to be covered in the eastern portion of AOI 29-A is approximately 35 feet by 25 feet and the area to be covered in the western portion of AOI 29-A is approximately 35 feet by 30 feet.

The extent of impacts at AOI 29-A to be included in the restrictive covenant remain the same as borings were not able to be completed to depths of historically known impact.

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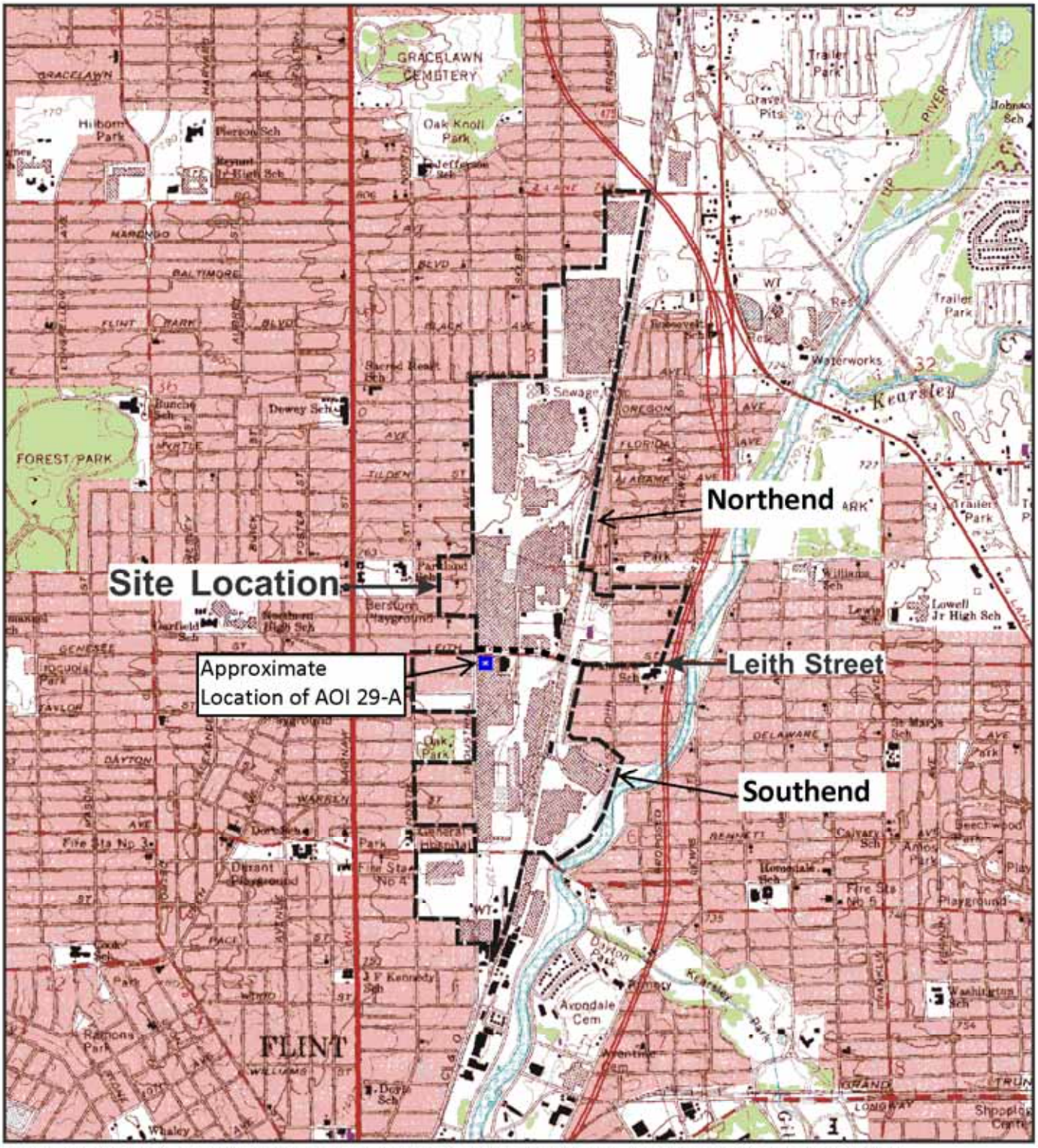
# Figures




**REFERENCE:** Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'

**Approximate Scale: 1" = 2000'**

**Area Location**

RACER TRUST
BUICK CITY - FLINT, MICHIGAN

## SITE LOCATION

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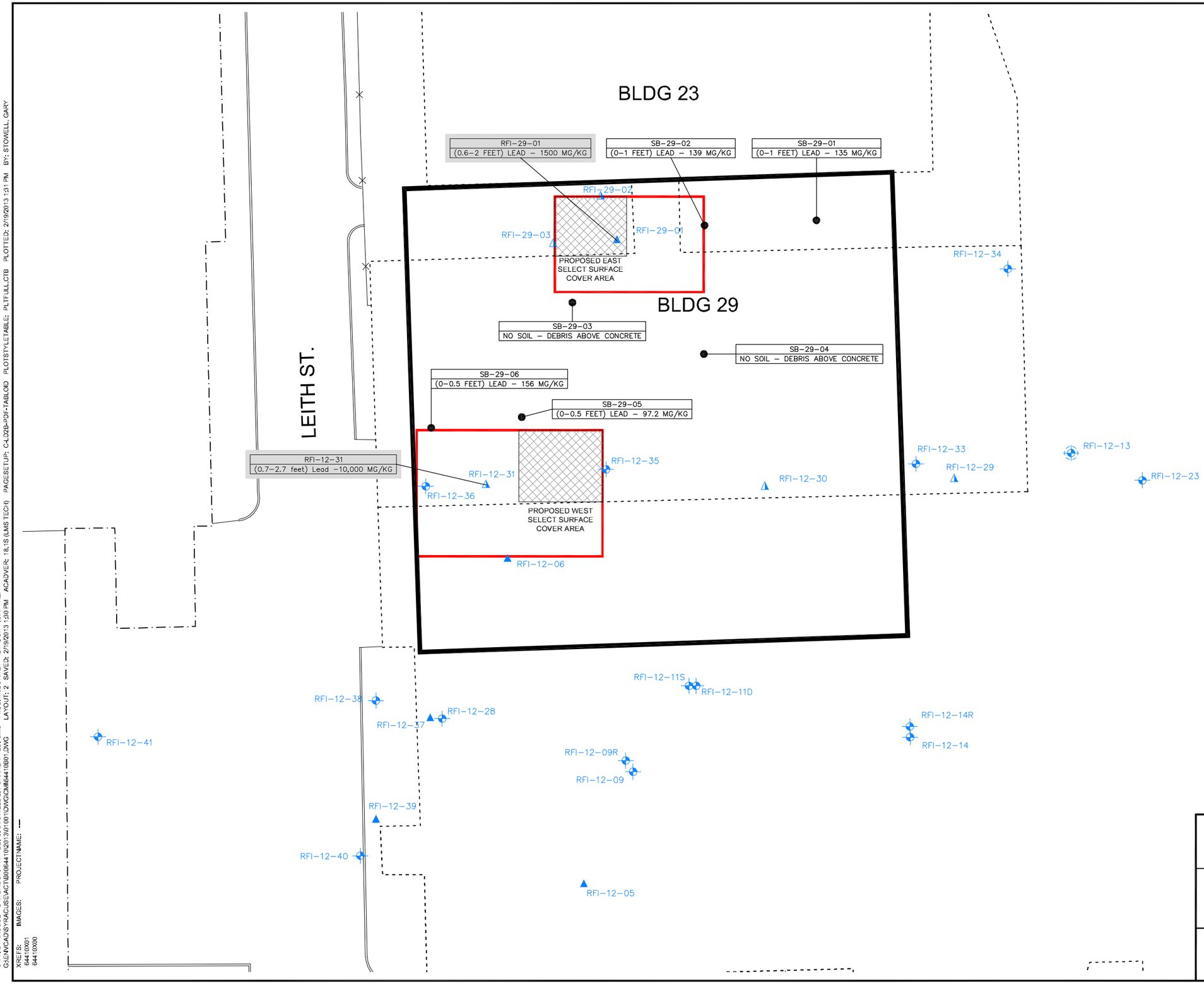
FIGURE
1

05/07/2012 SYRACUSE, NY-ENV/CAD-DJHOWES
B0064410/4012/00104/CDR/64410N02.CDR




**LEGEND:**

- DEMOLISHED BUILDING
- AREA TO BE INCLUDED IN A DEED RESTRICTION
- AREA REQUIRING ADDITIONAL SURFACE COVER
- 2012 BORING LOCATION
- RFI SOIL BORING LOCATION
- RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI MONITORING WELL LOCATION
- DECOMMISSIONED/DESTROYED MONITORING WELL
- DELINEATED AREA REQUIRING SURFACE COVER

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. DATABOXES WITH A GRAY BACKGROUND CONTAIN HISTORICAL DATA.

0 20' 40'
GRAPHIC SCALE

RACER TRUST
BUICK CITY - FLINT, MICHIGAN

**SELECT SURFACE COVERS**
**AOI 29-A - COVER PLAN**

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FIGURE
**2**

CITY: SYRACUSE DIV/GROUP: 141 DB: G. STOWELL L: FORAKER LD: GMS PM: L. McBURNEY LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2013\01001\DWG\M64410B01.DWG LAYOUT: 2 SAVED: 2/19/2013 1:30 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C4_D2B-PDF-TABLOID PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/19/2013 1:31 PM BY: STOWELL, GARY
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---

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**Attachment 1**

Laboratory Analytical Results

# Analytical Laboratory Report

Report ID: S55030.01(01)
Generated on 01/04/2013

Report to

Attention: Micki Macki
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2271 FAX: 248-994-2241
Email: mickimaki@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55030.01-S55030.05
Project: Select Surface Cover Sampling / B0064410.2012.01001
Collected Date: 12/19/2012
Submitted Date/Time: 12/20/2012 08:30
Sampled by: M. Meckley
P.O. #: B0064410.2012.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (5 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S55030.01 | SB-29-01(0-1) | Soil | 12/19/2012 11:45 |
| S55030.02 | SB-29-02(0-1) | Soil | 12/19/2012 11:58 |
| S55030.03 | SB-29-05(0-0.5) | Soil | 12/19/2012 12:42 |
| S55030.04 | SB-29-06(0-0.5) | Soil | 12/19/2012 13:34 |
| S55030.05 | IDW-A0129-12192012 | Soil | 12/19/2012 13:00 |

# Analytical Laboratory Report

Lab Sample ID: S55030.01
Sample Tag: SB-29-01(0-1)
Collected Date/Time: 12/19/2012 11:45
Matrix: Soil
COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 4oz Glass | None | Yes | Room | N/A |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Metal Digestion | Completed | | | 3050B | 12/26/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 12/20/12 17:57 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 135 | mg/kg | 0.30 | SW6020 | 12/26/12 14:42 | PER | | |

# Analytical Laboratory Report

Lab Sample ID: S55030.02
Sample Tag: SB-29-02(0-1)
Collected Date/Time: 12/19/2012 11:58
Matrix: Soil
COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 4oz Glass | None | Yes | Room | N/A |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Metal Digestion | Completed | | | 3050B | 12/26/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 87 | % | 1 | Std M 2540 B | 12/20/12 17:57 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 139 | mg/kg | 0.30 | SW6020 | 12/26/12 14:44 | PER | | |

# Analytical Laboratory Report

Lab Sample ID: S55030.03
Sample Tag: SB-29-05(0-0.5)
Collected Date/Time: 12/19/2012 12:42
Matrix: Soil
COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 4oz Glass | None | Yes | Room | N/A |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Metal Digestion | Completed | | | 3050B | 12/26/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 79 | % | 1 | Std M 2540 B | 12/20/12 17:57 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 97.2 | mg/kg | 0.30 | SW6020 | 12/26/12 14:46 | PER | | |

# Analytical Laboratory Report

Lab Sample ID: S55030.04
Sample Tag: SB-29-06(0-0.5)
Collected Date/Time: 12/19/2012 13:34
Matrix: Soil
COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 4oz Glass | None | Yes | Room | N/A |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Metal Digestion | Completed | | | 3050B | 12/26/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 78 | % | 1 | Std M 2540 B | 12/20/12 17:57 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 156 | mg/kg | 0.30 | SW6020 | 12/26/12 14:48 | PER | | |

# Analytical Laboratory Report

Lab Sample ID: S55030.05
Sample Tag: IDW-A0129-12192012
Collected Date/Time: 12/19/2012 13:00
Matrix: Soil
COC Reference:

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 4oz Glass | None | Yes | Room | N/A |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Metal Digestion | Completed | | | 3015A | 01/03/13 10:00 | PER | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 9.48 | | | 1311 | 01/02/13 17:30 | WAR | | |
| pH after 3.5 ml HCl | 5.60 | | | 1311 | 01/02/13 17:30 | WAR | | |
| % Solids | 100 | | | 1311 | 01/02/13 17:30 | WAR | | |
| Sample Used g | 100 | | | 1311 | 01/02/13 17:30 | WAR | | |
| Final Volume mL | 2,000 | | | 1311 | 01/02/13 17:30 | WAR | | |
| TCLP Extraction Fluid | 1 | | | 1311 | 01/02/13 17:30 | WAR | | |
| Final Extract pH | 6.16 | | | 1311 | 01/02/13 17:30 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead, TCLP | Not detected | mg/L | 0.03 | SW6020 | 01/03/13 16:00 | PER | 5.0 | |

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Laboratory Task Order No./P.O. No. B0064460. 2012 . D1001

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name Select Surface Cover Sampling

Project Location Flint, MI

Laboratory Merit

Project Manager Micki Maki

Sampler(s)/Affiliation M. Meckley / ARCADIS

ANALYSIS / METHOD / SIZE

| | Sample ID/Location | Matrix | Date/Time Sampled | Lab ID | lead | TCLP lead | | | | | Remarks | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55030.01 | JB-29-01(0-1) | S | 12/19/12 1145 | | X | | | | | | | 1 |
| .02 | JB-29-02(0-1) | S | 12/19/12 1158 | | X | | | | | | | 1 |
| .03 | JB-29-05(0-0.5') | S | 12/19/12 1248 | | X | | | | | | | 1 |
| .04 | JB-29-06(0-0.5) | S | 12/19/12 [illegible] | | X | | | | | | | 1 |
| .05 | IDW-A0129-12192012 | S | 12/19/12 1300 | | | X | | | | | | 1 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 5

| | | | | |
|---|---|---|---|---|
| Relinquished by: Megan Meckley | Organization: ARCADIS | Date 12/20/2012 | Time 830 | Seal Intact? |
| Received by: | Organization: | Date / / | Time | Yes No N/A |
| Relinquished by: | Organization: | Date / / | Time | Seal Intact? |
| Received by: Andrew Bell | Organization: Merit | Date 12/20/2012 | Time 0830 | Yes No N/A |

Special Instructions/Remarks: Temp-Room

Delivery Method: ☐ In Person ☐ Common Carrier _____ (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

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**Attachment 2**

Summary of AOI 29-A Historic Soil Samples Lead Analytical Results

**Attachment 2**
**Summary of AOI 29-A Historic Soil Sample Lead Analytical Results**

**RACER Buick City Site**
**Flint, Michigan**

| Location ID:<br>Sample Depth(ft BGS):<br>Date Collected: | Units | NDC | RFI-12-06<br>1.2 - 3.2<br>05/24/01 | RFI-12-06<br>7.2 - 9.2<br>05/24/01 | RFI-12-30<br>0.7 - 2.7<br>07/24/03 | RFI-12-31<br>0.7 - 2.7<br>07/25/03 | RFI-12-35<br>3 - 4<br>08/29/03 | RFI-29-01<br>0.6 - 2<br>05/15/01 | RFI-29-01<br>2 - 4<br>05/15/01 | RFI-29-02<br>1 - 3<br>09/05/01 | RFI-29-03<br>1 - 3<br>09/05/01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Inorganic** | | | | | | | | | | | |
| Lead | mg/kg | 900 | 5.5 J | 6.2 J | 730 J | **10,000 J** | 15 [13] | **1,500 J** | 12 J | 96 | 470 |

Notes:
Bolded and Shaded - Exceeeds criteria
ft bgs - feet below ground surface
mg/kg - milligrams per kilogram
NDC - Non-residential Direct Contact criteria
J - indicates an estimated value
[ ] - indicates duplicate sample results

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**Appendix G**

AOI 09-A Impacted Soil Removal Work Plan

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Imagine the result

**Revitalizing Auto Communities Environmental Response Trust (RACER)**

# AOI 09-A Impacted Soil Removal Work Plan

Buick City Site (Formerly General Motors Corporation North American Operations Facility)

Flint, Michigan

October 10, 2012

ARCADIS

**AOI 09-A Impacted Soil Removal Work Plan**

Buick City Site (Formerly General Motors Corporation North American Operations Facility)


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Our Ref.:
B0064410.2012.01101

Date:
October 10, 2012

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Appendix B Excerpt from Section 2.4.2.2 of the 2002 Michigan Department of Environmental Quality Sampling Strategies and Statistics Training Materials Plan

Appendix C Excerpts from the *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP) presented as Appendix C of the March 30, 2001 *RCRA Facility Investigation Work Plan*

## 1. Introduction

This AOI 09-A Impacted Soil Removal Work Plan (work plan) was prepared by ARCADIS on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Buick City Site (Site) located in Flint, Michigan. The objective of this work plan is to detail the approach that will be used to remove lead and benzo(a)pyrene impacted soils from the CSX property adjacent to AOI 09-A located in the Southend of the Site, Figure 1.

This work plan was developed in accordance with the *Corrective Measures Implementation (CMI) Work Plan (ARCADIS, 2010)* and the *U.S EPA Final Decision and Response to Comments for Soil and Groundwater Cleanup at The Southend of the Former General Motors Corporation North American Operations (Otherwise known as Buick City) (U.S.EPA, 2010)[the Final Decision].*

## 2. Soil Removal Activities

In the Final Decision the selected remedy to address the off-Site impacted soils is excavation and off-Site disposal. Off-Site impacted soils with lead concentrations above 900 milligrams per kilogram (mg/kg) (non-residential direct contact criteria) and benzo(a)pyrene concentrations above 8 mg/kg (non-residential direct contact criteria) will be excavated. The approximate extent of soil impacts (shown on Figure 2) is based on data collected during the RFI as well as investigation activities completed in August of 2010. Soils will be disposed of at an off-Site disposal facility consistent with state requirements.

The impacted soils are present on both RACER and CSX property; however, only the impacted soils on the CSX property will be excavated. An access agreement between RACER and CSX was fully executed on April 16, 2012. All provisions outlined in the access agreement will be followed during this excavation activity.

Figure 2 shows the route through the Site truck traffic will be using to access the work area on CSX property.

### 2.1 Site Preparation

Prior to beginning soil removal activities the following Site Preparation activities will be performed:

- A professional surveyor will stake and mark out the extent of each excavation and stake the historical soil boring locations, to be used as reference points. The estimated extent of offsite benzo(a)pyrene soil excavation is shown on Figure 3 and the lead soil excavation is shown on Figure 4.
- Work zones and staging areas for vehicles and equipment will be designated accordingly.
- Removal of existing perimeter fence as necessary to complete this scope of work.
- Construction safety fence or appropriate barricades will be installed just outside the excavation boundaries to eliminate a fall hazard and keep bystanders out of the work zones.
- A designated loading area will be established and appropriate measures will be taken to ensure impacted soil does not come into contact will non-impacted soils. Excavated soils will be directly loaded into trucks/roll-off boxes over a pad covered with poly plastic sheeting (or similar) to protect the underlying ground.
- Proper utility clearance procedures and one call activities will be completed.

### 2.2 Soil Erosion and Sedimentation Control

As the area of land to be excavated is less than 1 acre; a Sediment Erosion and Sedimentation Control Plan (SESC) Plan is not required. However, removal activities will be completed in a way that minimizes the potential for erosion and transport of soil from the removal areas to the adjacent surface-water bodies or nearby catch basins. During the soil excavation, the contractor will excavate the impacted soil and place the soil directly into a truck or staged roll-off, reducing or eliminating the need for stockpiling. However in the event that direct loading of impacted soil and unloading of fill soil cannot be achieved, soil stockpiles will be contained on plastic sheeting, and covered with plastic sheeting to prevent erosion. SESC control measure shall be removed upon completion of surface restoration and 90% vegetation coverage, where appropriate.

### 2.3 Soil Removal

The benzo(a)pyrene soil removal will be performed prior to the lead soil removal. In the event that additional excavation is required, excavation equipment shall be properly decontaminated prior to exiting either soil removal area.

#### 2.3.1 Benzo(a)pyrene Soil Removal

During the benzo(a)pyrene delineation activities several additional polynuclear aromatic hydrocarbons (PNAs) were also detected at concentrations exceeding non-residential criteria. Although several PNAs have been detected above criteria in this area, it will continue to be referred to as the benzo(a)pyrene soil removal area, for consistency's sake. The PNA impacted soils will be excavated using heavy equipment and transported offsite to an approved disposal facility.

The estimated initial extent of the benzo(a)pyrene removal area is shown on Figure 3. The estimated area to be excavated is approximately 22 feet wide by 28 feet long by 2.5 feet deep. The area is bounded by the RACER/CSX property boundary to the west and by soil borings SB-09-35, SB-09-03, SB-09-33, and SB-09-34 to the south and east. The northern extent of impact has not been fully delineated. The estimated volume of soil to be removed is approximately 60 cubic yards. Any surface concrete / asphalt and/or debris removed during the excavation will be incorporated into the waste.

Confirmation sampling will be performed on the floor and sidewalls of the excavation as detailed in Section 2.5.1. In the event that a confirmation sample exceeds non-residential cleanup criteria then additional excavation and sampling will be performed as needed.

#### 2.3.2 Lead-impacted Soil Removal

Lead impacted soils will be excavated using heavy equipment and transported offsite to an approved facility for disposal. All removed soil is assumed to be hazardous waste based on Site investigations which show that the Toxicity Characteristic Leaching Procedure (TCLP) results from soil samples exceeding 900 mg/kg also exceed the Resource Conservation and Recovery Act (RCRA) TCLP standard of 5 mg/l. Hazardous soils will be transported offsite for stabilization treatment and disposal.

The estimated initial extent of lead soil removal is shown on Figure 4. The estimated area to be excavated is approximately 12 feet wide by 100 feet long by 3.5 feet deep. The area is bounded by the RACER/CSX property boundary to the west and by soil borings RFI-09-50, SB-09-23, SB-09-25, SB-09-26, SB-09-28, SB-09-30, SB-09-17, and SB-09-18 to the north, east, and south. The excavation area was defined based on laboratory analytical data from RCRA Facility Investigation (RFI) activities and the August 2010 lead soil investigation which includes both laboratory analysis and X-ray florescence (XRF) field screening for lead concentrations. The data from the soil borings identified above as SB-XX-XX are XRF field screening data. An evaluation of the XRF data was previously presented in the 2011 CMI Annual Report. In general high XRF readings correlated to high laboratory total lead concentrations and low XRF readings correlated to low laboratory total lead concentrations; however, the field screening and laboratory results were not directly comparable. The approximate volume to be removed is estimated to be 200 cubic yards. Any surface concrete/ asphalt and/or debris removed during the excavation will also be disposed of.

Confirmation sampling will be performed on the floor and sidewalls of the excavation and is explained in detail in Section 2.4. In the event that a confirmation sample exceeds non-residential cleanup criteria then additional excavation and sampling will be performed as needed.

### 2.3.3 Air Monitoring and Dust Suppression

Air monitoring will be performed and documented throughout all dust generating activities due to the potential for inhalation exposure to dust containing lead and the potential presence of PNAs. Air quality will be continuously monitored with a particulate meter and flame ionization detector (FID) within and around the work zone to monitor potential exposure to workers and others (e.g., property users, occupants, or adjacent land owners). Appendix A presents the Standard Operating Procedure (SOP) for FID Air Monitoring and Field Screening.

#### *2.3.3.1 Wind Direction Monitoring*

One wind direction measurement device (wind sock or equivalent) will be located in an open area within the Site (unobstructed by buildings or trees) that will provide an accurate wind direction.

Wind direction will be measured continuously during soil removal activities. Field staff will check readings at least hourly. The results of the wind direction monitoring

will be used to determine placement of perimeter monitoring stations. Soil handling activities will cease if wind speed is reported by the National Weather Service to exceed 40 mph unless soil is saturated or it is raining.

*2.3.3.2 Particulate Monitoring*

Air quality will be continuously monitored at temporary air monitoring stations using a MIE Data RAM (or equivalent) which measures total suspended particulate (dust) in micrograms/cubic meter of air ($\mu g/m^3$). Monitoring will be completed real time at a minimum of two monitoring stations (1 upwind and 1 downwind of the excavation area) continuously during excavation activities. Field staff will verify operation of the equipment and record measurements of total suspended particulate, date, time, and wind direction at least hourly during excavation activities. The number, location, and frequency of temporary individual monitoring stations will depend on the activities being conducted and the predominant wind direction.

Based on the shallow depths of the proposed excavations (0 to 3.5 foot below ground surface [bgs]) and the limited lateral extent of these excavations, dust problems are not anticipated during soil removal activities. However, if the action levels presented in Appendix A are exceeded at any time, work will be stopped immediately, and a plan to reduce dust emissions will be established. These measures may include, but are not limited to, spraying the excavations lightly with clean water to minimize dust emissions. The action levels for the contaminants of concern are included in Appendix A.

## 2.4 Confirmation Sampling

Confirmation samples will be collected following the soil removal action using the "statistical" sampling approach identified as the Systematic Random Sampling method in Section 2.4.2.2 of the 2002 Michigan Department of Environmental Quality (MDEQ) Sampling Strategies and Statistics Training Materials (S3TM) for Part 201 Cleanup Criteria (excerpted in Appendix B).

### 2.4.1 Benzo(a)pyrene-impacted soil sampling

The excavation area is bounded by the RACER/CSX property boundary to the west and by soil borings SB-09-35, SB-09-03, SB-09-33, and SB-09-34 to the south and east. Sidewall samples will not be collected from the west wall of the excavation area due to the fact that excavation will not be performed on the RACER property to the west.

For the remainder of the excavation sidewall and bottom confirmation samples will be collected on a grid-based system as recommended in the S3TM with grid spacing set at 7 feet based on the excavation square footage of 600 square feet. Confirmation samples will be collected at the grid nodes (i.e., points of intersection); however, samples will be biased towards staining or indications of impact, if noted. In addition FID will be utilized during the excavation process to monitor for potential exposure and to screen soil at the limits (floor and sidewalls) of the excavation to aid in determining the extents.? Soil sample collection will also be biased towards elevated FID readings.

Confirmation samples will be collected after the anticipated depth and lateral extent of the excavation is reached. Confirmation samples will be collected in laboratory-provided containers using a decontaminated stainless-steel scoop or shovel. All sampling, analysis, and decontamination activities will be performed in accordance with the Site *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP) (BBL, 2001), Addendum Number 1 to Appendix C of the March 30, 2001 *RCRA Facility Investigation Work Plan – Field Sampling Plan/Quality Assurance Project Plan* (2005) and Addendum Number 2 (2005), and HASP (ARCADIS, 2010). Pertinent sections of the FSP/QAPP have been excerpted and are presented in Appendix C of this work plan**.** Sample containers will be labeled with the sample location identification, date of sample collection, and intended analysis. The samples will be immediately placed on ice in a cooler awaiting transport to the laboratory by courier. Samples will be submitted to the laboratory for PNA analysis.

#### 2.4.2 Lead-impacted soil sampling

The excavation area is bounded by the RACER/CSX property boundary to the west. Sidewall samples will not be collected from the west wall of the excavation area due to the fact that excavation will not be performed on the RACER property to the west.

For the remainder of the excavation sidewall and bottom confirmation samples will be collected on a grid-based system as recommended in the S3TM with grid spacing set at 10 feet based on the excavation square footage of 1,200 square feet. Confirmation samples will be collected at the grid nodes (i.e., points of intersection); however, samples will be biased towards staining or indications of impact, if noted.

Confirmation samples will be collected after the anticipated depth and lateral extent of the excavation is reached. Confirmation samples will be collected in laboratory-provided containers using a decontaminated stainless-steel scoop or shovel. Sampling, analysis, and decontamination activities will be performed in accordance

with the FSP/QAPP (BBL, 2001, 2005) and HASP (ARCADIS, 2010). Sample containers will be labeled with the sample location identification, date of sample collection, and intended analysis). The samples will be immediately placed on ice in a cooler awaiting transport to the laboratory by courier. Samples will be submitted to the laboratory for total lead analysis.

Based upon the available soil chemistry data, the depth of the excavation is assumed to be less than 4 feet and therefore no shoring will be required prior to an individual entering the excavation for sampling. If the sample results necessitate excavating deeper than 4 feet, the excavation will be stabilized as described in Section 2.6.

### 2.5 Soil Transport and Disposal Management

Excavated soil will be live-loaded into trucks or roll-off boxes staged at the Site during the removal action to minimize the need for stockpiling soils. All soils will be transported to an appropriate disposal facility.

Loaded trucks will follow a prescribed transportation route to the designated disposal facility. ARCADIS will provide oversight of the work on behalf of RACER. ARCADIS will review, approve, and sign all waste profiles and waste shipping documents/manifests prior to the shipment of soil from the Site. ARCADIS will obtain weight tickets, tare/gross weight slips, and waste shipping documents from each truckload of soil transported from the Site. The volume of material removed from the Site will be recorded in the field notes in accordance with the FSP/QAPP (BBL, 2001, 2005) and HASP (ARCADIS, 2010). Certificates of disposal will be obtained from the disposal facilities. Copies of all transport and disposal documentation will be provided in the removal action completion report and will be kept on file as part of the administrative record by RACER as long as is appropriate.

### 2.6 Shoring and Dewatering

Due to depth and relative width of the excavation shoring/benching of excavation slopes will not be necessary during the excavation process. If re-excavation is deemed necessary and a shear wall of 4 feet or greater will be created as a result, that portion of the excavation will be sloped appropriately in accordance with the OSHA 29 Code of Federal Regulations Section 1926.650-652. Due to the depth of the excavation it is not anticipated that groundwater will be encountered. Any storm water encountered that does not infiltrate to the ground will be containerized and properly disposed.

### 2.7 Site Restoration

The excavation will be backfilled to approximately 6 inches bgs with unimpacted fill soil, and the remaining 6 inches will be backfilled with topsoil. A letter of virgin material or sample analytical results verifying that the material is clean will be provided prior to any backfill activities. The backfill material will be compacted in the excavated areas. The topsoil will be covered with grass seed to re-vegetate the ground surface to prevent erosion. If necessary, additional grass seed will be placed at locations outside the excavation areas to repair grass that was disrupted by removal activities. Every effort will be made to minimize disturbance to non-impacted areas of the Site during removal. Following stabilization of the ground surface, all temporary measures will be removed. Upon completion of work, any chain link security fence removed to allow for excavation shall be replaced.

## 3. Reporting

A brief memo-style report will be prepared to document the activities and final confirmation sample results associated with this work plan. The report will include the following information:

- Description of the field activities performed during the course of the excavation and related activities;
- The final excavation limits and locations of all confirmation samples;
- Additional relevant information, including, but not limited to, field forms and analytical data.

## 4. References

BBL, 2001. *Field Sampling Plan/Quality Assurance Project Plan, March 30, 2001*

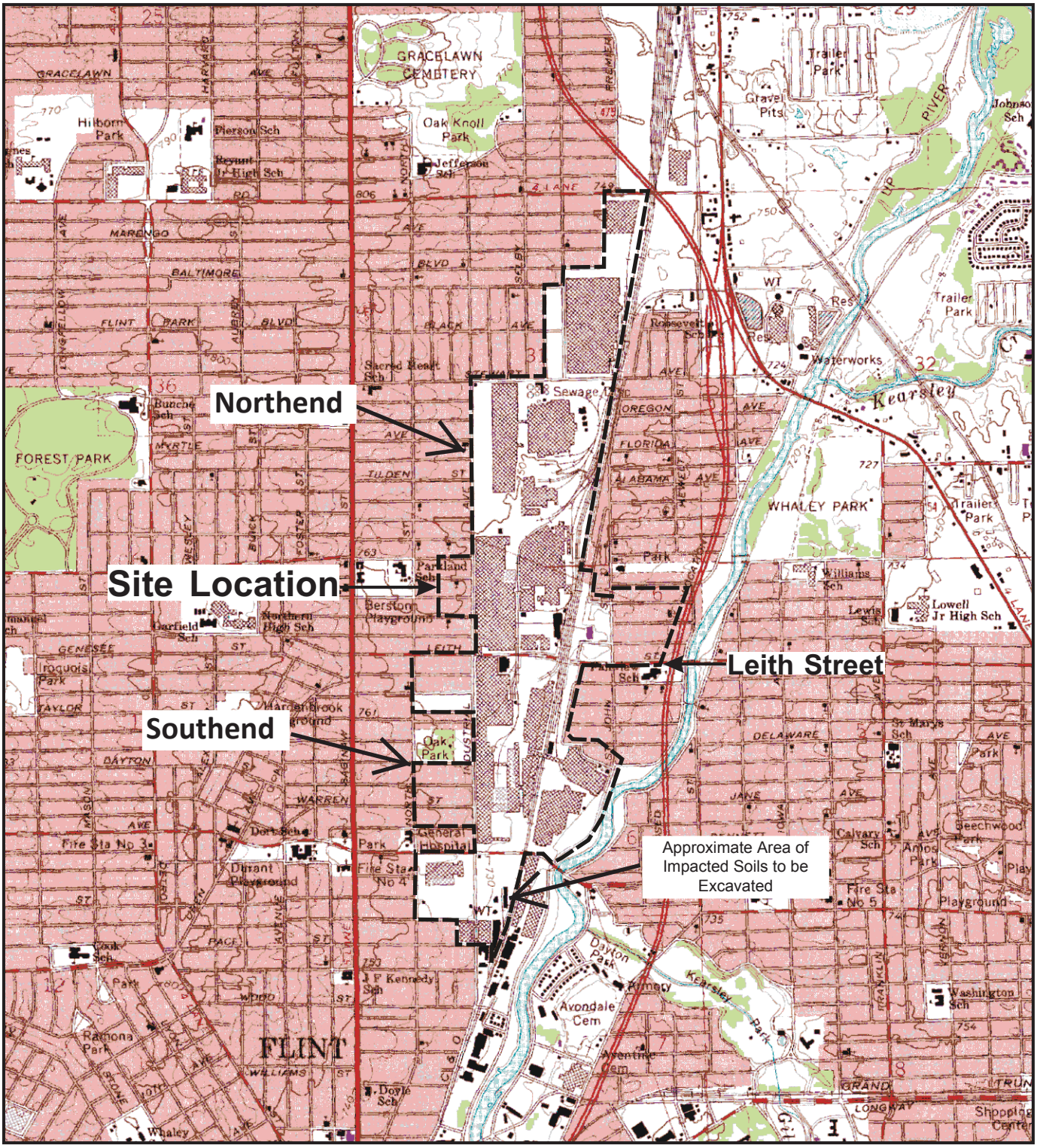
ARCADIS, 2005. *Addendum Number 1 to Appendix C of the March 30, 2001 RCRA Facility Investigation Work Plan – Field Sampling Plan/Quality Assurance Project Plan, May13, 2005.*

ARCADIS, 2005. *Addendum Number 2 to Appendix C of the March 30, 2001 RCRA Facility Investigation Work Plan – Field Sampling Plan/Quality Assurance Project Plan, November 7, 2005.*

ARCADIS, 2010. *Health and Safety Plan, July 29, 2010.*

Michigan Department of Environmental Quality, 2002. *Sampling Strategies and Statistics training Material for Part 201 Cleanup Criteria, 2002.*

# Figures




**REFERENCE:** Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'

**Approximate Scale: 1" = 2000'**

**Area Location**

RACER TRUST
BUICK CITY - FLINT, MICHIGAN
**AOI 09-A IMPACTED SOIL REMOVAL WORK PLAN**

## SITE LOCATION

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FIGURE
**1**

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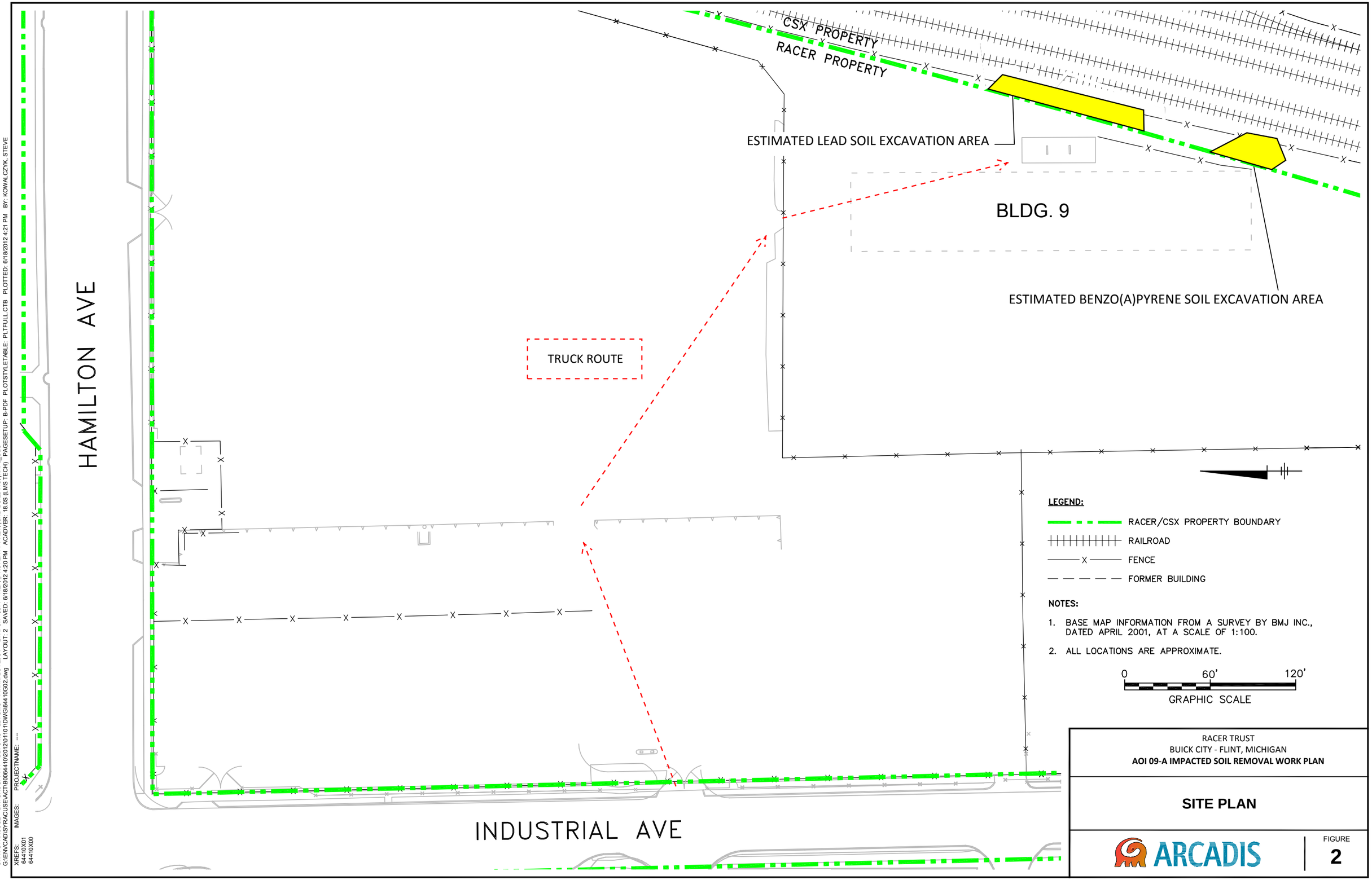
B0064410/4012/00104/CDR/64410N02.CDR




RACER TRUST
BUICK CITY - FLINT, MICHIGAN
**AOI 09-A IMPACTED SOIL REMOVAL WORK PLAN**

**SITE PLAN**

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FIGURE
**2**

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LD: GMS PM: M. LOVEJOY LYR: ON=*;OFF=*REF, |PROPERTY-PREV, |SHD-BUILDING, |NAPL_OBS
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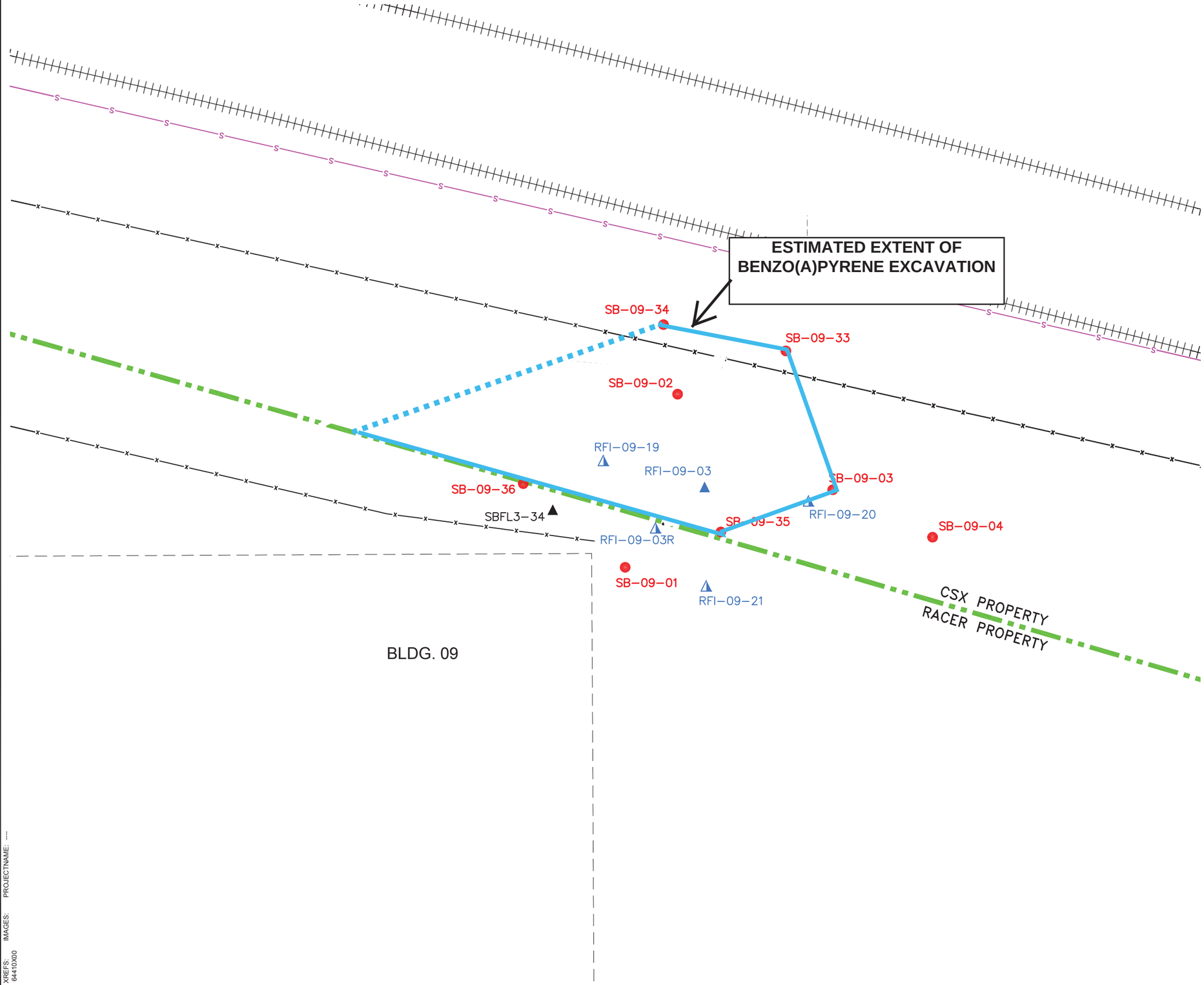


**LEGEND:**

- RACER/CSX PROPERTY BOUNDARY
- STORM PIPING
- RAILROAD
- FENCE
- FORMER BUILDING
- SOIL BORING (8/16/10–8/20/10)
- HISTORICAL RFI SOIL BORING
- HISTORICAL SOIL BORING

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

0 10' 20'
GRAPHIC SCALE

RACER TRUST
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**AOI 09-A IMPACTED SOIL REMOVAL WORK PLAN**

**ESTIMATED EXTENTS OF BENZO(A)PYRENE EXCAVATION**

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FIGURE
**3**

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LD: GMS PM: M. LOVEJOY LYR: ON=*;OFF=*REF, |PROPERTY-PREV, |SHD-BUILDING, |NAPL_OBS
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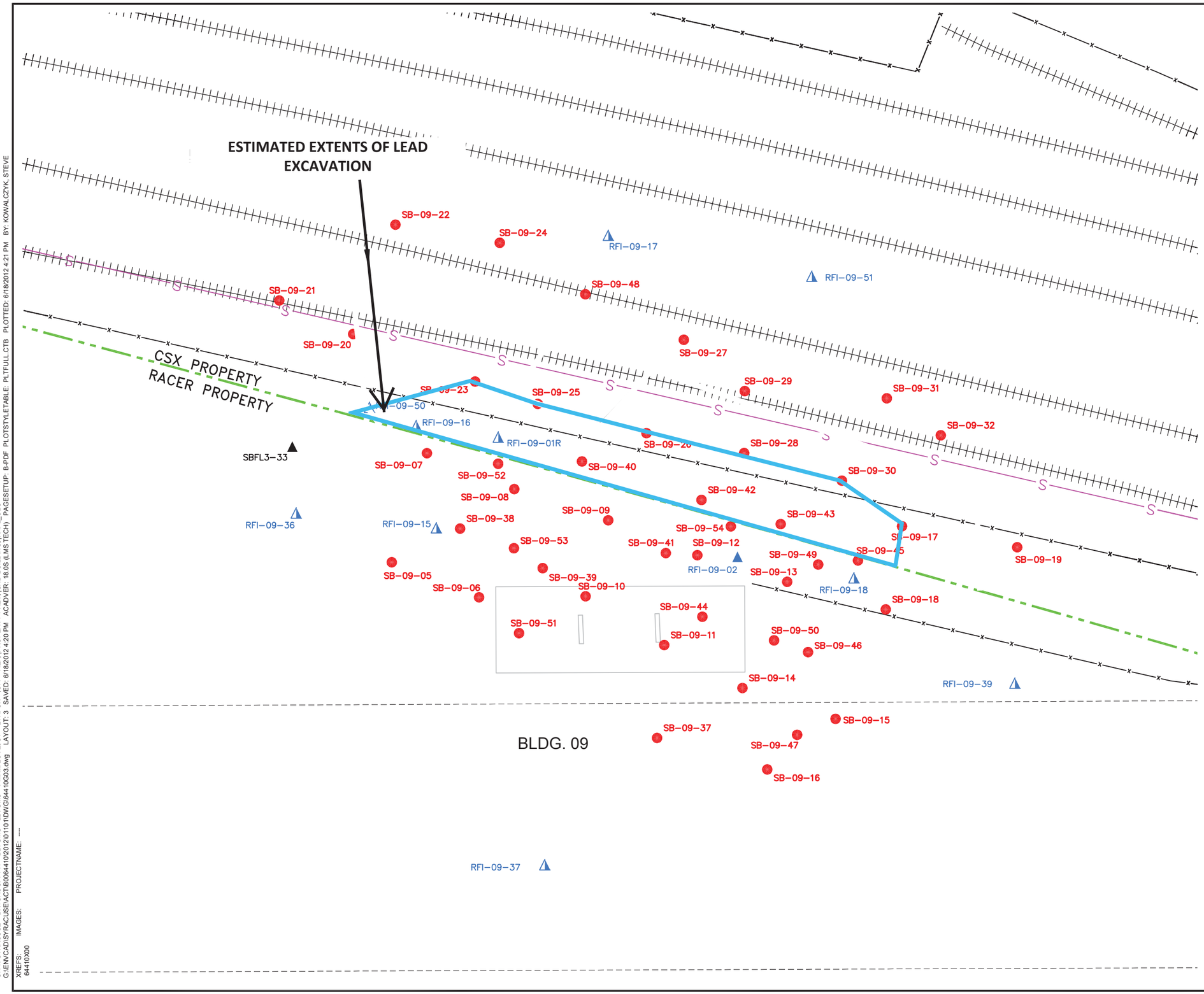


**LEGEND:**

- RACER/CSX PROPERTY BOUNDARY
- STORM PIPING
- RAILROAD
- FENCE
- FORMER BUILDING
- SOIL BORING (8/16/10–8/20/10)
- HISTORICAL RFI SOIL BORING
- HISTORICAL SOIL BORING

**NOTES:**

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'

GRAPHIC SCALE

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**AOI 09-A IMPACTED SOIL REMOVAL WORK PLAN**

**ESTIMATED EXTENTS OF LEAD EXCAVATION**

ARCADIS

FIGURE
**4**

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LD: GMS PM: M. LOVEJOY LYR: ON=*;OFF=*REF,{PROPERTY-PREV,{SHD-BUILDING,{NAPL_OBS
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**Appendix A**

Standard Operating Procedures and Action Levels

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Infrastructure, environment, facilities

Imagine the result

# Flame Ionization Detector Air Monitoring and Field Screening

Rev. #: 0

Rev Date: July 25, 2003

**Approval Signatures**

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____
(Technical Expert)

Reviewed by: _____ Date: _____
(Project Manager)

## I. Scope and Application

Field screening with a flame ionization detector (FID), such as an organic vaporizer analyzer (OVA), is a procedure to measure relative concentrations of volatile organic compounds (VOCs) and other compounds in air. The characteristics of the OVA are presented in Attachment 1; the compounds which it can detect are presented in Attachment 2; indicators of malfunction are summarized in Attachment 3; and the OVA Calibration and Maintenance Log is included in Attachment 4 (this form needs to be attached). Field screening will be conducted on the following:

- Work area air to assess exposure to on-site workers of air contaminants via the air pathway;
- Well headspaces as a precautionary measure each time the well cover is opened; and
- Soil samples obtained with split-barrel sampler.

## II. Personnel Qualifications

To be completed by Preparer and reviewed by Technical Expert.

## III. Equipment List

The following materials, as required, shall be available while performing OVA field screening:

- personal protective equipment (PPE), as required by the site Health and Safety Plan (HASP);
- OVA operating manual;
- calibration gas canisters; and
- field notebook.

## IV. Cautions

To be completed by Preparer and reviewed by Technical Expert.

## V. Health and Safety Considerations

To be completed by Preparer and reviewed by Technical Expert.

## VI. Procedure

The OVA will be operated according to the procedures contained in the operating manual. A summary of basic start-up and shut-down procedures is provided below.

### Start-Up

1. Move PUMP Switch to ON and check battery condition by moving the INSTR Switch to the BATT position.

2. Move INSTR Switch to ON and allow 5 minutes for warm up.

3. Set Alarm Level Adjust knob on back of Readout Assembly to desired level and adjust volume.

4. Check calibration with HIGH/LOW Calibrate Switch. End the check by going to HIGH position and then to OFF. Turn PUMP Switch ON.

5. Place instrument panel in vertical position and check sample flow rate indication.

6. Open the H2 TANK VALVE and the H2 SUPPLY VALVE.

7. Depress the igniter button until burner lights. Do not depress igniter button for more than 6 seconds (if burner does not ignite, let instrument run for several minutes and again attempt ignition).

8. The instrument is now ready for use.

### Shut Down

1. Close the H2 SUPPLY VALVE and H2 TANK VALVE.

2. Move the INSTR Switch and PUMP Switch to OFF.

3. Instrument in now in shut down configuration.

### OVA Calibration

OVA field instruments will be calibrated to methane and operated to yield measurements of "total organic vapor" in ppm (v/v). OVA operation, maintenance, and calibration shall be performed in accordance with the manufacturer's instructions and entered on the OVA Calibration and Maintenance Log (Attachment 4). Instructions for OVA calibration are summarized as follows:

**Electronic Adjustments for Calibration Using Methane as the Standard**

Calibrate the instrument as follows:

1. Prepare two known concentrations of methane gas in air, preferably 100 ppm and 10,000 ppm (1%).

2. Place the OVA in normal operation and permit it to warm up for at least 15 minutes.

3. Introduce the 100 ppm sample and rotate the Calibration Adjust knob for 100 ppm on the meter.

4. Introduce the 10,000 ppm mixture and adjust R-4 on the electronics board for 10,000 ppm.

5. Repeat Steps 3 and 4 until no further adjustment is necessary.

6. Close the Hydrogen Supply Valve and wait until the flame is extinguished.

7. Place the Calibrate Switch in the Low position and rotate the GAS Select knob until the meter reads 10 ppm.

8. Place the Calibrate Switch in the High position and adjust R-16 on the electronics board for 10,000 ppm.

9. Repeat Steps 7 and 8 until no further adjustment is necessary.

**Work Area Air Monitoring**

1. Measure and record the background OVA reading.

2. Measure and record breathing space reading.

3. Adjust level of PPE, as described in the HASP, and proceed.

4. Record OVA readings.

## VII. Waste Management

To be completed by Preparer and reviewed by Technical Expert.

## VIII. Data Recording and Management

To be completed by Preparer and reviewed by Technical Expert.

## IX. Quality Assurance

To be completed by Preparer and reviewed by Technical Expert.

## X. References

To be completed by Preparer and reviewed by Technical Expert.

## ATTACHMENT 1

## CHARACTERISTICS OF THE OVA

The organic vapor analyzer (OVA) is one type of flame ionization detector (FID). All FID instruments use ionization as the detection method, much the same as in the photoionization detector (PID), except that the ionization is caused by a hydrogen flame rather than by a UV light. This flame has sufficient energy to ionize any organic species with an ionization potential of 15.4 or less. Inside the detector chamber, the sample is exposed to a hydrogen flame which ionizes the organic vapors. When most organic vapors burn, positively charged carbon-containing ions are produced which are collected by a negatively charged collecting electrode in the chamber. An electric field exists between the conductors surrounding the flame and a collecting electrode. As the positive ions are collected, a current proportional to the hydrocarbon concentration is generated on the input electrode. This current is measured with a preamplifier which has an output signal proportional to the ionization current.

A signal conducting amplifier is used to amplify the signal from the pre-amp and to condition it for subsequent meter or external recorder display.

The Foxboro OVA consists of two major parts:

- A 9-pound package containing the sampling pump, battery pack, support electronics, FID, hydrogen gas cylinder, and an optional gas chromatography (GC) column; and

- A hand-held meter/sampling probe assembly.

The OVA is generally calibrated to methane, but can be calibrated to the species of interest.

The OVA can be operated in a GC mode or survey mode. During normal survey mode operation, a sample is drawn into the probe and transported to the detector chamber by an internal pumping system. When the sample reaches the FID, it is ionized as described above and the resulting signal is translated on the meter for direct-reading concentration as total organic vapors or recorded as a peak on the chart. The meter display is an integral part of the probe/read-out assembly and has a scale from 0 to 10 which can be set to read 0-10, 0-100, or 0-1,000 ppm.

With the GC option, individual components can be detected and measured independently. In the GC mode, a small sample of ambient air is injected into a chromatographic column and carried through the column by a stream of hydrogen gas. Two valves are used in the GC system: the sample inject valve and the backflush valve. The sample inject valve diverts a fixed volume of vapor contained in the sample loop into the hydrogen gas carrier and through the chromatographic column for separation identification, and quantification of individual components present. The backflush valve reverses the flow of the hydrogen flow through the GC column to clear the column of any contamination. In the GC mode, backflush plays a significant role in determining the presence of high boiling contaminants. If no peaks are observed after the desired run time, the user might assume no contaminants are present; however, high boiling volatiles may still be present. Backflushing allows for the detection of high boiling volatile components.

Compounds with different chemical structures are retained on the column for different lengths of time (known as retention times) and, hence, are detected separately by the FID. As each component exits the column into the detector, it is ionized and a proportional output voltage is recorded on a strip chart recorder. A strip chart recorder can be used to record the retention times, which are then compared to the retention times of a standard with known chemical constituents.

An instrument output meter serves to indicate, in ppm units, the concentration of total organic vapor. The concentration (in ppm) represents a summation of the percent relative response values characteristic of each individual organic compound in the sample. The sample can either be injected into the column from the air sampling hose or injected directly with a gas-tight syringe.

## ATTACHMENT 2

### RESPONSE FACTORS FOR THE OVA

| CHEMICAL COMPOUND | RESPONSE FACTOR (%) |
|---|---|
| Acetonitrile | 70 |
| Acrylonitrile | 70 |
| Allyl Alcohol | 30 |
| Allyl Chloride | 50 |
| BenzenE | 150 |
| 2-Bromo-2-chloro-1,1,1-trifluoroethane (Halothane) | 45 |
| Bromomethane | 75 |
| 1-Bromopropane | 75 |
| 2-Butane | 60 |
| n-Butanol | 50 |
| 2-Butanol | 65 |
| n-Butyl Acetate | 80 |
| n-Butyl Acrylate | 60 |
| 2-Butyl Acrylate | 70 |
| n-Butyl Formate | 50 |
| 2-Butyl Formate | 60 |
| n-Butyl Methacrylate | 60 |
| 2-Butyl Methacrylate | 80 |
| Carbon Tetrachloride | 10 |
| Chlorobenzene | 200 |
| Chlorodifluoromethane (Freon 22) | 40 |
| Chloroform | 65 |
| 1-Chloropropane | 76 |
| 2-Chloropropane | 90 |
| 2-Chloro-1,1,2-trifluoroethyl difluoromethyl ether (Ethane) | 150 |
| Cumene | 100 |
| Cyclohexane | 85 |
| Cyclohexanone | 100 |
| n-Decane | 75 |
| O-Dichlorobenzene | 50 |
| Dichlorodifluoromethane (Freon 12) | 15 |
| 1,1-Dichloroethane | 80 |
| 1,2-Dichloroethane | 80 |
| trans-1,2-Dichloroethylene | 50 |
| Dichlorofluoromethane (Freon 21) | 70 |
| Dichloromethane | 100 |
| 1,2-Dichloropropane | 90 |
| 1,3-Dichloropropane | 80 |
| 1,2-Dichloro 1,1,2,2-tetrafluoroethane (Freon 114) | 110 |

| CHEMICAL COMPOUND | RESPONSE FACTOR (%) |
|---|---|
| Diethyl Ether | 50 |
| Diethyl Ketone | 80 |
| p-Dioxane | 30 |
| Ethane | 80 |
| Ethanethiol | 30 |
| Ethanol | 25 |
| Ethyl Acetate | 65 |
| Ethyl Acrylate | 40 |
| Ethyl Benzene | 100 |
| Ethyl Butyrate | 70 |
| Ethyl Formate | 40 |
| Ethyl Methacrylate | 70 |
| Ethyl Propionate | 65 |
| Ethylene Dibromide | 50 |
| Ethylene Dichloride | 60 |
| Ethylene Oxide | 70 |
| Fluorotrichloromethane (Freon 11) | 10 |
| Heptane | 75 |
| Hexane | 70 |
| Isoprene | 50 |
| Methane | 100 |
| Methyl Alcohol | 12 |
| Methyl Acetate | 41 |
| Methyl Acrylate | 40 |
| Methyl Cyclohexane | 100 |
| Methyl Cyclopentane | 80 |
| Methyl Ethyl Ketone | 80 |
| Methyl Isobutyl Ketone | 80 |
| Methyl Methacrylate | 50 |
| Methyl Propyl Ketone | 70 |
| Nitromethane | 35 |
| 1-Nitropropane | 60 |
| 2-Nitropropane | 70 |
| Nonane | 90 |
| Octane | 80 |
| Pentane | 65 |
| Pentanol | 40 |
| Propane | 80 |
| n-Propanol | 40 |
| 2-Propanol | 65 |
| n-Propyl Acetate | 75 |
| n-Propyl Ether | 65 |
| n-Propyl Formate | 50 |

| CHEMICAL COMPOUND | RESPONSE FACTOR (%) |
|---|---|
| Pyridine | 128 |
| Styrene | 85 |
| 1,1,1,2-Tetrachloroethane | 100 |
| 1,1,2,2-Tetrachloroethane | 100 |
| Tetrachloroethylene | 70 |
| Tetrahydrofuran | 40 |
| Toluene | 110 |
| 1,1,1-Trichloroethane | 105 |
| 1,1,2-Trichloroethane | 85 |
| Trichloroethylene | 70 |
| Trichlorofluoroethane (Freon 113) | 80 |
| Triethylamine | 70 |
| Vinyl Acetate | 50 |
| Vinyl Chloride | 35 |
| Vinylidene Chloride | 40 |
| m-Xylene | 111 |
| o-Xylene | 116 |
| p-Xylene | 116 |

Note:

[1] Response factors for Foxboro Century OVA when instrument is calibrated to methane. For example, the instrument response factor for benzene is 150% and a 100 ppm concentration of benzene in air would register as 150 ppm on the instrument read-out.

## ATTACHMENT 3

### INDICATORS OF MALFUNCTION OF THE OVA

| INDICATION | POSSIBLE CAUSES |
|---|---|
| • High Background Reading (more than 10 ppm) | 1. Contaminated hydrogen<br>2. Contaminated sample line |
| • Continual Flameout | 1. Hydrogen leak<br>2. Dirty burner chamber<br>3. Dirty air filters |
| • Low Air Flow | 1. Dirty air filter<br>2. Pump malfunction<br>3. Line obstruction |
| • Flame Will Not Light | 1. Low battery<br>2. Igniter broken<br>3. Hydrogen leak<br>4. Dirty burner chamber<br>5. Air flow restricted |
| • No Power to Pump | 1. Low battery<br>2. Short circuit |
| • Hydrogen Leak (instrument not in use) | 1. Leak in regulator<br>2. Leak in valves |

## ATTACHMENT 4

## OVA CALIBRATION AND MAINTENANCE LOG

ARCADIS
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Imagine the result

# Air Monitoring Instruments

Rev. #: 0

Rev Date: August 21, 2003

**Approval Signatures**

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____
(Technical Expert)

Reviewed by: _____ Date: _____
(Project Manager)

## I. Scope and Application

This Standard Operating Procedure (SOP) provides the accepted methods of calibration of the HNu Model PI-101 Photoionization Detector (HNu) and the Foxboro Model 128 Organic Vapor Analyzer (OVA).

Proper calibration of air monitoring instruments is essential to evidence property evaluation of ambient air readings for the purpose of health and safety screening and for evidentiary air data collection. Without proper instrument calibration to a known concentration of a calibration gas standard, the usefulness of the data cannot be determined.

The following terminology is applicable to calibration of the HNu and OVA.

- • HNu - A photoionization detector that uses an ultraviolet light source to ionize organic and some inorganic gases and vapors for subsequent detection.
- • OVA - A flame ionization detector that uses a hydrogen flame to ionize organic vapors and gases for subsequent detection.
- • Ionization - A process by which a compound is broken down into the atoms that make up the compound, thereby forming positive and negative ions.
- • Gas - A substance that exists in a gaseous state at ordinary temperatures and pressures.
- • Vapor - The gaseous state of a substance that is a liquid or solid at ordinary temperatures and pressures.
- • Trimpot - A screw-type variable resistor incorporated into the electronic circuitry of the HNu and OVA used as a potentiometer to calibrate the instrument.
- • Primary Calibration - Instrument calibration of the HNu and OVA against a known standard calibration gas.
- • Secondary Calibration - In-field calibration check of the HNu or OVA for a stable background reading (zero adjust) and for response to a gaseous organic source.

## II. Personnel Qualifications

The Air Equipment Coordinator is responsible for performing routine maintenance on the HNu and OVA and is responsible for the primary calibration of instruments for field

use on a site-specific basis. The Field Investigation Manager (FIM) is responsible for the mobilization of the HNu and OVA, and is also responsible for the mobilization of calibration equipment when site stays are to be extended or when sites are clustered, thereby causing the need for primary instrument calibration. The Health and Safety Supervisor (HSS) is responsible for primary and secondary calibration of the HNu and OVA in the field. The FIM is responsible for documenting instrument calibration in the field logbook. The FIM is accountable to the Project Manager (PM) to ensure successful calibration of air monitoring equipment.

## III. Equipment List

**To be completed by Preparer and reviewed by Technical Expert.**

## IV. Cautions

**To be completed by Preparer and reviewed by Technical Expert.**

## V. Health and Safety Considerations

**To be completed by Preparer and reviewed by Technical Expert.**

## VI. Procedure

The following procedures may be employed for primary and secondary calibration of the HNu PI-101 Photoionization Detector:

### Calibration

1. Startup and shutdown of the HNu;
2. Maintenance and calibration schedules;
3. HNu calibration;
4. Cleaning the UV light-source window; and
5. Cleaning the ionization chamber.

The aforementioned procedures are from the Compendium of Superfund Field Operations Methods (EPA, 1987).

### Startup

- • Check the FUNCTION switch on the control panel to make sure it is in the OFF position. Attach the probe to the readout unit. Match the alignment key and twist the connector clockwise until a distinct locking is felt.

- • Turn the FUNCTION switch to the BATTERY CHECK position. Check that the indicator reads within or beyond the green battery arc on the scale plate. If the indicator is below the green arc or if the red LED comes on, the battery must be charged before using.

- • To zero the instrument, turn the FUNCTION switch to the STANDBY position and rotate the ZERO POTENTIOMETER until the meter reads zero. Wait 15 to 20 seconds to confirm that the zero adjustment is stable. If it is not, then readjust.

- • Check to see that the SPAN POTENTIOMETER is set at the appropriate setting for the probe being used (5.0 for 9.5eV probe; 9.8 for 10.2eV; and 5.0 for 11.7eV).

- • Set the FUNCTION switch to the desired parts per million (ppm) range.

- • Listen for the fan operation to verify fan function.

- • Check instrument with an organic point source, such as a “Sharpie,” before survey to verify instrument function.

**Shutdown**

- • Turn FUNCTION switch to OFF.

- • Place the instrument on the charger.

Maintenance and Calibration Schedule

The following maintenance/calibration schedule should be followed to ensure proper operation of the HNu.

| Function | Frequency |
|---|---|
| Perform primary calibration | Prior to each use* |
| Initial factory checkout and calibration | Yearly, when malfunctioning, or after changing UV light source |
| Wipe down readout unit | After each use |
| Clean UV light source window | Every month or as use and site conditions dictate |
| Clean the ionization chamber | Monthly |
| Recharge battery | After each use |

* During extended field use, the HNu PI-101 must be calibrated at least once every 3 days.

**Primary Calibration**

1. Start up the HNu.

2. Acquire the HNu calibration gas canister. The primary HNu calibration gas is benzene (or isobutylene, a benzene equivalent).

3. Connect the HNu probe to the gas canister using flexible tubing.

4. Allow the calibration gas to be drawn into the probe and check the HNu response in ppm.

5. Adjust the span potentiometer to 9.8 to match the concentration of the isobutylene calibration gas. This procedure should be followed only until the span potentiometer reaches the following limits:

| 1. Probe | 2. Initial Span Potentiometer Setting | 3. Maximum Acceptance Span Potentiometer Setting |
|---|---|---|
| 4. 9.5eV | 5. 5.0 | 6. 1.0 |
| 7. 10.2eV | 8. 9.8 | 9. 8.5 |
| 10. 11.7eV | 11. 5.0 | 12. 2.0 |

6. If these limits are exceeded, the HNu must be calibrated. Calibration is accomplished by first adjusting the span potentiometer to its initial setting. The trimpot inside the instrument must then be adjusted to obtain the concentration reading of the calibration gas (9.8). This trimpot is located inside the HNu case on the right side of the instrument.

**Calibration Records**

The following information should be documented in the field logbook when in field primary calibration of the HNu is required:

1. Serial number of the HNu.

2. Data of calibration.

3. Method of calibration.

4. Results of calibration.

5. Initial reading prior to adjustment.

6. Identification of the person responsible for instrument calibration.

7. Identification of the calibration gas (source, type, concentration, lot number).

**Cleaning the UV Light-Source Window**

The following procedures may be followed in the field, should the need arise, to clean the UV Light-Source Window:

1. Turn the FUNCTION switch to the OFF position and disconnect the sensor/probe from the Readout/Control unit.

2. Remove the exhaust screw located near the base of the probe. Grasp the end cap in one hand and the probe shell in the other. Separate the end cap and lamp housing from the shell.

3. Loosen the screws on top of the end cap and separate the end cap and ion chamber from the lamp and lamp housing, taking care that the lamp does not fall out of the lamp housing.

4. Tilt the lamp housing with one hand over the opening so that the lamp slides out of the housing into your hand.

5. The lamp window may now be cleaned using lens paper with any of the following compounds:

    a. Use HNu Cleaning Compound on all lamps except the 11.7eV.

    b. Clean the 11.7eV lamp with freon or chlorinated organic solvent. Do not use HNu cleaner, water, or water miscible solvents (i.e., acetone and methanol).

6. Following cleaning, reassemble by first sliding the lamp back into the lamp housing. Place the ion chamber on top of the housing, making sure the contacts are properly aligned.

7. Place the end cap on top of the ion chamber and replace the two screws. Tighten the screws only enough to seal the O-ring. Do not overtighten.

8. Line up the pins on the base of the lamp housing with pins inside the probe shell and slide the housing assembly into the shell. It will fit only one way.

9. Replace the exhaust screw.

**Cleaning the Ionization Chamber**

The following procedures may be followed in the field, should the need arise, to clean the HNu ionization chamber.

1. Turn the FUNCTION switch to the OFF position and disconnect the sensor/probe from the Readout/Control unit.

2. Remove the exhaust screws located near the base of the probe. Grasp the end cap in one hand and the probe shell in the other. Separate the end cap and lamp housing from the shell.

3. Loosen the screws on top of the end cap and separate the end cap and ion chamber from the lamp and lamp housing, taking care that the lamp does not fall out of the lamp housing.

4. The ion chamber may now be cleaned according to the following sequence:

    a. Clean with methanol using a Q-tip.

    b. Dry gently at 50ºC to 60ºC for 2 hours.

5. Place the ion chamber on top of the housing, making sure the contacts are properly aligned.

6. Place the end cap on top of the ion chamber and replace the two screws. Tighten the screws only enough to seal the O-ring. Do not overtighten.

7. Line up the pins on the base of the lamp housing with pins inside the probe shell and slide the housing assembly into the shell. It will fit only one way.

The following procedures may be employed for primary and secondary calibration of the Foxboro Model 128 Organic Vapor Analyzer (OVA):

**Calibration**

1. Startup and shutdown of the OVA;

2. Maintenance and calibration schedules;

3. OVA calibration;

4. Hydrogen recharge of the OVA;

5. Pump system checkout; and

6. Cleaning the burner chamber.

The aforementioned procedures are from the Compendium of Superfund Field Operations Methods (EPA, 1987).

**Startup**

1. Connect the probe/readout connectors to the side-pack assembly.

2. Check battery condition and hydrogen supply.

3. For measurements taken as methane equivalent, check that the GAS SELECT dial is set at 300.

4. Turn the electronics on by moving the INST switch to the ON position, and allow 5 minutes for warm-up.

5. Set CALIBRATE switch to X10; use CALIBRATE knob to set indicator to 0.

6. Open the H2 supply valve all the way. Check that the hydrogen supply gauge reads between 8.0 and 12.0 psig.

7. Turn the PUMP switch ON and check the flow system.

8. Check that the BACKFLUSH and INJECT valves are in the UP position.

9. To light the flame, depress the igniter switch until a meter deflection is observed. The igniter switch may be depressed for up to 5 seconds. Do not depress for longer than 5 seconds, as it may burn out the igniter coil. If the instrument does not light, allow the instrument to run several minutes and repeat ignition attempt.

10. Confirm OVA operational state by using an organic source, such as a “Sharpie.”

11. Establish a background level in a clean area or by using the charcoal scrubber attachment to the probe (depress the sample inject valve) and by recording measurements referenced to background.

12. Set the alarm level, if desired.

**Shutdown**

1. Close H2 supply valve and H2 tank valve (do not overtighten valves).

2. Turn INST switch to OFF.

3. Wait until H2 supply gauge indicates system is purged of H2, then switch off pump (approximately 10 seconds).

4. Put instrument on electrical charger at completion of day’s activities.

**Maintenance and Calibration Schedule**

| Function | Frequency |
|---|---|
| Secondary calibration | Prior to project startup |
| Primary calibration | Monthly, or if secondary check is off by more than +10% |
| Check pumping system | Prior to project startup |
| Check particle filters | Weekly, or as needed |
| Clean burner chamber | Monthly, or as needed |
| Quad ring service | Monthly, or as needed |
| Replace charcoal | 120 hours of use or when background readings are higher with the inject valve down then with the inject valve up in a clean environment |

**Primary and Secondary Calibration Procedures for OVA Model 128**

Procedures for primary and secondary calibration of the OVA are as follows:

**Primary Calibration**

1. Remove instrument components from the instrument shell.

2. Turn on electronics and zero instrument on X10 scale. Gas select dial to 300.

3. Turn on PUMP and HYDROGEN. Ignite flame. Go to SURVEY MODE.

4. Introduce a methane standard near 100 ppm.

5. Adjust R32 Trimpot on circuit board to make meter read to standard.

6. Turn off hydrogen flame and adjust meter needle to read 40 ppm (calibrate at X10) using the calibration adjust knob.

7. Switch to X100 scale and adjust meter to read 0.4 on the 1 to 10 meter markings (0.4 x 100 = 40 ppm). If the reading is off, adjust with R33 Trimpot.

8. Return to X10 scale and adjust meter to read 0.4 on the 1 to 10 meter markings using the calibration adjust. Switch to X1 scale. The meter should read 4 ppm. If the reading is off, adjust using the R31 Trimpot.

**Secondary Calibration**

1. Acquire a gas canister with 100 ppm (certified) methane calibration gas.

2. Connect the outlet of the air-sampling bag to the air-sampling line of the OVA.

3. Record the reading obtained from the meter on the calibration record.

**Calibration Records for the OVA**

The following information should be documented in the field logbook when in-field primary calibration of the OVA is required:

1. Serial number of the OVA.

2. Date of calibration.

3. Method of calibration.

4. Result of calibration.

5. Identification of person who calibrated the instrument.

6. Identification of the calibration gas (concentration and serial number of cylinder).

**Charging the OVA with Hydrogen**

1. High grade hydrogen (99.999%) is required. Maximum pressure the instrument can handle is 2,300 psig.

2. Connect the fill hose to the REFILL FITTING on the side pack assembly with FILL//BLEED valve on the OFF position.

3. Open the cylinder of 99.999% hydrogen.

4. Place FILL/BLEED valve on FILL Hose in BLEED position momentarily to purge any air out of the system.

5. Open the instrument tank valve.

6. Open REFILL valve on instrument.

7. Place FILL/BLEED valve in FILL position until the instrument pressure gauge equalizes with the hydrogen cylinder gauge.

8. Close tank valve, REFILL valve, and FILL/BLEED valve.

9. Turn FILL/BLEED valve to BLEED until the pressure in the hose is released.

10. Disconnect the FILL HOSE and replace protective nut on the REFILL FITTING.

**OVA Pump System Checkout**

1. With pump on, hold unit upright and observe flow gauge.

2. Ball level significantly below a reading of 2 is inadequate flow.

3. Check connections at the sample hose.

4. Clean or replace particle filters if flow is impaired or it is time for scheduled service.

5. Reassemble and retest flow.

6. If flow still inadequate, replace pump diaphragm and valves.

7. If flow is normal, plug air intake. Pump should slow and stop.

8. If no noticeable change in pump, tighten fittings and retest.

9. If still no change, replace pump diaphragm and valves.

10. Document this function in the maintenance records.

**Burner Chamber Cleaning**

The following procedures may be followed in the field, should the need arise, to clean the OVA burner chamber:

1. Remove plastic exhaust port cover.

2. Unscrew exhaust port.

3. Use wire brush to clean burner tip and electrode. Use wood stick to clean the Teflon housing.

4. Brush inside of exhaust port.

5. Blow out chamber with a gentle air flow.

6. Reassemble and test unit.

7. Document this function in the maintenance records.

**Particle Filter Servicing**

There are two points in the air sampling line of the OVA where filters have been placed to keep particulate from entering the instrument. The locations of these filters are indicated on the attached figure. The first filter is located in the probe assembly and the second filter (primary filter) is located on the side pack assembly. Cleaning procedures are as follows:

1. Detach the probe assembly from the readout assembly.

2. Disassemble the probe (the components unscrew).

3. The particle filter located within the probe can be cleaned by blowing air through the filter.

4. Reassemble the probe.

5. The primary filter, located behind the sample inlet connector on the side pack assembly, is accessed by removing the sample inlet connector with a thin-walled 7/16-inch socket wrench. Remove the filter and clean as above.

6. Reassemble the sample inlet fitting and filter to the side pack assembly.

7. Check sample flow rate.

**Quad Ring Service**

1. Remove OVA guts from protective shell.

2. Remove clip ring from bottom of valve.

3. Unscrew nut from top of valve.

4. Gently pull valve shaft upward and free of housing.

5. Observe rings for signs of damage - replace as necessary.

6. Lightly grease rings with silicone grease.

7. Reassemble valve - do not pitch rings during shaft insertion.

8. Document this function in the maintenance records.

## VII. Waste Management

To be completed by Preparer and reviewed by Technical Expert.

## VIII. Data Recording and Management

Field documentation of air monitoring equipment calibration must provide sufficient information and data to both enable reconstruction of field activities and evidence proper calibration methods.

The following documentation will be retained in the project file:

1. Field logbooks.

2. Records of calibration, maintenance, and field checkout procedures for any measuring and test equipment used.

## IX. Quality Assurance

To be completed by Preparer and reviewed by Technical Expert.

## X. References

Century Systems (Foxboro). Service Procedures: Organic Vapor Analyzer; 128GC.

HNu Systems, Inc. Instruction Manual for Model PI-101 Photoionization Analyzer.

EPA, 1987. *A Compendium of Superfund Field Operations Methods*. Section 15.2: HNu PI-101, pp. 15-17 to 15-30. Section 15.3: Organic Vapor Analyzes (OVA-128), pp. 15-30 to 15-38. Office of Emergency and Remedial Response, Office of Waste Programs Enforcement. U.S. Environmental Protection Agency, Washington, D.C. EPA/540/p-87/001. December 1987.

**ATTACHMENT A**
**HNu TROUBLESHOOTING**
**To be performed by qualified technician only.**

A. No meter response in any switch position (including BATT CHK)

1. Broken meter movement

   a. Tip instrument rapidly from side to side. Meter needle should move freely, and return to zero.

2. Electrical connection to meter is broken

   a. Check all wires leading to meter and clean the contacts of quick-disconnects.

3. Battery is completely dead

   a. Disconnect battery and check voltage with volt-ohm meter.

4. If none of the above solves the problem, consult the factory.

B. Meter responds in BATT CHK position, but reads zero or near zero for all others.

1. Power supply defective

   a. Check power supply voltages per Figure 11 of the HNu owner's manual. If any voltage is out of specification, consult the factory.

2. Input transistor or amplifier has failed

   a. Rotate zero control; meter should deflect up/down as control is turned.

   b. Open probe. Both transistors should be fully seated in sockets.

3. Input signal connection broken in probe or readout.

   a. Check input connector on printed circuit board. The input connector should be firmly pressed down.

   b. Check components on back side or printed circuit board. All connections should be solid, and no wires should touch any other object.

   c. Check all wires in readout for solid connections.

C. Instrument responds correctly in BATT CHK, and STBY, but not in measuring mode

1. Check to see that light source is on.

D. Instrument responds correctly in all positions, but signal is lower than expected.

1. Check span stetting for correct value.
2. Clean window of light source.
3. Double check preparation of standards.
4. Check for proper fan operation.
5. Rotate span setting. Response should change if span pot is working properly.

E. Instrument responds in all switch positions, but is noisy (erratic meter movement)

1. Open circuit in feedback circuit. Consult the factory.
2. Open circuit in cable shield or probe shield. Consult the factory.

F. Instrument response is slow and/or irreproducible.

1. Fan operating improperly.
2. Check calibration and operation.

G. Low battery indicator

1. Indicator comes on if battery charge is low.
2. Indicator also comes on if ionization voltage is too high.

**ATTACHMENT B**
**OVA TROUBLESHOOTING**

| Indication | Possible Causes |
|---|---|
| High Background Reading (More than 10 ppm) | 1. Contaminated Hydrogen<br>2. Contaminated Sample Line |
| Continual Flameout | 1. Hydrogen Leak<br>2. Dirty Burner Chamber<br>3. Dirty Air Filters |
| Low Air Flow | 1. Dirty Air Filter<br>2. Pump Malfunction<br>3. Line Obstruction |
| Flame Will Not Light | 1. Low Battery<br>2. Igniter Broken<br>3. Hydrogen Leak<br>4. Dirty Burner Chamber<br>5. Air Flow Restricted |
| No Power to Pump | 1. Low Battery<br>2. Short Circuit |
| Hydrogen Leak (Instrument Not in Use) | 1. Leak in Regulator<br>2. Leak in Valves |

To be performed by qualified technician only.

A. No meter response in any switch position (including BATT CHK).

1. Broken meter movement

   a. Tip instrument rapidly from side to side. Meter needle should move freely, and return to zero.

2. Electrical connection to meter is broken

   b. Check all wires leading to meter and clean the contacts of quick-disconnects.

3. Battery is completely dead.

a. Disconnect battery and check voltage with a volt-ohm meter.

4. If none of the above solves the problem, consult the factory.

B. Meter responds in BATT CHK position, but reads zero or near zero for all others.

1. Power Supply Defective

a. Check power supply voltages per the HNu owner's manual. If any voltage is out of specification, consult the factory.

2. Input transistor or amplifier has failed.

a. Check input connector on printed circuit board. The input connector should be firmly pressed down.

b. Check components on back side of printed circuit board. All connections should be solid, and no wires should touch any other object.

c. Check all wires in readout for solid connections.

**ATTACHMENT C**
**SHIPPING**

Since the OVA-128 contains hydrogen, it is subject to shipping restrictions.

**As Personal Luggage**

The OVA-128 can be taken on a plane as luggage as a permit has been issued from the Department of Transportation (DOT) to the manufacturer (Foxboro).

**Air Express**

The following labels must be affixed to both sides of the VA case when shipping OVA by Air Express.

1. Danger - Peligro
2. Flammable Gas
3. Inside Container Complies with DOT Regulations
4. Hydrogen UN #1049
5. Name and Address of Recipient

A hazardous air bill must be filled out. The following information is requested.

| | |
|---|---|
| Proper Shipping Name | Hydrogen |
| Classification | Flammable Gas |
| I.D. No. | UN 1049 |
| Net Quantity | 75 Cubic Centimeter |

In addition, the shipping's certification must be signed and marked CARGO AIRCRAFT ONLY.

Excerpt from **Table 2: Chemical Hazard Information (HASP, ARCADIS 2010) – Updated for Lead and PNA Excavation Activities.**

| Chemical Name | IP (eV) | Routes of Entry/ Exposure Symptoms | 8-hr TWA[1] (ppm or mg/m3) | IDLH (NIOSH) (ppm) | STEL (ppm) |
|---|---|---|---|---|---|
| Lead | NA | Inhalation, Ingestion, Contact with Skin/Eyes. Lassitude, insomnia; facial pallor, low-weight, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis of the wrists and ankles; encephalopathy; kidney disease; irritation of the eyes; hypotension. | 0.05 mg/m3 | 100 mg/m3 | NA |
| Coal Tar Pitch Volatiles | NA | Inhalation, skin and/or eye contact. Symptoms- dermatitis, bronchitis, [potential occupational carcinogen] | 0.2 mg/m3 | 80 mg/m3 | NA |
| Naphthalene | 8.12 | Inhalation, skin absorption, ingestion, skin and/or eye contact. Symptoms irritation eyes; headache, confusion, excitement, malaise (vague feeling of discomfort); nausea, vomiting, abdominal pain; irritation bladder; profuse sweating; jaundice; hematuria (blood in the urine), renal shutdown; dermatitis, optical neuritis, corneal damage | 10 ppm | 250 ppm | 15 ppm |
| 2-methylnaphthalene | NA | Inhalation and Ingestion. Inhalation symptoms – cough. Contact with eyes will cause redness and pain. | 0.5 ppm | NA | NA |

TWAs are ACGIH 8 hr-TLVs unless noted.

Excerpt from Table 3: **Exposure Monitoring Requirements (HASP, ARCADIS 2010) – Updated for Lead and PNA Excavation Activities.**

| Exposure Hazard | Monitoring Equipment | Monitoring Frequency | Action Level | Required Action |
|---|---|---|---|---|
| VOCs | Photo ionization detector (PID) (10.6 eV lamp or greater) | Continuous in Breathing Zone/Work Zone | ≤ 0.5 ppm<br>> 0.5 ppm<br>≥ 2.5 ppm<br>> 5 ppm | - Normal operations<br>- Begin Monitoring with colorimetric tubes<br>- Upgrade to level C PPE<br>- Stop work and investigate cause of reading; contact SSO/PM |
| PNAs | Flame Ionization detector (FID) | Continuous in Breathing Zone/Work Zone of PNA Excavation Area | ≤ 0.5 ppm<br>> 0.5 ppm<br>≥ 2.5 ppm | Normal operations<br>- Upgrade to level C PPE<br>- Stop work and investigate cause of reading; contact SSO/PM |
| Benzene | Colorimetric tube | As dictated by total VOC action level above | ≤ 0.5 ppm<br>> 0.5 ppm, ≤ 1.0 ppm<br>> 1.0 ppm | - Normal operations<br>- Upgrade to level C PPE<br>- Stop work and investigate cause of reading; contact SSO/PM |
| Vinyl Chloride | Colorimetric tube | As dictated by total VOC action level above | ≤ 0.5 ppm<br>> 0.5 ppm, ≤ 1.0 ppm | - Normal operations<br>- Stop work and investigate cause of reading; contact SSO/PM. |
| Particulate | MIE PDR 1000 Data RAM | Continuous in Breathing Zone | 0 to 0.05 $mg/m^3$<br>0.05 to 0.2 $mg/m^3$<br>> 0.2 $mg/m^3$ | - Normal operations.<br>- Implement wetting procedures or appropriate engineering controls to reduce.<br>- Stop work activity, reassess hazards. Contact ARCADIS SSO/PM. |

**Appendix B**

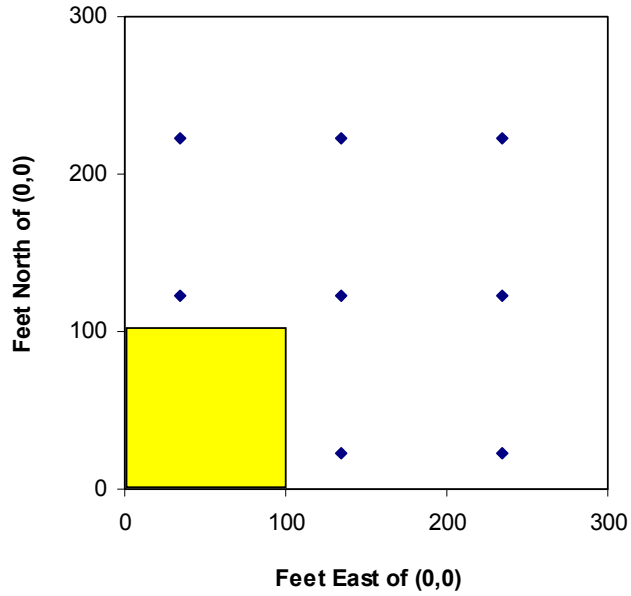
Excerpt from Section 2.4.2.2 of the 202 Michigan Department of Environmental Quality Sampling Strategies and Statistics Training Materials Plan

### 2.4.2.2 Systematic *RANDOM* Sampling

A preferable alternative to simple *RANDOM* sampling is systematic *RANDOM* sampling. This sampling design consists of dividing the total area to be sampled into subsections based on the number of samples to be collected (e.g., for nine samples, divide the total area into nine subsections) and *RANDOMLY* selecting a starting point within the first subsection. Subsequent sampling locations are then identified on a grid that is anchored at the starting point. The grid nodes represent locations to be sampled and all nodes are located based on the first *RANDOMLY*-selected location.

Figure 2.3 illustrates how systematic *RANDOM* sampling works. First, a 300 ft x 300 ft area was divided into nine subsections of equal area (100 ft x 100 ft). A point was *RANDOMLY* selected from the lower left cell of the *EXPOSURE UNIT*. Subsequent samples were identified systematically using a 100 ft grid extended from the first point.

**Figure 2.3 Systematic *RANDOM* Sample of Nine Observations Collected from a 300 ft x 300 ft *EXPOSURE UNIT*.**




The shaded area represents the cell from which the first sample was *RANDOMLY* selected.

The advantages of this design are numerous. First, it results in a *RANDOMIZED* sample from the population, thus satisfying the statistical requirements. Second, once the first location has been selected, locating the remaining sample locations is relatively straightforward and doesn't require a computer or GPS system. Third, because the coverage is fairly uniform, most of the *EXPOSURE UNIT* will be sampled and the likelihood of missing a large *HOT SPOT* is reduced. Furthermore, since sample locations are identified using a grid, statistical tools described in the tabbed section titled, "Identification and Consideration of *HOT SPOTS*," may be used to estimate the size of a *HOT SPOT* that might be identified (or missed) using this sampling approach. However, there is a danger that, if contamination occurs with some pattern, samples located on

a grid could systematically "miss" the contamination. If this is a concern, use of an unaligned grid (Gilbert, 1987, page 93) should be considered.

To determine the grid spacing, first determine the number of samples that are to be collected. The recommended minimum number is nine, based on statistical considerations only. Additional samples may be necessary to adequately represent spatial variability in the *EXPOSURE UNIT*. Next, use the following equation to determine an approximate grid interval:

$$\text{Grid Interval} = \sqrt{\frac{Area}{n}}$$

Where *Area* represents the total area of the *EXPOSURE UNIT* and *n* represents the number of samples that are to be collected.

The grid interval equation given above provides a rough approximation to a reasonable grid interval. The unique shape and size of the *EXPOSURE UNIT*, as well as the number of samples to be collected, will influence what the appropriate grid interval should be and where samples should be collected. The aim of systematic *RANDOM* sampling is to evenly cover the sampled area while collecting a *RANDOM* sample. Judgment must be used to decide on a sampling plan that is appropriate for individual *EXPOSURE UNITS*.

**Example 2.9 Systematic *RANDOM* Sampling**

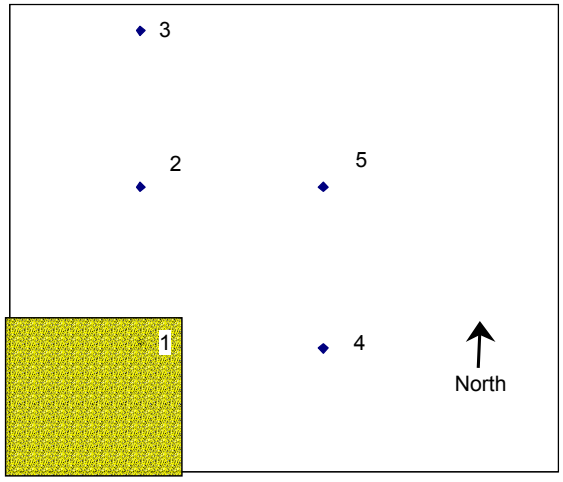
Figure 2.4 represents a square *EXPOSURE UNIT* of approximately two acres (i.e., 300 ft x 300 ft). Suppose that nine samples are to be collected. Using the above equation, the resulting grid interval is 100 ft. The *EXPOSURE UNIT* was divided into nine subsections of equal area (100 ft x 100 ft) and a sample location was *RANDOMLY* selected from the 100 ft x 100 ft cell in the lower left corner of the *EXPOSURE UNIT*. Based on the point selected, subsequent points are collected at the nodes of a grid with the grid interval equal to 100 ft.

The initial *RANDOM* sample location within the 100 x 100 ft cell in the southwest corner of the *EXPOSURE UNIT* was obtained as follows (which corner you start from is irrelevant, but for the sake of consistency, we recommend beginning in the southwest corner). First, generate two *RANDOM* numbers between 0 and 100 using the Microsoft Excel function:

=RANDBETWEEN(L,U)

where L is the lower number (set to 0 in this case) and U is the upper number (set to 100 in this case). The results were 80 and 94. Starting from the southwest corner of the *EXPOSURE UNIT*, move 80 ft east and 94 ft north to establish the *RANDOM* starting point within the southwest cell. The remaining eight sample locations are then positioned at the nodes of a grid with a 100 ft grid interval. For example, the second sample would be located 100 ft north of the first and the third would be located 200 ft north of the first. The fourth would be located 100 ft east of the first, and the fifth would be located 100 ft north of the fourth. This process would continue until all nine systematic *RANDOM* sample locations had been identified.

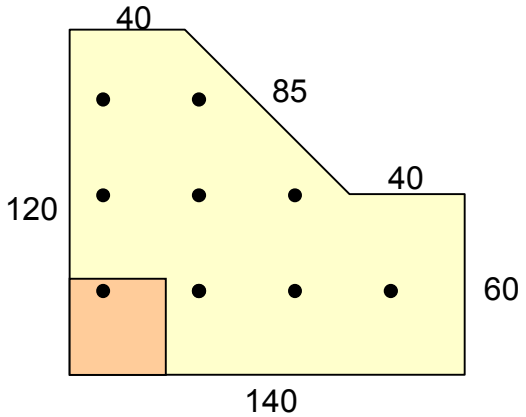
**Figure 2.4 Systematic *RANDOM* Sampling of a Two Acre *EXPOSURE UNIT***




**Example 2.10 Systematic *RANDOM* Sampling of an Odd-Shaped *EXPOSURE UNIT***

Figure 2.5 represents an odd-shaped *EXPOSURE UNIT* with the dimensions as listed (in feet). The first step is to determine the total area of the polygon, which is 12,600 $ft^2$. Suppose that nine samples need to be collected by systematic *RANDOM* sampling. Using the above equation, the approximate grid interval is 37 ft. To determine the *RANDOM* starting point, we generate two *RANDOM* numbers, 9 and 27. Starting in the lower-left corner of the polygon, we move nine ft east and 27 ft north to establish the first sample location. Subsequent samples are located on a grid anchored on the first point with a grid interval of 37 ft. If we denote the lower-left corner of the polygon as the (0,0) point on a (x, y) coordinate plane, the nine sample locations depicted are at (9,27), (9,64), (9,101), (46,27), (46,64), (46,101), (83,27), (83,64), and (120,27). Professional judgment may be used to increase the number of samples to be collected if nine samples do not appear to provide adequate coverage of an odd-shaped *EXPOSURE UNIT*.

**Figure 2.5 Systematic *RANDOM* Sampling of an Odd-Shaped *EXPOSURE UNIT***



**Appendix C**

Excerpts from the Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP) presented as Appendix c of the March 30, 2001 RCRA Facility Investigation Work Plan

# 4. General Field Protocols

## 4.1 Sampling

Samples will be collected at the locations and frequencies specified in the RFI Work Plan and in accordance with the procedures identified herein.

The following protocols will be employed during all sampling conducted during the RFI:

1. Prior to the collection of samples for laboratory analysis at each location, all sampling instruments and equipment must be cleaned in accordance with the protocols presented herein and in Attachment H.

2. A new pair of disposable nitrile gloves must be used for the collection of samples at each location. If, during the course of sample collection, the gloves are observed to be torn, or the gloves are suspected of being soiled from a source other than the sample media at hand, the gloves must be replaced.

3. Quality assurance samples will be collected as outlined in Section 10.

4. All personal protective equipment wastes generated during sampling, such as gloves, Tyveks, etc., will be collected and containerized for proper disposal.

5. Samples will be identified using labels affixed to the sample container. Sample labels will identify the site, sample location, sample interval (if appropriate), laboratory analysis required, preservative added, date and time of collection, and sampler's initials. A hardcover bound field book and/or field forms will be used to record the information associated with the sampling events and sample collection.

6. Sample containers and preservation requirements will be determined by the requirements of the laboratory analytical analysis. All sample containers will be provided by the laboratory and will be prepared using a standard laboratory validated washing procedure. The sample bottles will be delivered by the laboratory to the Site in sealed containers.

7. All properly labeled collected samples will be shipped to the laboratory for laboratory analysis in laboratory-supplied coolers. The coolers must be packed with ice to maintain the required preservation temperature as

identified in Section 7, any remaining space will be filled with packing to cushion the containers. Each cooler will be sealed with two seals comprised of BBL's chain of custody tape and/or the sampler's name. The coolers will then be properly sealed with packing tape.

All samples will be delivered to the laboratory by commercial courier or laboratory personnel the day of or the day following sample collection.

8. Samples will be shipped under the chain of custody procedures as outlined in Section 7.

## 4.2 Equipment Cleaning

Upon mobilization of the equipment on the Site, and prior to commencing work, all equipment must be thoroughly cleaned. The cleaning shall, at a minimum, consist of the use of pressurized water or steam wash to remove oil, grease, mud, and other foreign matter. The equipment will be inspected by the on-site BBL representative to check that all seals and gaskets are intact and that no fluids are leaking. After the visual inspection has been completed, the on-site BBL representative will determine if additional cleaning is required. If additional cleaning is required, the equipment will receive a thorough recleaning using pressurized water or steam wash. If a drill rig is used, the augers and tooling will be decontaminated between soil borings, as required. Soil sampling equipment will be decontaminated between samples by washing thoroughly with non-phosphate detergent and potable water using a brush to remove particulate matter or surface film, if any.

Prior to the collection of any samples for laboratory analyses, all reusable sampling equipment and tools, or dedicated equipment, will be thoroughly cleaned in accordance with the Equipment Decontamination Procedures included in Attachment H.

Upon completion of activities, the equipment will be thoroughly cleaned by pressurized water or steam wash to remove soils and other foreign matter prior to demobilization from the Site.

Fluids used for cleaning will not be recycled.

## 4.3 Waste Handling

All water, and excess sampling waters developed as a result of cleaning, will be placed in GM-supplied drums and stored in GM's disposal area (as required) and labeled by BBL. The material contained within the drums will be laboratory analyzed for waste characterization prior to disposal. All other waste materials developed as a result of RFI activities, such as personal protective equipment, will be placed in GM-supplied drums and stored in GM's disposal area (as required). An inventory of all drums containing waste materials will be kept by the supervising geologist.

Investigation-derived waste (IDW), including soil cuttings generated as a result of drilling and sampling will be placed in GM-supplied drums and stored in GM's disposal area (as required) and labeled by BBL. The IDW within the drums will be laboratory analyzed for waste characterization prior to disposal. All IDW generated from RFI activities will be properly disposed of by GM in accordance with appropriate protocols. An inventory of all IDW generated during the investigation will be kept by the supervising geologist.

Additional protocols specific to each sampling method are presented in the following sections.

## 4.4 Soil Boring Protocols

Soil borings will be completed at the locations identified in the RFI Work Plan. Soil borings will be completed using standard procedures and in accordance with the protocols identified in Section 6. Soil borings will generally be completed to the encountered water table. Representative soil samples will be typically collected in 2-foot depth intervals. Field oil-water shake tests will be conducted on soil samples in areas of known or suspected NAPL occurrence and based on visual and PID readings.

If NAPL is observed during installation of a soil boring, a monitoring well will be installed and a new soil boring(s) will be proposed nearby following the Decision Logic Flow Chart (Figure 2) of the RFI Work Plan in an attempt to delineate the extent of NAPL in the area. These new soil borings will be installed following appropriate utility clearance, and in the same manner as other planned soil borings.

Refer to Attachment D for the procedure for soil boring completion.

### 4.4.1 Surface Soil Sampling Procedure

Subsurface soil samples will be collected at each soil boring location identified in the RFI Work Plan. The surface soil samples will consist of the material from the ground surface (or immediately beneath the pavement) to a depth of 2 feet. Also, surface soil samples will be collected from selected locations for characterization of direct-contact criteria. The samples will consist of the 0- to 2-foot interval (only) at each location.

Refer to Attachment D for the procedure for surface soil sample collection.

### 4.4.2 Subsurface Soil Sampling Protocols

Subsurface soil samples will be collected at the soil boring locations identified in the RFI Work Plan. Up to three subsurface soil samples may be collected from each soil boring. The following indicates the locations of subsurface soil sample collection for each soil boring location:

- One subsurface soil sample will be collected from the 8- to 10-foot depth increment unless shallow water table conditions exist (10 feet below grade or less) in which case this sample will not be collected;
- One subsurface soil sample will be collected from the 2-foot depth increment immediately above the groundwater table; and
- Up to one other subsurface sample may be collected based on high PID reading at a boring location or visual evidence of contamination as determined by the supervising geologist.

All soil samples will be collected using the standard methods. Alternate sampling techniques may be proposed to USEPA if the identified method proves to be ineffective or is not feasible due to field constraints (e.g., limited access). Soils will be described and classified according to the Unified Soil Classification System (USCS).

The laboratory QA/QC procedures for the subsurface soil sample collection will be in accordance with Section 10.

Refer to Attachment D for the procedures for subsurface soil sample collection.

## 4.5 Monitoring Well Installation Procedures

Monitoring well installations will be completed at the locations identified in the RFI Work Plan. All monitoring wells will be installed and developed in accordance with Attachments B and C, and in accordance with USEPA technical guidance. Soil samples for stratigraphic definition will be collected continuously using a split-spoon or direct-push methods. In areas where dense nonaqueous phase liquid (DNAPL) is not suspected, monitoring wells will generally be screened to straddle the encountered water table with well screen lengths of either 5 or 10 feet.

In areas where DNAPL is suspected, monitoring wells will be screened below the water table such that the lower portion of the screen intersects the upper contact of the first confining unit. The well screen will be fitted with a 2-foot-long sump at the bottom of the screen and installed into the upper contact of the confining unit to allow the collection of DNAPL, if present.

A typical monitoring well installation detail is presented in Attachment B-1. An alternative detailed flushmount installation detailed is presented on Attachment B-2. A typical DNAPL monitoring well installation is presented in Attachment B-3.

Refer to Attachments B and C for the procedures for monitoring well installation and development.

## 4.6 Groundwater and NAPL Sampling Protocols

Groundwater samples will be collected at the locations identified in the RFI Work Plan. Following the installation and development of monitoring wells, two rounds of groundwater sampling will be conducted. The first round of groundwater sampling will consist of sampling all wells installed as part of the RFI Work Plan and those existing wells selected for additional sampling. A subsequent round of groundwater samples will be collected only from the wells where the confirmation of the presence or absence of site-specific constituents are required to address RFI objectives. All groundwater samples will be collected using standard hand-bailing or low-flow sampling methods. Refer to Attachments J and L for the procedures for groundwater sampling using hand-bailing or low-flow, respectively. Prior to the collection of groundwater samples, water level measurements will be obtained. Refer to Attachment I for the procedure for water level measurements.

If LNAPL or DNAPL are encountered in monitoring wells at the time of groundwater sampling, a representative sample of NAPL will be collected and laboratory analyzed in accordance with the RFI Work Plan. Refer to Attachment P for the procedures for LNAPL sample collection and Attachment U for DNAPL sample collection.

Hydraulic conductivity testing using the specific capacity tests procedure will be performed at selected monitoring wells. Refer to Attachment O for the procedure for specific capacity testing.

## 4.7 Surface Water Sampling Protocols

Surface water sampling may be performed during the RFI field activities at specific locations. These locations may include interior basements of buildings, and shafts or pits associated with buildings that may contain standing water. Procedures for the collection of surface water samples are provided in Attachment W.

## 4.8 Geophysical Survey

Geophysical investigation methods may be implemented during the RFI will be in accordance with the following objectives:

- Provide geophysical data to supplement soil boring and well data to delineate subsurface conditions (i.e., stratigraphy);
- Identify potential subsurface preferential pathways (i.e., Site piping/utilities) at various AOI locations; and
- Provide a supplemental method to soil borings and monitoring wells to assist in the delineation of potential NAPL areas.

These objectives will be addressed by performing a geophysical investigation consisting of ground-penetrating radar (GPR) and magnetic surveys. Performing the GPR and magnetic surveys may aid in identifying these subsurface features at the Site.

The identification and location of such features may be useful in determining the final location of proposed sampling locations and may be used to supplement the data between proposed sampling locations.

The magnetic survey may be used (if deemed necessary) in areas outside of Site buildings. Detailed operating procedures for the magnetometer are provided in Attachment R.

The GPR survey may be used (if deemed appropriate) in areas both inside and outside of Site buildings. The GPR system's data can be reviewed "real time" to assist in the field evaluation of the targeted subsurface features of interest. Detailed operating procedures for the GPR survey are provided in Attachment S.

## 4.9 Test Pit Excavation Procedures

The completion of test pit excavations during the RFI field activities is not planned; nevertheless, there may be a need to perform test pit excavations for the RFI program. Test pit excavations may be performed based on the need to identify subsurface structures, facilitate the collection of soil samples that cannot be collected by soil borings, and in areas requiring excavations for Interim Measure (IM) design or implementation. Refer to Attachment V for the procedure for test pit excavation.

# 5. Quality Assurance Objectives for Measurement Data

Data quality objectives (DQOs) are qualitative and quantitative statements that specify the quality of the data required to support decisions made during Site-related activities associated with the soil and groundwater investigations and are based on the end uses of the data to be collected as part of these programs. DQOs were developed with the intention that the data generated during field investigations will produce a representative characterization of Site conditions that will be of adequate quality and sufficient quantity to form a sound basis for decision making purposes. A DQO summary for the sampling investigation effort is presented below. The summary consists of stated DQOs relative to: data uses, data types, data quantity, sampling and analytical methods, and data measurement performance criteria.

Two data categories have been defined to address various analytical data uses and the associated QA/QC effort. A description and the methods required to achieve the desired levels of quality for each of these categories are:

Screening Data: Screening data afford a quick assessment of Site characteristics or conditions. This objective for data quality is applicable to data collection activities that involve rapid, non-rigorous methods of analysis and quality assurance. This objective is generally applied to: physical and/or chemical properties of samples; degree of contamination relative to concentration differences; and a preliminary health and safety assessment.

Definitive Data: Definitive data are generated using analytical methods, such as approved USEPA reference methods. Data are analyte-specific, with confirmation of analyte identity and concentration. Methods produce raw data (e.g., chromatograms, spectra, concentration values) in the form of paper printouts or computer-generated electronic files.

It is anticipated that both the screening and definitive data categories will be used during the investigation. Field parameters (i.e., dissolved oxygen, conductivity, temperature and pH) which will be obtained during groundwater column sampling for use in qualitatively interpreting other Site data will be determined using screening techniques. Oil-water shake testing for identification of occurrence of NAPL and PID field screening will also be used for select samples. All remaining parameters will be determined using definitive techniques.

For this project, two levels of data reporting have been defined. They are as follows:

Level 1 - Minimal Reporting: Minimal or "results only" reporting is used for analyses which, either due to their nature (i.e., field monitoring) or the intended data use (i.e., preliminary screening), do not generate or require extensive supporting documentation.

Level 2 - Full Reporting: Full "CLP-type" reporting is used for those analyses which, based on the intended data use, require full documentation (particularly to support data validation efforts). Definitive data during site characterization and delineation sampling will normally fall under this level of reporting.

A DQO summary and associated reporting levels for the field investigation activities is presented below. The summary consists of stated DQOs relative to the following items:

- Data uses;
- Data types;
- Data quantity;
- Sampling and analytical methods; and
- Measurement performance criteria.

## 5.1 Objectives

The purpose of this FSP/QAPP is to present specific QA/QC procedures to be implemented during Site investigation activities to provide data quality that is sufficient to meet the investigation objectives. The overall objective of the soil investigation is to provide the data necessary to complete the characterization of the Site soil and to facilitate the preparation of the final RFI reporting.

### 5.1.1 Soil Sampling

The overall objective of soil sampling as part of Site investigation activities is to provide the data necessary to complete the characterization of the Site areas to facilitate the preparation of the RFI reporting.

Three soil sampling tasks will be performed during the soil investigations to support this objective including:

1. Oil-water shake tests on selected samples;
2. PID headspace testing; and
3. Soil analysis sampling.

Data Uses

Oil-water shake tests will be used as a field method to evaluate for potential NAPL in subsurface soils in areas of known or suspected NAPL occurrence. PID headspace measurements will be conducted to investigate the potential presence of volatile organics in subsurface soils. Both PID and oil-water shake tests will be used for screening level and gross non-chemical specific soil analysis. Soil analysis sampling will be used to delineate, through fixed-based laboratory analysis, the potential presence of PAL VOCs, PAL SVOCs, PCBs, and PAL metals in the surface and subsurface soils. The chemical-specific analytical results will be used to determine Site potential health risks and, if necessary, to determine whether remedial actions are necessary at select areas of the Site.

Data Types

The soil investigations will include the collection and analysis of surface and subsurface soil samples that will be analyzed by a commercial analytical laboratory for PAL VOCs, PAL SVOCs, PCBs, and PAL metals. Visual examination of soil samples from various depth intervals will also be conducted to evaluate subsurface conditions at the Site. The following testing will be conducted for the three soil sampling tasks:

1. Oil-Water Shake Tests - Field shake testing for potential presence of NAPL products. The presence of a sheen will be used to indicate whether organic material is present in subsurface soils.

2. PID Headspace Measurements - Field test used to determine the gross presence of volatile organics.

3. Soil Analysis Sampling - Analytical laboratory analysis for PAL VOCs, SVOCs, PCBs, and PAL metals.

Data Quantity

Table 1 contains a summary of the number of samples to be collected and associated QC analyses for laboratory-based analyses. Oil-water shake tests will be performed at borings in areas of known or suspected NAPL occurrence. Soil samples will be collected from the 0- to 2-foot, 8- to 10-foot, and unsaturated zone immediately above the water table where the water table is at a depth 12 feet or greater. If the water table is found to be 10 feet or less, a single soil sample (in addition to the 0- to 2-foot sample) will be collected just above the water table. All soil samples will undergo PID headspace testing.

Sampling and Analytical Methods

Samples will be collected during the boring operations for each monitoring well/soil boring installation. Procedures for sample collection are presented in Attachment D. The laboratory methods to be utilized are listed in Table 1. Reporting for the oil-water shake tests and PID headspace measurements will be Level 1. Reporting for the laboratory-based PAL VOCs, PAL SVOCs, PCBs, and PAL metals analyses will be Level 2.

Measurement Performance Criteria

Precision and accuracy QC limits for chemical constituents which are used during data review to assess analytical performance are included in the analytical laboratory's (CT&E) Quality Assurance Plan (Attachment T).

Data representativeness is addressed by the sample quantities and locations included in the soil investigation program design. Data comparability is intended to be achieved through the use of standard USEPA approved methods, which are presented in Table 1. Data completeness will be assessed at the end of the soil investigation.

### 5.1.2 Groundwater Sampling

The overall objective of groundwater sampling as part of Site investigation activities is to provide the data necessary to complete the characterization of the Site areas to facilitate the preparation of the RFI reporting.

Groundwater samples will be collected either manually by use of a bailer or by using low-flow sampling techniques from selected existing wells and each new monitoring well installed during the investigation. During groundwater sampling, each well will be visually inspected for NAPL. Water table elevation measurements will be taken and groundwater will be tested for NAPL with a groundwater/interface probe. After the completion of the monitoring well stabilization period (approximately seven days), groundwater samples will be collected from area specific wells to characterize water quality. Additionally, in-situ grab groundwater samples (e.g., hydropunch) will be collected at locations specified in the RFI Work Plan. In-situ grab groundwater samples will be collected from area-specific locations to characterize water quality.

Data Uses

Groundwater samples will be visually inspected for product in each well sampled. Groundwater samples will be collected from select well locations to provide sufficient groundwater data for use in determining whether groundwater contamination has been delineated for areas investigated.

Data Types

Data types include both hydrogeologic and water quality data. Hydrogeologic data will consist of water level and hydraulic conductivity information which may be used to calculate other hydrogeologic parameters (gradient, flow conditions, etc.). Water quality data will consist of field parameters, including water/NAPL interface measurements, visual inspections for NAPL, conductivity, dissolved oxygen, pH, and temperature, as well as laboratory parameters for PAL VOCs, PAL SVOCs, PCBs (filtered and unfiltered), and PAL metals (filtered).

Data Quantity

The subsurface investigation activities will involve the collection of groundwater samples from select newly installed monitoring wells, select existing wells, and in-situ grab sample locations (as appropriate or determined by a specific investigation activity). Groundwater elevations will be established at all new wells and the selected existing wells used for the groundwater investigation.

Sampling and Analytical Methods

Samples will be collected using standard hand bailers or sampling pumps (e.g., peristaltic pump). Samples will be visually inspected for and be sampled for NAPL with a groundwater interface probe. Procedures for sample collection are provided in Attachment J. Section 5 contains a description of the water quality measurement procedures and groundwater sampling procedures to be followed during the groundwater investigations. Reporting for field-measured parameters will be Level 1. Reporting for laboratory analyses will be Level 2.

Measurement Performance Criteria

Precision and accuracy QC limits for chemical constituents which are used during data review to assess analytical performance are included in the analytical laboratory's (CT&E's) Quality Assurance Plan (Attachment T).

Data representativeness is addressed by the sample quantities and locations associated with groundwater investigation work activities. Data comparability is intended to be achieved through the use of standard USEPA-approved methods, which are presented in Table 1. Data completeness will be assessed at the end of the groundwater investigations.

### 5.1.3 Surface Water Sampling

Surface water sampling may be performed during the RFI field activities at specific locations as described below.

Data Uses

Surface water samples may be collected from select locations to provide water quality data for use in determining whether standing water contains hazardous constituents.

Data Types

Data types include only water quality data. Water quality data will consist of field parameters, including water/NAPL interface measurements, visual inspection for NAPL, pH, conductivity and temperature. Laboratory parameters will consist of PAL VOCs, PAL SVOCs, PCBs, PAL metals, and possible waste characterization data (TCLP analysis).

Data Quantity

During the RFI field activities, surface water samples may be collected at specific locations (e.g., Building 40 basement). These locations may include interior basements of buildings, and shafts or pits associated with buildings (as appropriate) that may contain standing water. The number of surface water samples to be collected and analyzed as part of the RFI field activities is anticipated to be less than 10 locations.

Sampling and Analytical Methods

Samples will be collected using standard hand bailers or sampling pumps (e.g., peristaltic pump). Procedures for the collection of surface water samples are provided in Attachment W. Surface water samples will be visually inspected for sheens or evidence of NAPL at each sample location. Reporting for field-measured parameters will be Level 1. Reporting for laboratory analyses will be Level 2.

Measurement Performance Criteria

Precision and accuracy QC limits for constituents used during data review to assess analytical performance are included in the analytical laboratory's (CT&E's) Quality Assurance Plan (Attachment T).

Data representativeness is addressed by the sample quantities and locations associated with groundwater investigation work activities. Data comparability is intended to be achieved through the use of standard USEPA-

approved methods, which are presented in Table 1. Data completeness will be assessed at the end of the groundwater investigations.

### 5.1.4 Nonaqueous Phase Liquid (NAPL) Sampling

NAPL sampling will be performed during the RFI field activities in areas where LNAPL or DNAPL is identified in existing or newly installed monitoring wells and in areas where analytical data are currently not available.

Data Uses

NAPL samples will be collected from select monitoring well locations to determine both physical and chemical characteristic data of the NAPL for use in determining the presence of hazardous constituents in the product, as well as physical characteristics (e.g., viscosity, specific gravity) as they pertain to NAPL recovery.

Data Types

Data types include both field parameters and laboratory data. Field data will consist of general parameters, including NAPL thickness measurements and visual inspection of the NAPL for color and general viscosity. Laboratory parameters will consist of chemical analyses for PAL VOCs, PAL SVOCs, PCBs, PAL metals, and physical analysis for viscosity, specific gravity, and interfacial tension.

Data Quantity

NAPL, if identified, will be collected at existing or newly installed monitoring wells, as appropriate, to represent areas containing NAPL where analytical data are currently not available. These locations may include select existing or newly installed well locations within interior or exterior building areas. NAPL thickness measurements and elevations will be collected at locations containing NAPL and used for the groundwater investigation.

Sampling and Analytical Methods

NAPL samples will be visually inspected for color, relative viscosity and thickness at each sample location. Samples will be collected using standard hand bailers or sampling pumps (e.g., peristaltic pump). NAPL data will consist of field parameters, including NAPL thickness measurements, and visual inspection of the NAPL for color and general viscosity. Procedures for the collection of LNAPL and DNAPL samples are provided in Attachments

P and U, respectively. Laboratory parameters will consist of chemical analyses for PAL VOCs, PAL SVOCs, PCBs, PAL metals, and physical analysis for viscosity, specific gravity, and interfacial tension. Reporting for field-measured parameters will be Level 1. Reporting for laboratory analyses will be Level 2.

Measurement Performance Criteria

Precision and accuracy QC limits for chemical and physical constituents that are used during data review to assess analytical performance are included in the analytical laboratory's (CT&E) Quality Assurance Plan (Attachment T).

Data representativeness is addressed by the sample quantities and locations associated with NAPL occurrence. Data comparability is intended to be achieved through the use of standard USEPA-approved methods. Data completeness will be assessed on an interim basis at the end of each NAPL sampling program for each AOI or facility area (as appropriate).

# 6. Sampling Procedures

Groundwater and soil samples will be collected as required for the soil and groundwater investigation programs. Sample tracking and identification of the investigations is part of the sampling procedures. An important aspect of sample tracking and identification is based on the ability to discern the difference between and document the origin of a number of environmental samples collected for future reference in reporting and performing an assessment of the distribution of chemical analytical results in any specific area. Detailed descriptions of the sample designation system, documentation, and reporting requirements are presented below.

## 6.1 Sample Designation System

A four-tier sample designation code and the sample date will provide each sample with a unique "name" or identifier. This alphanumeric system will apply to all samples collected that are to be transmitted to the laboratory for analysis. The sample designation code system includes the prefix "RFI" followed by another prefix indicating the sample location (i.e., Building 31 area) followed by a sequential number assigned at the time of installation for monitoring wells or at the installation of soil borings. These codes are followed with a depth interval in the case of soil borings, and with a date designation in the case of monitoring wells.

Example sample designation codes for groundwater samples and soil samples under this system would be RFI 70-161 (3/21/99) and 20-277 (8-10), respectively. Additional sample volumes collected for matrix spike ("MS") and matrix spike duplicate ("MSD") analysis will be noted on the chain of custody forms, and the associated additional sample containers will be labeled with the appropriate suffix ("MS" or "MSD").

## 6.2 Field Documentation

Field personnel will provide comprehensive documentation covering all aspects of field sampling, field analysis, and sample chain of custody. This documentation constitutes a record that allows reconstruction of all field events to aid in the data review and interpretation process. All documents, records, and information relating to the performance of the field work will be retained in the project file.

The various forms of documentation to be maintained throughout the investigation activities include:

- Daily Production Documentation - A field logbook consisting of a waterproof, bound notebook that will contain a record of all activities performed at the Site. All logbook entries will be made in pen. Any additions or corrections to the field logbook information will be single-lined out, dated, and initialed.

- Sampling Information - Detailed notes will be made as to the exact site of sampling, physical observations, personnel present, and weather conditions (as appropriate).

- Sample Chain of Custody – Chain of custody forms will provide the record of responsibility for sample collection, transport, and submittal to the laboratory. Chain of custody forms will be filled out at each sampling site, at a group of sampling sites, or at the end of each day of sampling by BBL's field personnel designated to be responsible for sample custody. In the event that the samples are relinquished by the designated sampling person to other sampling or field personnel, the chain of custody form will be signed and dated by the appropriate personnel to document the sample transfer. The original chain of custody form will accompany the samples to the laboratory and copies will be forwarded to the project files. A sample chain of custody form is included in Attachment A.

- Field Equipment, Calibration, and Maintenance Logs - To document the calibration and maintenance of field instrumentation, calibration and maintenance logs will be maintained for each piece of field equipment that is not only factory-calibrated.

## 6.3 Field Data Reporting

Information collected in the field through visual observation, manual measurement and/or field instrumentation will be recorded in field notebooks or data sheets, and/or on pre-prepared forms. Such data will be reviewed by the appropriate Task Manager for adherence to the specific requirements associated with the soil and groundwater investigation requirements and for consistency. Concerns identified as a result of this review will be discussed with the field personnel, corrected if possible, and as necessary, incorporated into the data evaluation process.

Where appropriate, field data forms and calculations will be processed and included in appendices to investigation reports. The original field logs, documents, and data reductions will be maintained with the project file at the BBL office in Syracuse, New York.

## 6.4 Sampling Methods

The project-specific scope of work is presented in detail in the RFI Work Plan. The sampling procedures for the various investigation tasks are summarized in the following subsections. Detailed field procedures are included in the attachments to this FSP/QAPP. The attachments also contain other investigation supportive procedures such as for cleaning equipment, packing, handling, executing chain of custody, shipping samples, and obtaining field measurements.

## 6.5 Monitoring Well and Boring Installation

New monitoring wells will be installed to augment the existing wells. Additionally, boreholes will be completed for the additional characterization of surface and subsurface soil conditions.

Shallow monitoring wells (water table wells) will be constructed of 1.5- or 2-inch-diameter, Schedule 40, machine-slotted PVC. Monitoring well installation procedures are provided in Attachment B. Prior to groundwater sample collection, all monitoring wells will be developed in accordance with the procedures described in Attachment C.

If boring refusal is encountered, either a new boring will be initiated (with the previous boring being abandoned following procedures described in Attachment D) or a tri-cone or hammer-head drill bit, or equivalent method, will be used to penetrate through the zone of refusal. If physically possible, a sample will be obtained for identification purposes from the zone of refusal. Any sheen observed during the drilling and monitoring well installation will be noted on the boring logs.

Lithologic Characterization

To provide a vertical profile of the subsurface, soil samples will be collected continuously for visual classification using split-spoon sampling methods from the ground surface to the bottom of each boring. Soil boring completion, soil sample collection, and lithologic characterization will be performed in accordance with the procedures described in Attachment D. A PID will be used to obtain PID headspace readings of each sample interval, as well as provide health and safety monitoring for field personnel during the drilling program as described in Attachment E. Oil-water shake tests will be performed on samples taken from boreholes in areas where NAPL may be present following the procedures outlined in Attachment F.

The visual descriptions of the subsurface lithology will be evaluated to assess the extent to which the geologic unit may influence migration of NAPL and dissolved-phase constituents at the Site and will provide a vertical profile of the subsurface. This information will be used to prepare detailed boring/well logs and geologic cross sections of the subsurface area. Specific details in the lithologic descriptions normally include the following:

Color/discoloration
- Fill component description (cinder, clay, metal, tires, etc.)
- Odors
- Principal components
- Contacts when observed
- Mottling/staining
- Minor Components
- Particle angularity/shape
- Weathering
- Structure and bedding
- Particle sizes

PID Measurements
- Field moisture conditions
- Moisture content
- Unified Soil Classification System group symbol
- Fill or geologic origin, if known
- Organic content
- Vertical fractures
- Sheen
- Relative cohesiveness
- Item which may indicate age of deposit (identification of archeological artifacts, newspapers, etc.)

## 6.6 Soil Sampling and Analysis

Soil samples will be selected for analytical characterization from samples collected during the installation of the soil boreholes. In general, three or four soil samples will be collected from each borehole in areas where the water table is 12 feet or greater below ground surface (bgs). Samples submitted for analytical laboratory testing will consist of soil collected at the following intervals: at the surface (0 to 2 feet bgs) or the remaining interval present beneath concrete pads or pavement, the 8 to 10 feet bgs interval, and at or immediately above the water table interface. In areas where the water table is found to be 10 feet or less (bgs), a single soil sample will be collected just above the water table. Additionally, one more 2-foot soil interval may be submitted for analysis if unusually high PID readings are encountered.

Soil samples will be obtained following the sampling criteria identified in Section 5 of the RFI Work Plan. Soil samples will be collected in accordance with the procedures outlined in Attachment D with samples to be submitted for VOC analysis being collected following the procedures outlined in Attachment G. These soil samples will be

used to assess potential source materials at each area where a monitoring well or borehole is installed. The soil samples will be analyzed for PAL VOCs, PAL SVOCs, PCBs, and PAL metals.

Soil samples will be identified, packaged, and shipped to the analytical laboratory using the chain of custody procedures set forth in Attachment A. Equipment decontamination will be performed in accordance with the procedures described in Attachment H.

## 6.7 Groundwater Sampling and Analysis

Water level measurements will be obtained from each monitoring well in accordance with procedures set forth in Attachment I. In general, measurements will be obtained with a water level probe and measured to the nearest 0.01 foot. Water levels will be converted to elevations using the surveyed measurement point (i.e., top of casing) elevations.

The water level measurements will be used to determine groundwater elevations and determine groundwater flow directions.

Groundwater samples will be collected from newly installed monitoring wells upon completion of well development and associated stabilization period. Standard hand bailing techniques or low-flow sampling will be utilized for groundwater sampling at each selected monitoring well location using sampling procedures as described in Attachment J or Attachment L.

A representative groundwater sample from each monitoring well will be collected in the field and measured for dissolved oxygen (DO), temperature, conductivity, turbidity, and pH. Specific field procedures for measurement of these water quality parameters are described in Attachment K. If low-flow purging is used, additional water quality measurements for temperature and turbidity will also be used to determine well stability and when purging is complete.

Groundwater samples will be analyzed using USEPA SW-846 methods at the laboratory for PAL VOCs, PAL SVOCs, PCBs (filtered and unfiltered), and PAL metals (filtered).

Filtered samples will be collected for PCB and metals analyses. A 0.45-micron filter will be used to filter groundwater samples for PCB and metals analyses. Filtered only groundwater samples will be collected for metals

because of the fines encountered in water accumulating in the monitoring well as a result of drilling and even sampling.

To characterize the hydraulic conductivity at selected monitoring well locations, data will be obtained during well purging consistent with specific capacity testing procedures. Specific capacity tests entail pumping a well at an approximately constant rate and measuring the drawdown inside the pumped well. To optimize the efficiency of data acquisition, specific capacity tests will be performed as part of purging prior to groundwater sampling. The relationship between the specific capacity test duration and pumping rate, the measured drawdown, and the geometry of the well intake section (wetted sand filter pack) will be used to estimate the hydraulic conductivity of the water-bearing formation surrounding the well intake section. Specific capacity testing will be performed in accordance with the procedures specified in Attachment O.

## 6.8 Oil/Sludge Grab Sampling Procedures

Oil/sludge samples from sumps, pits, trenches, etc., may be collected, if encountered, for chemical analysis. Oil/sludge samples may be collected utilizing a grab sampler, hand-held dredge, peristaltic pump, and/or a hand bucket auger. The specific procedures for collection of oil/sludge grab samples are presented in Attachment M.

## 6.9 NAPL Sampling and Passive Oil Recovery

NAPL samples may be collected to facilitate laboratory characterization of these materials. Standard procedures for the collection of NAPL samples and passive oil recovery are presented in Attachments P and U for LNAPL and DNAPL, respectively. The procedures for determining oil layer thickness in monitoring wells is presented in Attachment Q.

If NAPL is measured in any of the new wells or in any of the existing wells (associated with each subsurface investigation area) where it was not previously found and sampled, a representative sample of the liquid, if present in sufficient quantity, will be collected in place of a groundwater sample. The location and physical characteristics of the NAPL will be noted in the field logs. The NAPL will be analyzed for density, viscosity, interfacial tension, PAL VOCs, PAL SVOCs, PCBs, and PAL metals.

## 6.10 Magnetometer and Ground-Penetrating Radar Surveys

Magnetometer and ground-penetrating radar (GPR) procedures may be used to identify the location of buried materials, if deemed necessary during subsurface investigation activities. These surveys will be conducted following the procedures presented in Attachments R and S, respectively.

## 6.11 Surface Water Sampling

Surface water sampling may be performed during the RFI field activities at specific locations. These locations may include interior basements of buildings (e.g., Building 40 basement), and shafts or pits associated with buildings that may contain standing water. In general, surface water sampling will be performed using either bailers or a sampling pump (e.g., peristaltic pump). Procedures for the collection of surface water samples are provided in Attachment W.

# 7. Custody Procedures

## 7.1 Sample Containers and Preservation

Appropriate sample containers, preservation methods, and laboratory holding time requirements for planned environmental samples are shown in Table 1.

The analytical laboratory will supply appropriate sample containers and preservatives, as necessary. The bottles will be purchased pre-cleaned to USEPA Office of Solid Waste and Emergency Response (OSWER) Directive 9240.05A requirements. The field personnel will be responsible for properly labeling containers and preserving samples (as appropriate). Sample labeling procedures are described in Attachment A.

## 7.2 Packing, Handling, and Shipping Requirements

Sample packaging and shipment procedures are designed to ensure that the samples will arrive at the laboratory with the custody intact.

Samples will be packaged for shipment as outlined below:

- Ensure that all sample containers have the sample labels securely affixed to the container with clear packing tape;
- Check the caps on the sample containers to ensure that they are properly sealed;
- Wrap the sample container cap with clear packing tape to prevent it from becoming loose;
- Complete the chain of custody form with the required sampling information and ensure that the recorded information matches the sample labels. NOTE: If the designated sampler relinquishes the samples to other sampling or field personnel for packing or other purposes, the sampler will complete the chain of custody prior to this transfer. The appropriate personnel will sign and date the chain of custody form the document the sample custody transfer.
- Using duct tape, secure the outside drain plug at the bottom of the cooler;
- Wrap sample containers in bubble wrap or other cushioning material (not vermiculite);
- Place 1 to 2 inches of cushioning material at the bottom of the cooler;
- Place the sealed sample containers into the cooler;

- Place ice in plastic bags and seal. Place loosely in the cooler;
- Fill the remaining space in the cooler with cushioning material;
- Place chain of custody forms in a plastic bag and seal. Tape the forms to the inside of the cooler lid;
- Close the lid of the cooler, lock, and secure with duct tape;
- Wrap strapping tape around both ends of the cooler at least twice;
- Mark the cooler on the outside with the following information: shipping address, return address, "Fragile" labels, and arrows indicating "this side up." Cover the cooler label with clear plastic tape. Place a signed custody seal over the cooler lid.

All samples will be packaged by the field personnel and transported as low-concentration environmental samples. The coolers will be hand-delivered or delivered by an express carrier to be received within 48 hours of the time of collection. All shipments will be accompanied by the chain of custody form identifying the contents. The original form will accompany the shipment; copies will be retained by the sampler for the sampling office records. If the samples are sent by common carrier, a bill of lading should be used. Receipts or bills of lading will be retained as part of the permanent project documentation. Commercial carriers are not required to sign off on the chain of custody form as long as the forms are sealed inside the sample cooler and the custody seals remain intact.

Sample custody seals and packing materials for filled sample containers will be provided by the analytical laboratory. The filled, labeled, and sealed containers will be placed in a cooler on ice and carefully packed to eliminate the possibility of container breakage. Trip blank(s) of analyte-free water will be provided by the laboratory and included in each cooler containing aqueous samples to be analyzed for VOCs.

General procedures for packing, handling, and shipping environmental samples are included in Attachment A and in Attachment N.

## 7.3 Field Custody Procedures

The objective of field sample custody is to assure that samples are not tampered with from the time of sample collection through time of receipt by the analytical laboratory. Persons will have "custody of samples" when the samples are in their physical possession, in their view after being in their possession, or in their physical possession and secured so they cannot be tampered with. In addition, when samples are secured in a restricted area accessible only to authorized personnel, they will be deemed to be in the custody of such authorized personnel.

Field custody documentation consists of both field logbooks and field chain of custody forms.

### 7.3.1 Field Logbooks

Field logbooks will provide the means of recording data collection activities performed. As such, entries will be described in as much detail as possible so that persons going to the Site could re-construct a particular situation without reliance on memory.

Field logbooks will be bound field survey books or notebooks. Logbooks will be assigned to field personnel, but will be stored in a secure location when not in use. Each logbook will be identified by the project-specific document number. The title page of each logbook will contain the following:

- Person to whom the logbook is assigned;
- Logbook number;
- Project name;
- Project start date; and
- End date.

Entries into the logbook will contain a variety of information. At the beginning of each entry, the date, start time, weather, names of all sampling team members present, level of personal protection being used, and the signature of the person making the entry will be entered. The names of visitors to the Site, field sampling or investigation team personnel, and the purpose of their visit will also be recorded in the field logbook.

Measurements made and samples collected will be recorded. All entries will be made in ink and no erasures will be made. If an incorrect entry is made, the information will be crossed out with a single strike mark. Whenever a sample is collected, or a measurement is made, a detailed description of the location of the station shall be recorded. The number of the photographs taken of the station, if any, will also be noted. All equipment used to make measurements will be identified, along with the date of calibration of any field instruments used.

Samples will be collected following the sampling procedures documented in Section 6. The equipment used to collect samples will be noted, along with the time of sampling, sample description, depth at which the sample was collected, volume and number of containers. A sample identification number will be assigned prior to sample collection for each environmental sample. Field duplicate samples, which will receive an entirely separate sample identification number, will be noted under sample description.

Preprinted sample labels will be affixed to sample bottles prior to delivery to the sampling location. The following information is required on each sample label:

- Project;
- Date collected;
- Time collected;
- Location;
- Sampler;
- Analysis to be performed;
- Preservative; and
- Sample number.

### 7.3.2 Field Chain of Custody Form

Completed chain of custody forms will be required for all samples to be analyzed. Chain of custody forms will be initiated by the sampling crew in the field. The chain of custody forms will contain the sample's unique identification number, sample date and time, sample description, sample type, preservation (if any), and analyses required. The original chain of custody form will accompany the samples to the laboratory. Copies of the chain of custody will be made prior to shipment (or multiple copy forms used) for field documentation. The chain of custody forms will remain with the samples at all times. The samples and signed chain of custody forms will remain in the possession of the sampling crew until the samples are delivered to the express carrier (e.g., FedEx) or hand delivered to the fixed-based laboratory, or placed in secure storage.

Sample labels are completed for each sample using waterproof ink unless prohibited by weather conditions. The labels include sample information such as sample number and location, type of sample, date and time of sampling, sampler's name or initials, preservation, and analyses to be performed. The completed sample labels are affixed to each sample bottle and covered with clear tape.

## 7.4 Laboratory Custody Procedures

Upon sample receipt, laboratory personnel will be responsible for sample custody. The original field chain of custody form will accompany all samples requiring laboratory analysis. The laboratory will use chain of custody guidelines described in the USEPA guidance documents. Samples will be kept secured in the laboratory until all

stages of analysis are complete. All laboratory personnel having samples in their custody will be responsible for documenting and maintaining sample integrity. The selected commercial analytical laboratory's custody procedures are described in the CT&E Quality Assurance Plan (QAP) (Attachment T).

### 7.4.1 Sample Receipt and Storage

Immediately upon sample receipt, the laboratory sample custodian will verify the package seal, open the package, and compare the contents against the field chain of custody. If a sample container is received broken, the sample is in an inappropriate container, or has not been preserved by appropriate means, BBL will be notified. The laboratory sample custodian will be responsible for logging the samples in, assigning a unique laboratory identification number to each sample, labeling the sample bottle with the laboratory identification number, and moving the sample to an appropriate storage location to await analysis. The project name, field sample code, date sampled, date received, analysis required, storage location and date, and action for final disposition will be recorded in the laboratory logbook. All relevant custody documentation will be placed in the project file.

### 7.4.2 Sample Analysis

Analysis of an acceptable sample will be initiated by laboratory documentation that contain all pertinent information for analysis. The analyst will sign and date the laboratory chain of custody form when removing the samples from storage.

Samples will be organized into sample delivery groups (SDGs) by the laboratory. A SDG may contain up to 20 field samples (field duplicates, trip blanks, and rinse blanks are considered field samples for the purposes of SDG assignment). All field samples assigned to a single SDG shall be received by the laboratory over a maximum of fourteen calendar days and must be processed through the laboratory (preparation, analysis, and reporting) as a group. Every SDG must include a minimum of one site-specific matrix spike/matrix spike duplicate or MS/Dup pair, which shall be received by the laboratory at the start of the SDG assignment.

Each SDG will be self-contained for all of the required QC samples. All parameters within an SDG will be extracted or prepared and analyzed together in the laboratory. At no time will the laboratory be allowed to run any sample (including QC samples) at an earlier or later time than the rest of the SDG. These rules for analysis will ensure that the QC samples for an SDG are applicable to the field samples of the same SDG and that the best possible comparisons may be made.

### 7.4.3 Sample Storage Following Analysis

All samples will be maintained by the laboratory for one month after the final report is delivered to BBL. After this period, the samples will be disposed of in accordance with applicable rules and regulations.

# 10. Internal Quality Control Checks

The overall quality assurance objective for this FSP/QAPP is to develop and implement procedures for sampling, chain of custody, laboratory analysis, instrument calibration, data reduction and reporting, internal QC, audits, preventive maintenance, and corrective action, such that valid data will be generated. These procedures are presented or referenced in the sections of the FSP/QAPP. General field QC checks and laboratory QC checks related to the sampling and analysis planned for these investigations are discussed below. QA/QC limits for laboratory and field QC checks are presented in Table 4.

## 10.1 Field Quality Control Checks

### 10.1.1 Field Measurements

To verify the quality of data using field instrumentation, duplicate measurements will be obtained and reported for all field measurements. A duplicate measurement will involve obtaining measurements a second time at the same sampling location. Both results will be recorded in field logs.

### 10.1.2 Sample Containers

New, certified-clean sample containers (I-Chem 300 series or equivalent) will be supplied by the analytical laboratory. Certificates of analysis demonstrating these containers to be analyte-free will be filed in the project file.

### 10.1.3 Field Duplicates

Field duplicates will be collected for groundwater and soil samples to check reproducibility of the sampling methods. In general, soil and groundwater sample field duplicates will be analyzed at a 5% frequency (every 20 samples) for the chemical constituents. Specific sampling procedures for collecting field duplicates are included in the appropriate attachments.

### 10.1.4 Rinse Blanks

Rinse blanks are used to monitor the cleanliness of the sampling equipment and the effectiveness of the cleaning procedures used. Rinse blanks will be prepared and submitted for analysis at a frequency of one per day (when sample equipment cleaning occurs) or once for every 20 samples collected, whichever is more. Rinse blanks will be prepared by filling sample containers with analyte-free water (supplied by the laboratory) which has been routed through a cleaned sampling device. When dedicated sampling devices are used or sample containers are used to collect the samples, rinse blanks will not be necessary.

### 10.1.5 Trip Blanks

Trip blanks will be used to assess whether samples have been exposed to volatile constituents during sample storage and transport. Trip blanks will be analyzed at a frequency of one per cooler containing groundwater samples to be analyzed for volatile organic constituents. A trip blank will consist of a container filled with analyte-free water (supplied and prepared by the laboratory) which remains unopened with field samples throughout the sampling event. Trip blanks will only be analyzed for volatile organic constituents.

## 10.2 Laboratory Quality Control Checks

Internal laboratory QC checks will be used to monitor data integrity. These checks will include method blanks, matrix spikes (and matrix spike duplicates), spike blanks, internal standards, surrogate spikes, calibration standards, and reference standards. Project QC limits for duplicates and matrix spikes are identified in Table 4. Laboratory control charts will be used to determine long-term instrument trends.

### 10.2.1 Method Blanks

Sources of contamination in the analytical process, whether specific analytes or interferences, need to be identified, isolated, and corrected. The method blank is useful in identifying possible sources of contamination within the analytical process. The laboratory will analyze blank samples as a check on possible sample collection, preparation, and analytical background interferences or contamination. At a minimum, one method blank will be prepared and analyzed with each analytical series associated with no more than 20 samples.

# Attachment A

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

## Sample Handling, Packing, and Shipping Procedures

# Attachment A

*Sample Handling, Packing, and Shipping Procedures*

## I. Chain of Custody Procedures

1. Prior to collecting samples, complete the chain of custody form (Attachment A-3) header information by filling in the project number, project name, and the name(s) of the sampling technician(s). Please note that it is important that chain of custody information is printed legibly using indelible ink.

2. After sample collection, enter the individual sample information by filling in the following chain of custody fields:

   a. STA. NO. - Indicates the station number or location that the sample was collected from. Appropriate values for this field include well locations, grid points, or soil boring identification numbers (e.g., MW-3, X-20, SB-30, etc.).

   b. Date - Indicates the date that the sample was collected. The date format to be followed should be mm/dd/yyyy (e.g., 03/07/2000).

   c. Time - Indicates the time at which the sample was collected. The time value should be presented using the military format. For example, 3:15 P.M. should be entered as 15:15.

   d. Comp - This field should be marked with an "X" if the sample was collected as a composite.

   e. Grab - This field should be marked with an "X" if the sample was collected as an individual grab sample.

   f. Station Location - This field should represent the complete sample name. Although, in some instances it may be similar to the STA. NO. field. An example of a complete sample name is SB-3 (0.5-1.0), where the 0.5-1.0 represents the depth interval in feet from where the sample was collected. Please note that it is very important that the use of hyphens in sample names and the depth units (i.e., feet or inches) remain consistent for all samples entered on the chain of custody form. Sample names may also use the abbreviations "MS/MSD", "FB", "TB", and "DUP" as prefixes or suffixes to indicate that the sample is a matrix spike/matrix spike duplicate, field blank, trip blank, or field duplicate, respectively.

   g. Number of Containers - This field represents the number of containers that were collected at the sampling location to be submitted for analysis.

   h. Analytical Parameters - The analytical parameters that the samples are being analyzed for should be written legibly on the diagonal lines to the right of the "number of containers" column. The analytical parameters should be chosen from those presented in Table 1 of the FSP/QAPP. As much detail as

possible should be presented to allow the analytical laboratory to properly analyze the samples. For example, polychlorinated biphenyls (PCBs) analyses may be represented by entering "PCBs" or Method 8082." Multiple methods and/or analytical parameters may be combined for each column (e.g., PCBs/VOCs/SVOCs or 8082/8260/8270). These columns should also be used to present project specific parameter lists (i.e., Appendix IX excluding herbicides and pesticides). QA/QC information may also be entered in a separate column for each parameter (e.g., PCBs - MS/MSD) to identify a sample that the laboratory is to use for a specific QA/QC requirement. Each sample that requires a particular parameter analysis will be identified by placing an "X" in the appropriate analytical parameter column.

i. Remarks - The remarks field should be used to communicate special analytical requirements to the laboratory. These requirements may be on a per sample basis such as "extract and hold sample until notified" or may be used to inform the laboratory of special reporting requirements for the entire SDG. Reporting requirements that should be specified in the remarks column include: 1) turn around time, 2) required detection limits, 3) contact and address where data reports should be sent, 4) name of laboratory project manager, and 5) type of sample preservation that was utilized.

j. Relinquished By - This field should contain the signature of the sampling technician that relinquished custody of the samples to the shipping courier or the analytical laboratory.

k. Date - Indicates the date that the samples were relinquished. The date format should be mm/dd/yyyy (e.g., 03/07/2000).

l. Time - Indicates the time that the samples were relinquished. The time value should be presented using the military format. For example, 3:15 P.M. should be entered as 15:15.

m. Received By - This field should contain the signature of the sample courier or laboratory representative that received the samples from the sampling technician.

3. Complete as many chain of custody forms as necessary to properly document the collection and transfer of the samples to the analytical laboratory.

4. Upon completion of the chain of custody forms, forward two copies to the analytical laboratory and retain one for the field records. The field records copy should also be sent to Ms. Jessica Whisher at BBL by facsimile at (315) 449-0017.

## II. Handling

1. After completing the sample collection procedures, record the following information in the field notebook with indelible ink:

- Project number and site name;
- Sample identification code and other sample identification information, if appropriate;
- Sampling method;

- Date;
- Name of sampler(s);
- Time;
- Location (project reference); and
- Any comments.

2. Fill in sample label (Attachment A-1) with the following information in indelible ink:

   - Sample matrix (e.g., groundwater);
   - Project number and site name;
   - Sample identification code and other sample identification information, if applicable;
   - Analysis required;
   - Date;
   - Time sampled;
   - Initials of sampling personnel;
   - Sample type (composite or discrete);
   - Tissue preparation procedure (biota; e.g., fillets, whole body), if applicable; and
   - Preservative added, if applicable.

3. Cover the label with clear packing tape to secure the label onto the container.

4. Check the caps on the sample containers to ensure that they are tightly sealed.

5. Wrap the sample container cap with clear packing tape to prevent it from becoming loose.

6. Place a signed custody seal label (Attachment A-2) over the cap such that the cap cannot be removed without breaking the custody seal. Alternatively, if shipping several containers in a cooler, custody seal evidence tape may be placed on the shipping container as described below.

## III. Packing

1. Using duct tape, secure the outside and inside of the drain plug at the bottom of the cooler that is used for sample transport.

2. Place each container or package in individual polyethylene bags (resealable-type) and seal. If a cooler temperature blank is supplied by the laboratory, it should be packaged following the same procedures as the samples. If the laboratory did not include a temperature blank, do not add one, since the sample temperature will be determined by the laboratory using a calibrated infrared thermometer.

3. Place 1 to 2 inches of cushioning material (i.e., vermiculite) at the bottom of the cooler. See Section 6.

4. Place the sealed sample containers upright in the cooler.

5. Package ice or blue ice in small resealable-type plastic bags and place loosely in the cooler. Do not pack ice so tightly that it may prevent addition of sufficient cushioning material. Samples placed on ice will be cooled to and maintained at a temperature of approximately 4°C.

6. Fill the remaining space in the cooler with cushioning material.

7. Place the completed chain of custody forms (Attachment A-3) in a large resealable-type bag and tape the bag to the inside of the cooler lid.

8. Close the lid of the cooler and fasten with packing tape.

9. Wrap strapping tape around both ends of the cooler.

10. Mark the cooler on the outside with the following information: shipping address, return address, "Fragile" labels (Attachment A-4) on the top and on one side, and arrows indicating "This Side Up" (Attachment A-4) on two adjacent sides.

11. Place custody seal evidence tape (Attachment A-2) over front right and back left of the cooler lid and cover with clear plastic tape.

    Note: Procedure numbers 2, 3, 5, and 6 may be modified in cases where laboratories provide customized shipping coolers. These coolers are designed so the sample bottles and ice packs fit snugly within preformed styrofoam cushioning and insulating packing material.

## IV. Shipping

All samples will be delivered by an express carrier within 48 hours of sample collection. Alternatively, a laboratory courier may be used for sample pickup. If parameters with short holding times are being analyzed [e.g., VOCs (EnCore™ Sampler)], sampling personnel will take precautions to assure that the maximum holding times for these parameters will not be exceeded.

The following chain of custody procedures will apply to sample shipping:

- Relinquish the sample containers to the laboratory via express carrier or laboratory courier. The signed and dated forms should be included in the cooler. The express carrier will not be required to sign the chain of custody forms.

- When the samples are received by the laboratory, the laboratory personnel shall complete the chain of custody by recording the date and time of receipt of samples, measure and record the internal temperature of the shipping container, and then check the sample identification numbers on the containers to ensure that they correspond to the chain of custody forms.

# Attachment A-1

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

## Sample Label

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

PROJECT #

SAMPLE I.D.

DATE

SAMPLE TYPE
- ☐ Soil/Sediment
- ☐ Water

COLLECTION MODE
- ☐ Composite
- ☐ Grab

TIME

ANALYSIS

SAMPLER(S)

PRESERVATIVE

# Attachment A-2

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

# Custody Seal Label

CUSTODY SEAL

BBL

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

6723 Towpath Road, Box 66, Syracuse, N.Y. 13214-0066
TEL (315) 446-9120

SEALED BY

_____

DATE_____ TIME _____

# Attachment A-3

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

## Chain of Custody Form

BLASLAND, & LEE, INC.
engineers & scientists
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

# CHAIN OF CUSTODY RECORD

| PROJ. NO. | PROJECT NAME |
|---|---|
| SAMPLERS: *(Signature)* | |

| STA. NO. | DATE | TIME | COMP. | GRAB | STATION LOCATION | Number of Containers | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Relinquished by: *(Signature)* | DATE | TIME | Received by: *(Signature)* | Relinquished by: *(Signature)* | DATE | TIME | Relinquished by: *(Signature)* |
| Relinquished by: *(Signature)* | DATE | TIME | Received by: *(Signature)* | Relinquished by: *(Signature)* | DATE | TIME | Relinquished by: *(Signature)* |
| Relinquished by: *(Signature)* | DATE | TIME | Received for Laboratory by: *(Signature)* | DATE | TIME | Remarks: | |

10/23/95
5951188L.CDR

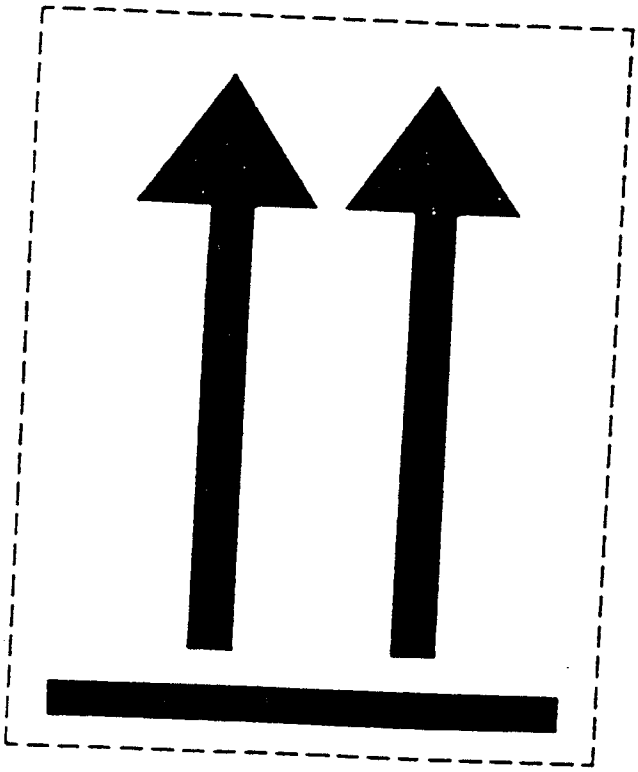
Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

# Attachment A-4

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

## Shippers Certification for Restricted Articles

fragile
HANDLE
WITH CARE



# Attachment D

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

## Procedures for Soil Boring Completion and Sample Collection

# Attachment D

*Procedures for Soil Boring Completion and Sample Collection*

## I. Introduction

Soil borings typically will be completed using direct-push techniques (e.g., Geoprobe®) or using the hollow-stem auger drilling method. No oils or grease will be used on equipment introduced into the boring (e.g., drill rod, casing, or sampling tools, etc.). Prior to beginning work, all underground utilities will be delineated by GM or an independent underground utility locator service approved by GM.

## II. Equipment Cleaning

Equipment will be cleaned prior to use on the site, between each drilling location, and prior to leaving the site. All drilling equipment and associated tools, including direct-push tooling, augers, drill rods, sampling equipment, wrenches, and other equipment or tools that may have come in contact with soils and/or waste materials, will be cleaned with steam-cleaning equipment using a potable water source. The drilling equipment will be cleaned in an area designated by the supervising engineer or geologist that is approved by GM. More detailed equipment cleaning procedures are provided in Appendix H.

## III. Drilling Procedures, Equipment, and Records

All equipment and materials that may be required to advance the soil borings and sample encountered materials, as described, will be available during the boring and sampling operations. Required equipment and materials include drilling machinery in good working order equipped for the season of operation; sample containers and forms; sampling, screening, and cleaning equipment and supplies; and supplies and equipment to comply with all site and Health and Safety procedures.

The drilling contractor will be responsible for obtaining accurate and representative samples, informing the supervising geologist of changes in drilling conditions, and keeping a separate general log of soils encountered, including blow counts (i.e., the number of blows from a soil sampling drive weight [140 pounds] required to drive the split-barrel sampler in 6-inch increments). Records will also be kept of occurrences of premature refusal due to boulders or construction materials which may have been used as fill. Where a boring cannot be driven to the desired depth, equipment will be relocated in order to obtain the required sample. Multiple refusals may lead to a decision by the supervising geologist to abandon that sampling location.

The supervising geologist will be responsible for documenting drilling events using a daily field log (Attachment D-1) to record all relevant information in a clean and concise format. As an alternative, a bound field notebook may be used at the discretion of field personnel to document field activities, provided that the information shown on the Attachment D-1 is concisely presented in the notebook. The record of drilling events will include: 1) start and finish dates of drilling; 2) name and location of project; 3) project number, client, and site location; 4) sample number and depths; 5) blow counts and recovery; 6) depth to water; 7) type of drilling method; 8) auger size;

9) documentation of any elevated organic vapor emissions; 10) names of contractor's drillers, inspectors, or other people on site; and 11) weather conditions.

The direct-push drilling method also may be used to complete soil borings and monitoring wells. Examples of this technique include the Diedrich ESP vibratory probe system or AMS Power Probe™ dual-tube system. Environmental probe systems typically use a hydraulically operated percussion hammer. Depending on the equipment used, the hammer delivers 140 to 350 foot pounds of energy with each blow. The hammer, operated at 1,200 blows per minute, provides the force needed to penetrate very stiff/medium dense soil formations. The hammer simultaneously advances an outer steel casing which contains a dual tube liner for sampling soil. Depending on the system utilized, the outside diameter (OD) of the outer casing ranges from 1.75 to 2.4 inches, and the OD of the inner sampling tube ranges from 1.1 to 1.8 inches. The outer casing isolates shallow layers and permits the unit to continue to probe at depth. The double-rod system provides a borehole that may be tremie grouted from the bottom up. Alternatively, the inside diameter (ID) of the steel casing provides clearance for the installation of small diameter (e.g., 0.75- to 1.5-inch ID) wells. Upon completion of the borehole to the desired depth, the well is installed through the inner drill casing. The wells will consist of approximately 1.5-inch ID PVC slotted screen and blank riser. In areas of suspected DNAPL or highly chlorinated constituents, 2-inch stainless steel monitoring wells will be installed using conventional hollow-stem auger drilling methods.

Following the completion of soil sampling, all borings that are not being converted to monitoring wells will be tremie-grouted using neat cement and 5% bentonite mix. Also, if boring refusal is encountered and the boring location is abandoned, the boring will be tremie-grouted using neat cement and bentonite.

## IV. Soil Sampling

Samples of subsurface materials encountered during the drilling of soil borings will be collected continuously with a 2-inch split-barrel (split-spoon) sampler (using ASTM Method D1586) or direct-push methods at select locations, as directed by the supervising geologist. Soil samples will be field screened with a PID.

Representative split-spoon or direct-push samples will be fully described on a soil boring description log (Attachment D-2) or in the field notebook.

Those samples selected for laboratory analysis will be handled, packed, and shipped in accordance with the procedures set forth in Attachment A.

Samples collected for Analysis of volatile organic compounds (VOCs) will be collected from the split-spoon using an EnCore™ Sampler as described in Attachment G. A geologist will be on site during drilling and sampling operations to fully describe each soil sample on the soil boring log including:

- Percent recovery;
- Structure and degree of sample disturbance;
- Soil type;

- Color;
- Moisture condition;
- Density;
- Grain size;
- Consistency; and
- Any other observations, particularly relating to the presence of waste materials or contaminants.

Particular care will be taken to fully describe any sheens observed, oil saturation, evidence of other organic chemicals, or unnatural materials.

## V. Disposal Methods

All water generated during cleaning procedures will be collected and contained on site in labeled 55-gallon drums for future analysis and appropriate disposal.

Personal protective equipment, such as gloves, disposable clothing, and other disposable equipment, resulting from personnel cleaning procedures and from soil sampling and handling activities, will be placed in plastic bags. These bags will be transferred into appropriately labeled 55-gallon drums for appropriate disposal.

Soil materials will be placed in labeled sealed 55-gallon steel drums and stored in a secured area. Once full, the material will be analyzed to determine the appropriate disposal method.

# Attachment D-1

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

# Daily Field Report

Date: _____

| S | M | T | W | T h | F | S |
|---|---|---|---|---|---|---|

PROJECT _____

JOB. NO. _____

CLIENT _____

CONTRACTOR _____

PROJECT MANAGER _____

WEATHER _____

TEMP. _____

WIND _____

HUMIDITY _____

## FIELD TEAM

| NAME | REMARKS |
|---|---|
| NAME | REMARKS |

## VISITORS

| TIME | REPRESENTING | REMARKS |
|---|---|---|
| | | |

## EQUIPMENT AT THE SITE

## FIELD ACTIVITIES

PAGE 1 OF ___ PAGES

BY _____ TITLE _____

6/2/97
1694840Q

# Attachment D-2

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

# Soil Boring Log

| | | |
|---|---|---|
| Date Start/Finish: /<br>Drilling Company:<br>Driller's Name:<br>Drilling Method:<br>Bit Size: Auger Size :<br>Rig Type:<br>Spoon Size: | Northing:<br>Easting:<br>Well Casing Elev.: ft.<br>Corehole Depth: ft.<br>Borehole Depth: ft.<br>Ground Surface Elev.: ft.<br><br>Descriptions by: | Well No.<br><br>Client:<br><br>Site: |

| DEPTH / ELEVATION | Sample Depth / Sample Number | Sample/Int/Type | Blows/6 In. | N | Recovery (ft.) | PID (ppm) Headspace | Geotechnical Test | Geologic Column | Stratigraphic Description | Well Construction |
|---|---|---|---|---|---|---|---|---|---|---|
| gs elevation ft. | | | | | | | | | GROUND SURFACE | |
| 5 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 15 | | | | | | | | | | |

Remarks:

| Water Levels | | |
|---|---|---|
| Date / Time | Elevation | Depth |
| | | |
| | | |
| | | |

Project:

Script: BBL-wel2
Date: 10/15/98

# Attachment H

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

# Equipment Decontamination Procedures

# Attachment H

*Equipment Decontamination Procedures*

## I. Introduction

Decontamination areas for smaller equipment to be washed by hand will generally be set up adjacent to the individual work areas, as described in the Site Health and Safety Plan (HASP). A steam-cleaning station and pad for containing rinse water will be set up within the Site in a peripheral location that will not interfere with sampling activities. The equipment decontamination procedures include pre-field, in the field, and post-field cleaning of sampling equipment. The sampling equipment includes all non-disposable equipment potentially coming in contact with contaminated materials. The nondisposable equipment will be decontaminated after the completion of each sampling event. All rinse water will be contained and appropriately disposed of.

## II. Typical Equipment Decontamination Materials List

- Distilled/deionized water
- Non-phosphate soap
- Tap water
- Appropriate cleaning solvent (e.g., hexane, methanol)
- Nitric acid
- Wash basins
- Brushes
- Plastic sheeting
- Aluminum foil
- Large heavy-duty garbage bags
- Spray bottles
- Ziploc®-type bags
- Handiwipes
- Disposable gloves

## III. Storage of Equipment

All sampling equipment will be stored in a clean environment and, where appropriate, the equipment will be covered in aluminum foil after cleaning prior to use.

## IV. Safety Procedures During Equipment Decontamination

1. Personnel will wear the following safety equipment when cleaning smaller sampling equipment (e.g., split-spoons, trowels);

   - Safety glasses, goggles, and/or a splash shield;
   - Coveralls;
   - Waterproof cover boots; and
   - PVC or nitrile outer gloves.

   Additional personal protective equipment (PPE) may be required based on the results of field screening, as described in the HASP.

2. Personnel will wear the following additional safety equipment when cleaning larger equipment with a high-pressure water/stream cleaning unit (i.e., drilling rig backhoe):

   - Laminated-type Tyvek™ disposable coveralls (e.g., Saranex™); and
   - Chemical-resistant overboots.

3. All solvent rinsing will be conducted in an adequately ventilated area.

4. All solvent transported into the field will be stored and packed in appropriate containers with care taken to avoid extreme heat.

5. Handling of solvents will be conducted in accordance with the manufacturer's Material Safety Data Sheets (MSDSs).

## V. Field Decontamination Procedures

1. Decontamination Station

   The steam-cleaning station will be located within the site in a peripheral area. In addition, wash stations for the decontamination of smaller equipment will be established as necessary outside of the individual work zones.

   All equipment, such as drill rigs and other mobile equipment, will receive an initial decontamination prior to use at the site. The frequency of subsequent decontamination while on site will depend on how the equipment is actually used in relation to taking environmental samples. All fluids and residues produced

from the decontamination procedures will be collected and stored on-site until analysis can be conducted and a decision is made regarding final disposition of the material pursuant to state and federal requirements.

2. Decontamination of Sampling Equipment

Sampling equipment (split-spoons, Hydropunch™ sampler, bailers, trowels, etc.) will be cleaned in accordance with the decontamination procedures listed in Attachment H-1. The first step, a soap and water wash, is completed to remove all visible particulate matter and residual oils and grease. (This step may be preceded by steam-cleaning to facilitate removal of residual materials.) When analyzing for organic constituents, this step will be followed by a tap water rinse to remove the detergent and a rinse sequence of solvent (e.g., hexane, methanol) and distilled/deionized water. When analyzing for inorganic constituents, the soap and water wash will be followed by a nitric acid rinse, a tap water rinse, and a distilled/deionized water rinse.

3. Decontamination of Heavy Equipment

Other equipment and materials associated with sampling tasks will be decontaminated prior to use. Items such as drill rigs and auger flights present potential sources of cross-contamination of environmental samples. These items may come into contact with the materials adjacent to the matrix being sampled or may be attached to sampling equipment which has been decontaminated in accordance with procedures set forth in Attachment H-1. Heavy equipment may potentially retain contaminants from other sources such as roadways or storage areas or have soil material from previous job sites that has not been removed. For these reasons, it is most important that these items be decontaminated prior to their use at the site.

Two options are available to accomplish decontamination of heavy equipment: steam-cleaning and manual scrubbing. The use of steam-cleaning can remove visible debris and has several advantages. Steam-cleaners provide high-pressure which is very effective for residuals removal. They are also efficient in terms of ease of handling and generate low volumes of wash solutions.

Steam-cleaning is the preferred method for decontamination of heavy equipment and will be used to decontaminate drill rigs and other heavy equipment whenever possible. Manual scrubbing of equipment will only be used if steam-cleaning fails to remove visible materials.

The drilling equipment will be thoroughly decontaminated by steam-cleaning or manual scrubbing upon initial arrival on site and between drilling locations. Drill rig items such as auger flights, drill rods, and drill bits will be decontaminated between borings.

4. Decontamination of Other Equipment

The water level probe used for water level measurements will be cleaned between each well with a soapy water wash and a distilled/deionized water rinse. The transducer and cable used during the in-situ hydraulic conductivity testing and the gamma ray logging instrument probe used during the borehole logging will be cleaned in the same manner.

Well development equipment will be cleaned with a soapy water wash, followed by a tap water rinse, a solvent rinse, and a distilled/deionized water rinse.

## VI. Disposal Methods

All fluids generated during decontamination procedures will be collected and contained on site in 55-gallon drums for future analysis and appropriate disposal. Solids (e.g., disposable gloves, disposable clothing, and other disposable equipment) resulting from personal decontamination procedures will be placed in plastic bags and appropriately disposed of in 55-gallon drums or a covered roll-off container.

# Attachment H-1

BLASLAND, BOUCK & LEE, INC.
*engineers & scientists*

# Equipment Decontamination Procedure

# Attachment H-1

*Equipment Decontamination Procedure*

The field sampling equipment decontamination procedures when analyzing for organic constituents are as follows:

1. Non-phosphate detergent and water wash;
2. Tap water rinse;
3. Solvent rinse (e.g., hexane, methanol);
4. Distilled water rinse; and
5. Wrap equipment completely with aluminum foil to prevent contact with other materials during storage and/or transport to the field, as appropriate.

The field sampling equipment decontamination procedures when analyzing for inorganic constituents are as follows:

1. Non-phosphate detergent and water wash;
2. Rinse equipment with at least a ten-percent nitric acid solution;
3. Tap water rinse;
4. Distilled water rinse; and
5. Wrap equipment with aluminum foil to prevent contact with other materials during storage and/or transport to the field.

ARCADIS

**Appendix H**

Outfall Decreased Inspection Plan

ARCADIS G&M of Michigan, LLC
28550 Cabot Drive
Suite 500
Novi
Michigan 48377
Tel 810 994 2240
Fax 248 994 2241

**MEMO**

To:
Grant Trigger, RACER
David Favero, RACER

Copies:
Chris Peters, ARCADIS
Micki Maki, ARCADIS

From:
Tony Maffeo

Date:
June 25, 2012

ARCADIS Project No.:
B0064410.2012.00601

Subject:
Decreased Outfall Inspection Plan
Buick City Site Outfalls
RACER Buick City, Flint, MI

---

Current activities at the RACER Buick City site involve daily inspections of select the storm sewer outfalls to monitor the presence of oil and status of containment measures as required by NPDES Permit No. MI0001597. Site production facilities underwent decommissioning and demolition activities, which were completed on April 20, 2012. As such, daily inspections are no longer required. The following plan outlines the procedures to be followed to continue outfall observation to prevent the release of oil to the Flint River.

**Outfall 002**

Outfall 002 is currently configured with a small interior containment area surrounded by a larger secondary containment area. Both the interior and secondary containment areas consist of a line of oil absorbent booms and permanent oil containment booms. The Outfall 002 containment area currently contains oxidized oil, which accumulates fairly rapidly and requires maintenance activities on a routine basis.

Outfall 002 will continue to be inspected a minimum of once per week to observe the presence and amount of oil inside the containment, conduct maintenance activities and monitor the river water elevation. In order to prevent a possible release to the river, a maintenance event will be scheduled if the booms are more than 50% saturated (or damaged),if greater than 50% of the interior containment area contains oil, or if oil is present in the second containment area.

**Outfall 003**

Outfall 003 is currently configured with a small interior containment area surrounded by a larger secondary containment area. Both the interior and secondary containment areas consist of a line of oil absorbent booms and permanent oil containment booms. Outfall 003 accumulates small quantities of emulsified oil and sheen on a regular basis.

Outfall 003 will be inspected a minimum of once per week to observe the presence and amount of oil inside the containment. In order to prevent a release to the river a maintenance event will be scheduled if the booms are more than 50% saturated (or damaged) or if greater than 50% of the interior containment area contains oil.

Based on previous inspections it has been noted that a significant fluctuation in the river level can cause the booms at Outfall 003 to become tangled or caught on rocks. Therefore, if river water level changes are observed during the Outfall 002 inspection, then Outfall 003 will also be inspected.

**Outfall 004**

Outfall 004 is currently configured with a line of oil absorbent boom and permanent oil containment booms. This outfall is currently accumulating minimal oil on an occasional basis.

Outfall 004 will be inspected a minimum of once per week to observe the presence and amount of oil inside the containment. In order to prevent a release to the river a maintenance event will be scheduled if the booms are more than 50% saturated (or damaged) or if greater than 50% of the interior containment area contains oil.

Additional inspections will be made dependent upon river water level changes observed during the outfall 002 inspections due to previous issues with obstructions.

**Outfall 005**

Outfall 005 is currently configured with one oil absorbent boom and a permanent oil containment boom. This outfall is currently accumulating minimal oil on an occasional basis.

Outfall 005 will be inspected a minimum of once per week to observe the presence and amount of oil inside the containment. In order to prevent a release to the river a maintenance event will be scheduled if the booms are more than 50% saturated (or damaged) or if greater than 25% of the interior containment area contains oil, due to the small size of the containment area.

**Weather Related Inspections**

In order to minimize the possibility of a release from Outfalls 002, 003, 004, and 005 while implementing the decreased outfall inspection frequency additional weather related inspections will be completed in order to minimize the possibility for a release. The weather forecast and previous day's precipitation shall be checked each day prior to 9:00 AM at wunderground.com by the Site OMM technician to determine whether an inspection is necessary. An inspection will be completed under the following conditions:

- If a rain event is forecasted to occur the following day (50% chance or greater), then inspections shall be completed within the next 4 hours at Outfalls 002, 003, 004 and 005. The purpose of the inspection is to determine whether a maintenance event is required to prevent a release during the precipitation event.

- If rain events in the previous 24 hours yielded 0.1 inch of rain in a one hour period or 0.15 inches of rain in any consecutive two hour period, then outfall inspections will be conducted at Outfalls 002, 003, 004 and 005. This is in accordance with the "Procedure for Determining if a Sufficient amount of Precipitation Occurred to Require NPDES Outfall Observations at GMPT Flint North", attached. The purpose of this inspection is to observe and adjust the absorbent and permanent booms as necessary. Due to the increased flow during precipitation events the booms frequently become tangled and can allow oil to escape the containment area. This issue is the reason for the majority of the releases that occur at the Site.

- If rainfall in excess of 0.05 inches is observed in the previous 24 hours, inspections of Outfall 002 and Outfall 003 shall be conducted. Our experience is that smaller rain events result in increased oil presence at these outfalls and can directly influence the river elevation.

**Inspections Due to Change in Dam Flow**

- In the event that the City of Flint informs ARCADIS that a change in flow condition at the dam will be made, ARCADIS will perform an inspection of the booms within the next 6 hours to adjust the booms as necessary.

The daily flow monitoring associated with the NPDES permit will be discontinued as no production from the site is contributing to the flow. A flow reading will continue to be collected once a week during the MP003A sampling event.

This plan is subject to change upon onsite sewer improvement activities, i.e. bulkheading.

ARCADIS

**Appendix I**

RCRA WMU Certification of Closure Reports and MDEQ Correspondence

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837
**www.arcadis-us.com**

Mr. Peter Quackenbush
Waste Management Division
525 Allegan St., Atrium-North
Lansing, MI 48933

Subject:
Transmittal of *Northend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units for the Former General Motors Corporation North American Operations Facility (Otherwise known as Buick City)*

ENVIRONMENT

Date:
April 2, 2012

Contact:
Micki M. Maki

Phone:
248-994-2271

Email:
Micki.maki@Arcadis-us.com

Our ref:
B0064410.2012

Dear Mr. Quackenbush:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this *Northend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units for the Former General Motors Corporation North American Operations Facility (Otherwise known as Buick City)* (Certification Report). This Closure Report was prepared to document and summarize closure activities associated with Waste Management Units (WMUs) #2, #4, #5, and #6 located at the Northend of the Buick City Site.

Based on an evaluation of the analytical data collected to date and discussions with the MDEQ the following requests for determination are made:

For WMU #2 - Division 25, East of Factory 10, Outside Waste Thinner Tank; WMU #4 - Factory 10, Salvage Yard Tank Storage Area; and WMU #5 - Factory 10, Salvage Yard Container Storage Area it is requested that these WMU be deferred to be addressed as part of the Site corrective action activities. In addition a restrictive covenant will be filed for each WMU documenting the potential for listed hazardous waste to be present beneath the WMU.

For WMU #6 - Factory 31, Building 32, Axle Plant North Dock, it is requested that this WMU be clean closed.

Please feel free to contact me with any question or concerns that you may have.

Sincerely,

ARCADIS G&M of Michigan, LLC

Micki M. Maki
Project Manger

Imagine the result

Copies:
Grant Trigger (RACER Trust) – Via Email
Dave Favero (RACER Trust) – Via Email
Chris Black (USEPA) – Via Email
Chris Peters (ARCADIS) – Via Email

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

# Revitalizing Auto Communities Environmental Response (RACER) Trust

# Northend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units

Former General Motors Corporation
North American Operations Facility
Otherwise known as Buick City)

Flint, Michigan

April 2, 2012

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# 1. Introduction

## 1.1 Overview

This Certification of Closure (Certification) has been prepared on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust by ARCADIS. This Certification is for the closure activities completed at the Resource Conservation and Recovery Act of 1976 (RCRA) Waste Management Units (WMUs) located at Division 25, Factory 10, and Factory 31 of the former General Motors Corporation (GMC) North American Operation (NAO) Flint Operations Site located at 902 East Leith Street in Flint, Michigan (the Site) (Figure 1 and Figure 2). On March 31, 2011, ownership of the site was transferred from Motors Liquidation Company (MLC) to RACER Properties LLC and responsibility for environmental remediation of the Site was transferred to RACER Trust.. The United States Environmental Protection Agency (USEPA) ID No. for the Site is MID 005356712.

Specifically, this Certification covers the following WMUs, all of which are located in the Northend (the portion of the RACER property north of Leith Street) of the Site (Figure 2):

- Division 25, East of Factory 10, Outside Waste Thinner Tank (WMU #2)
- Factory 10, Salvage Yard Tank Storage Area (WMU #4)
- Factory 10, Salvage Yard Container Storage Area (WMU #5)
- Factory 31, Building 32, Axle Plant North Dock (WMU #6)

## 1.2 Background

The Site is located at 902 East Leith Street in Flint, Michigan, and consists of approximately 450 acres of land. The portion of the Site located North of Leith Street is commonly referred to as the Northend of the Site, while the portion of the Site located South of Leith Street is referred to as the Southend. The Site is generally bounded to the north by Stewart Avenue and Pierson Road, to the south by Harriet Street, to the east by James P. Cole Boulevard, and CSX Railroad, and to the west by Industrial Avenue and North Street. The Site has been used since the early 1900s for automobile manufacturing, including various manufacturing processes including: ferrous and non-

ferrous metal machining, plastic injection molding, metal forging and foundry, painting and finishing, vehicle assembly, and products testing.

Manufacturing operations at the Site ceased on December 6, 2010. The buildings located in the Northend of the Site are either currently undergoing decommissioning/demolition or are slated for demolition. Building demolition has been completed in the portion of the property located south of Leith Street, which is referred to as the Southend.

In April 2007, a *RCRA Waste Management Unit Closure Status Report* (Closure Status Report) was submitted to the Michigan Department of Environmental Quality (MDEQ) – Waste and Hazardous Materials Division (WHMD) summarizing 10 WMU areas and the proposed activities / information required for closure (ARCADIS BBL, 2007). In July 2009, the MDEQ – WHMD issued a response to the Closure Status Report detailing guidance on the activities needed to obtain closure of the 10 WMU areas (MDEQ, 2009).

In January 2010, a conference call between the Michigan Department of Natural Resources and the Environment (MDNRE) – WHMD (MDEQ was referred to as MDNRE between January 17, 2010 and March 13, 2011) and ARCADIS was held to discuss and clarify the July 2009 MDEQ-WHMD letter. During this call it was decided that WMUs located in the Northend and Southend would be addressed under separate work plans. In April 2010, it was decided that because of the schedule for demolition of Factory 36, the closure of WMU #1 needed to be accelerated and a separate work plan would be prepared for this activity. Therefore, three separate work plans were planned to be submitted for the Site's WMU areas (Factory 36, Northend, and Southend). The Northend work plan was submitted to the MDEQ and was approved on August 4, 2011 with modifications (Appendix A).

## 2. WMU Closure Activities

Closure field work activities discussed below were performed between October 3, 2011 and January 27, 2012. Prior to beginning field work at each WMU area, the location of the WMU was staked by BMJ Surveying (BMJ). All sample locations were also surveyed by BMJ and the locations are presented on Figures 3 through 6. Also, a ground penetrating radar (GPR) survey was completed on December 7, 2011 at each WMU area to provide subsurface information. A photo log documenting field activities is presented in Appendix B.

### 2.1 WMU #2 Closure Activities

Historically, the Division 25, East of Factory 10, Outside Waste Thinner Tank WMU (WMU #2) contained a 12,000-gallon steel aboveground storage tank (AST) used to collect and store waste paint thinner (F003 and F005). The tank was located between two railroad spurs and two interior roads, and was situated on a gravel surface. The tank was in operation for approximately five years. There was no documented associated piping leading to, or from the tank. GMC loaded and unloaded the tank through a two-foot diameter hatch on top of the tank. No containment structure was documented to exist for this unit.

#### 2.1.1 WMU Area Inspection

The WMU #2 area currently consists of an overgrown grass area with a gravel and dirt road that runs north to south through the center of WMU #2. There is evidence of railroad ties and tracks still left in some areas with no obvious indication of where the former AST was located. As requested by the MDEQ, the approximate location of the former AST was surveyed based on the provided aerial photograph (Appendix A). In addition, the MDEQ requested that the surficial gravel be cleared from the area to potentially expose any tank mounting pads. On December 15, 2011, the surficial gravel was scraped to an approximate depth of 2 to 3 feet below ground surface (bgs) with a backhoe. The top 1 to 2 feet of surficial soil was observed to be compacted gravel with dark brown to black fill beneath the gravel to a depth of 2 to 3 feet bgs. Subsurface concrete was encountered at various locations beneath the fill material. A portion of the subsurface concrete (approximately 8 feet by 8 feet) was exposed during the scraping and no staining, cracking, or tank mounts were observed. At the request of the MDEQ additional delineation of the concrete pad was attempted prior to collecting the required soil samples. Eleven hand auger borings were completed in the WMU #2 area and the subsurface concrete pad appeared to be at least 22 feet by 26 feet. Due to the

uncertainty of the subsurface concrete pad's extent as well as the historical information indicating that the former AST was located on gravel, the MDEQ concurred with discontinuing delineation of the subsurface concrete pad.

#### 2.1.2 Soil Sampling and Analytical Results

Based on the area of WMU #2 (approximately 285 square feet) two soil samples were collected from soil boring locations agreed upon by the MDEQ as shown on Figure 3. The first soil sample (SB-1) was collected at the surveyed location representing the approximate center of the former AST location as provided by the MDEQ. This sample was collected from 3 to 3.5 feet bgs using a stainless steel hand auger. Repeated refusal was encountered at SB-2 due to the subsurface concrete pad. As discussed with the MDEQ, no sample was collected at the SB-2 location. Instead, a soil sample (SB-3) was collected approximately 25 feet south to southwest of the SB-1 location. SB-3 was collected from 2 to 2.2 feet bgs using a stainless steel hand auger.

The soil samples were described continuously during the boring activities and photoionization detector (PID) measurements were recorded. The soil boring logs along with PID measurements can be found in Appendix C. Soil samples were submitted to Merit Laboratories, Inc. (Merit) for analysis of the following F-listed waste analytical methods and constituents:

- **USEPA Method 8015**: Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane) , Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylenes
- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The results of the soil samples are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B (Act 307) criteria and the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, Part 201 generic cleanup criteria (Part 201 criteria). A summary of the exceedances is provided below:

- WMU2_SB1 (3-3.5')

- Benzene was detected at a concentration of 320 micrograms per kilogram (µg/kg) which exceeds the Act 307 20 x Drinking Water criterion of 24 µg/kg and the Part 201 Residential Drinking Water Protection (RDWP) criterion of 100 µg/kg.

- Ethylbenzene was detected at a concentration of 670 µg/kg which exceeds the Act 307 20 x GSI criterion of 620 µg/kg and the Part 201 GSI Protection (GSIP) criterion of 360 µg/kg.

- Toluene was detected at a concentration of 6,160 µg/kg which exceeds the Act 307 20 x GSI criterion of 2,200 µg/kg and the Part 201 GSIP criterion of 5,400 µg/kg.

- Xylenes was detected at a concentration of 2,550 µg/kg which Exceeds the Act 307 20 x GSI criterion of 1,200 µg/kg and the Part 201 GSIP criterion of 820 µg/kg.

- WMU2_SB3 (2-2.2')
  - No Exceedances.

There are no nearby groundwater/surface water interfaces; the Site will be restricted to non-residential use; and a groundwater use restriction is planned for the Site. During the January 26, 2012 MDEQ site visit, it was determined that no additional soil sampling was required to obtain RCRA closure.

### 2.2 WMU #4 Closure Activities

Historically, the Factory 10, Salvage Yard Tank Storage Area (WMU #4) contained three 15,000-gallon steel ASTs used to contain hazardous waste (F001 and F002). Each AST was located within a separate concrete secondary containment with the floor sloped toward an epoxy-sealed spill containment sump. Also, each AST was divided by a double-walled bulkhead into two compartments of 7,500-gallons for a total of six separate tank compartments.

Prior to completing the inspection and decontamination of the three ASTs and their secondary containment areas; the water and debris present in the AST secondary containment areas was characterized, removed from the containment areas, and properly disposed of on October 3, 2011. Water was observed in both the northern and southern secondary containments, but not in the middle containment area. The

analytical data for the liquid waste characterization are presented in Appendix D and the manifests are presented in Appendix E.

### 2.2.1 Decontamination of WMU Area

Terra Contracting, LLC. (Terra) completed the decontamination of the WMU area (ASTs, secondary containments, sumps) between October 3 and October 10, 2011. After all waste was removed from the WMU area decontamination was completed using a soap (Alconox anionic detergent) solution followed by a triple rinsing with water using a heated pressure washer. Confined space entry procedures were followed by Terra during the decontamination of the ASTs and secondary containment areas. During decontamination activities, the southernmost AST was observed to be leaking, and piping was noted to be missing from the northernmost AST; therefore, due the observed leaking and the inability to completely seal the tank vents, pressure testing of the ASTs was not performed. The secondary containments were also decontaminated due to the presence of water and other debris; the absence of AST piping within the secondary containments; and/or observed leaking during AST decontamination.

Nine samples were collected of the decontamination final rinse water (one sample collected from each of the two compartments within each AST and one sample collected from each secondary containment) and submitted to Merit for the following F-listed waste and constituents using the following stated analytical methods:

- **USEPA Method 8015**: Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane) , Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylenes
- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

### 2.2.2 Final Decontamination Rinse Water Analytical Results

The analytical results of the final rinse samples are presented in Appendix D. Toluene was detected in all nine of the final rinse samples at concentrations ranging from 3 µg/L to 158 µg/L. Xylene was also detected in two samples at concentrations of 1 µg/l

and 2 µg/L. The results from samples WMU #4-Tank Compartment 1 – Final Rinse and WMU #4- Tank Compartment 3 – Final Rinse detected toluene at concentrations that exceed the Act 307 Type B GSI criteria (110 µg/L); however, since the tanks were planned to be recycled/properly disposed of, the GSI pathway was not considered to be applicable. The MDEQ was contacted on October 20, 2011 to discuss the analytical results and concurred that the decontamination procedures satisfied the cleaning requirements of WMU #4 closure activities.

Following the completion of decontamination activities the demolition contractor properly disposed and/or recycled the ASTs along with other above grade structures (piping, roof, walls, etc) on November 7, 2011. Also, portions of the secondary containment walls were taken down to allow for the WMU area to be completely inspected and subsurface samples to be collected as outlined in the work plan.

#### 2.2.3 WMU Area Inspection

On November 16, 2011, following the completion of the decontamination activities and the removal of the ASTs/other above ground structures, a visual inspection was completed at the WMU area to document any cracking, jointing, or staining. The northern containment area had no visible signs of cracking or jointing, but did have an area with possible staining. Soil sample SB1 was collected from this location. The middle and southern containment areas had no visible signs of cracking, jointing, or staining. Photographs of WMU #4 are located in the photo log in Appendix B.

#### 2.2.4 Soil Sampling and Analytical Results

On December 15, 2011, four soil samples were collected based on the area of WMU #4 (approximately 1,500 square feet). The samples were collected below the concrete floor in the three secondary waste containment areas. One sample (SB1) was collected in the northernmost containment area (near possible observed staining); two samples (SB2 and SB3) were collected from the center containment area; and the last sample (SB4) was collected from the southernmost containment area.

Prior to beginning soil sampling, water that had accumulated in the secondary containment areas from melted snow and rain water was pumped out by the on-Site demolition contractor. Concrete in the secondary containment areas ranged from 9.5 to 12 inches in thickness. Upon removal of the concrete core, soil samples were collected using a stainless steel hand auger to an average depth of 3 feet bgs (approximately 2 feet bgs below the concrete pad). Soil was continuously logged and

PID measurements were recorded. Soil boring logs are presented in Appendix C. No elevated PID readings were measured. The soil sample locations were surveyed and are presented on Figure 4.

The soil samples were submitted to Merit for F-listed waste analytical methods and constituents:

- **USEPA Method 8015**: Isobutanol, Methanol, and n-Butyl Alcohol

- **USEPA Method 8260**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, Trichlorofluoromethane, and Xylenes

- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The results of the soil samples are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B criteria and Part 201 criteria. A summary of the exceedances is provided below:

- WMU4_SB2 (1.5-2')
    - Methanol was detected at a concentration of 150,000 µg/kg which exceeds Act 307 20 X Drinking Water criterion of 70,000 µg/kg and Part 201 RDWP criterion of 74,000 µg/kg.

Methanol was not detected above criteria in the remaining WMU #4 samples. Based on historical information methanol was not known to be stored in the former ASTs and the decontamination and rinse samples collected in October 2011 did not detect methanol. Please note that the Site will be restricted to non-residential use and a groundwater use restriction will be implemented at the Site.

During a January 24, 2012 MDEQ site visit, it was determined that no additional soil sampling was required to obtain RCRA closure. Upon completion of the closure activities and concurrence from the MDEQ that additional soil sampling would not be

required, the on-Site demolition contractor backfilled all the WMU area subsurface features.

### 2.3 WMU #5 Closure Activities

Historically, Factory 10, Salvage Yard Container Storage Area (WMU #5) was used to store paint thinner waste and other F-listed hazardous wastes (F002, F003, and F005). The WMU area consisted of a 40-foot by 50-foot elevated concrete platform with the floor sloped toward a spill containment trench and sump. Also, three empty 330-gallon steel tote containers reported to previously contain paint thinner and 1,1,1-trichloroethane were also located at the WMU.

#### 2.3.1 Historic Waste Inventory and Disposal

On October 3, 2011 decontamination activities began at WMU #5. Three empty steel totes (which formerly contained paint thinner and 1,1,1-tricholoroethane) were observed at WMU #5. The totes were decontaminated (see Section 2.3.3) and properly disposed of along with other miscellaneous debris present at the WMU.

#### 2.3.2 WMU Area Inspection

Prior to completing the inspection and decontamination on the WMU area, water present in the secondary containment was characterized, removed from the containment area, and properly disposed of. Water was primarily observed in the trench and sump located on the western portion of the WMU. The analytical data for the liquid waste characterization is presented in Appendix D and the manifests are presented in Appendix E.

WMU #5 consists of a container storage area with a trench and sump located on the west side of the WMU area. During the completion of the decontamination activities and after the removal of debris, a visual inspection was completed at the WMU area to document any cracking, jointing, or staining. Cracking and minor staining was observed at four locations within the WMU. These areas were marked as soil boring locations. Photographs of WMU #5 are located in the photo log in Appendix B.

#### 2.3.3 Decontamination of WMU Area

Terra completed the decontamination of the WMU area including the concrete slab, trench, sump, and steel totes between October 3 and October 10, 2011. The WMU

area was decontaminated using a soap (Alconox anionic detergent) solution followed by a triple rinsing with water using a heated pressure washer.

A total of three samples were collected of the final rinse water; one from the concrete pad floor, one from the totes, and one from the sump. The final rinse water was collected using the vacuum truck, with the contents of the vacuum truck transferred into 55-gallon drums to allow for discrete sampling of the final rinse water. The samples were submitted to Merit for the following F-listed waste and constituents using the following stated analytical methods:

- **USEPA Method 8015**: Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane) , Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylenes
- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

#### 2.3.4 Final Decontamination Analytical Results

The analytical results of the final rinse samples are presented in Appendix D. Toluene was detected in two of the three samples at concentrations of 2 µg/L and 59 µg/L. The MDEQ was contacted on October 20, 2011 to discuss the analytical results and concurred that the decontamination procedures satisfied the cleaning requirements of WMU #5 closure activities. The demolition contractor properly disposed and/or recycled the steel totes in November 2011.

#### 2.3.5 Soil Sampling and Analytical Results

On December 15, 2011, five soil samples were collected based on the area of WMU #5 (approximately 1,800 square feet). Four samples (SB1, SB2, SB3, and SB5) were located within areas of observed cracking or staining, and one sample (SB4) was located near the sump. Prior to beginning of soil sampling, water that had accumulated in the secondary containment areas from melted snow and rain water; was pumped out. Concrete in the secondary containment areas ranged from 8 to 11 inches in thickness. Upon removal of the concrete core, soil samples were completed using a

stainless steel hand auger to an average depth of 3 feet bgs (approximately 2 feet bgs below the concrete pad). Soil was continuously logged and PID measurements were recorded. Soil boring logs are presented in Appendix C. No elevated PID readings were measured. The soil sample locations were surveyed and are presented on Figure 5.

The soil samples were submitted to Merit for F-listed waste analytical methods and constituents:

- **USEPA Method 8015**: Isobutanol, Methanol, and n-Butyl Alcohol

- **USEPA Method 8260**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, Trichlorofluoromethane, and Xylenes

- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The results of the soil samples are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B criteria and Part 201 criteria. A summary of the exceedances is provided below:

- WMU5_SB1 (1.5-2')
    - Tetrachloroethene was detected at a concentration of 80 µg/kg, which exceeds Act 307 20 X Drinking Water criterion of 14 µg/kg.
- WMU5_SB2 (1.5-2')
    - Trichloroethene was detected at a concentration of 100 µg/kg which exceeds Act 307 20 X Drinking Water criterion of 44 µg/kg.

Tetrachloroethene and Trichloroethene were not detected in the remaining WMU#5 collected samples. Based on historical information, tetrachloroethene was not known to be stored in the WMU and the decontamination/rinse samples collected in October 2011 did not detect tetrachloroethene. Please note that the Site will be restricted to non-residential use and a groundwater use restriction will be implemented at the Site. .

During a January 24, 2012 MDEQ site visit, it was determined that no additional soil sampling was required to obtain RCRA closure. Upon completion of the closure activities and concurrence from the MDEQ that additional soil sampling would not be required the on-Site demolition contractor backfilled all the WMU area subsurface features.

### 2.4 WMU #6 Closure Activities

Historically, Factory 31, Building 32 Axle Plant North Dock (WMU #6) was intended to support waste storage for greater than 90 days; however, GMC decided that the waste generated would not require storage greater than 90 days. The WMU was located on an elevated concrete pad in a room approximately 10 feet by 20 feet with a sump located in the northeast corner of the room

#### 2.4.1 WMU Area Inspection

Building demolition activities have recently been completed at Factory 31. Prior to demolition, the location of WMU #6 and the sump was noted, photos were taken, and spray paint markings were made on the building foundation so that the WMU could be relocated for sampling. At the time of the sampling the sump had been backfilled with gravel and was located in the west to southwest area of the former WMU.

The WMU was visually inspected for evidence of historical spills (e.g. staining) prior to beginning closure activities  Photographs of WMU #6 are located in the photo log in Appendix B.

#### 2.4.2 Soil Sampling and Analytical Results

On December 15, 2011 one soil sample (SB1) was collected approximately one foot north of the former sump location. This sample was collected from 3.5 to 4 feet bgs (which was below the approximate sump depth) using a stainless steel hand auger. Soil was continuously logged and PID measurements were recorded. The soil boring log is presented in Appendix C.  No elevated PID readings were measured.  The soil sample location and sump location was surveyed and presented on Figure 6.

The soil sample was submitted to Merit for the Project Analyte List (PAL) Volatile Organic Compound and Semi-Volatile Organic Compound analytical methods and constituents (Appendix F).

The results of the soil samples are presented in Appendix C. The analytical data were compared to MDEQ Act 307 Type B criteria and Part 201 criteria. A summary of the exceedances is provided below:

- WMU6_SB1 (3.5-4')
    - 1,2-Dichlorobenzene was detected at a concentration of 180 µg/kg, which exceeds Act 307 GSI criterion of 140 µg/kg.

Based on historical information 1,2-Dichlorobenzene was not known to be stored at this WMU.

During a January 24, 2012 MDEQ site visit, it was determined that no additional soil sampling was required to obtain RCRA closure.

### 2.5 Additional Waste Management Procedures

Investigation-derived waste (e.g. decontamination water, waste materials, etc.) were containerized in vacuum tanker trucks, or segregated labeled 55-gallon Department of Transportation (DOT) -approved drums. All wastes were properly containerized, characterized and disposed of off-site or are awaiting off-site disposal. The laboratory analytical results for all waste characterization samples are presented in Appendix D. Copies of the shipping manifests are presented in Appendix E.

### 2.6 Request Determination

Based on an evaluation of the analytical data collected to data and discussions with the MDEQ the following requests for determination are made:

For WMU #2 - Division 25, East of Factory 10, Outside Waste Thinner Tank; WMU #4 - Factory 10, Salvage Yard Tank Storage Area; and WMU #5 - Factory 10, Salvage Yard Container Storage Area it is requested that these WMU be deferred to be addressed as part of the Site corrective action activities. In addition a restrictive covenant will be filed for each WMU documenting the potential for listed hazardous waste to be present beneath the WMU.

For WMU #6 - Factory 31, Building 32, Axle Plant North Dock, it is requested that this WMU be clean closed.

### 3. Certification Of Closure

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Grant Trigger

RACER Trust

Edward Cote, PE

Principal Environmental Engineer

STATE OF MICHIGAN
EDWARD COTE
ENGINEER
No. 28482
LICENSED PROFESSIONAL ENGINEER

## 4. References

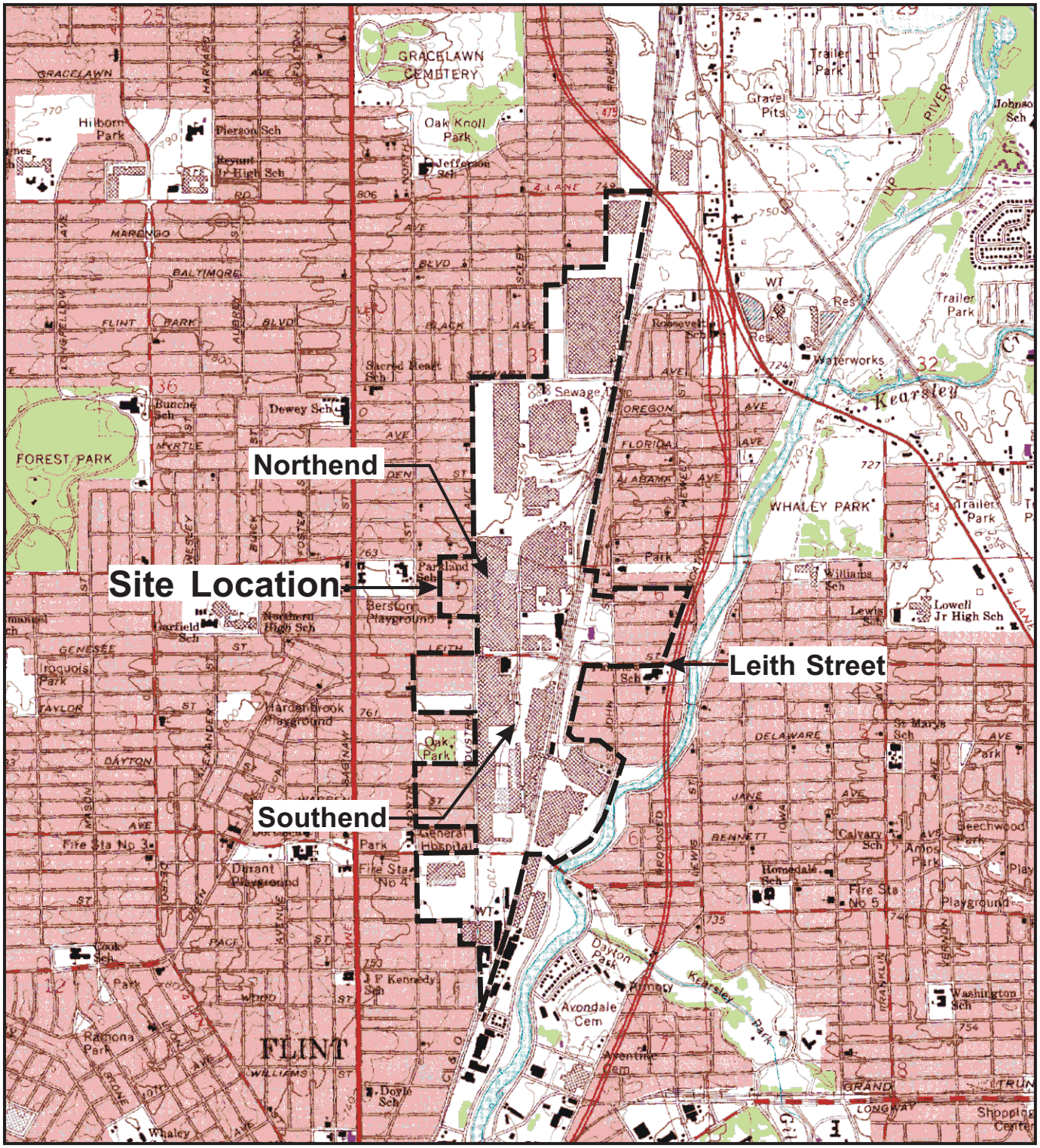
ARCADIS, 2011. Northend: Work Plan for Closure Response Activities at RCRA Waste Management Units – Former General Motors Corporation, NAO Flint Operations Facility (Otherwise known as Buick City), Flint Michigan. June 2011.

ARCADIS BBL, 2007. RCRA Waste Management Unit Closure Status Report. (April 30, 2007).

MDEQ. 2011. Northend Work Plan Approval (with Modifications) for the RCRA Waste Management Unit Areas at the General Motors Corporation, NAO Flint Operations; MID 005 356 712. August 4, 2011

MDEQ. 2009. Closure Status Report Review Letter for the RCRA Waste Management Unit Areas at the General Motors Corporation, NAO Flint Operations; MID 005 356 712. July 27, 2009

# Figures




**REFERENCE:** Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'

**Approximate Scale: 1" = 2000'**

**Area Location**

RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN

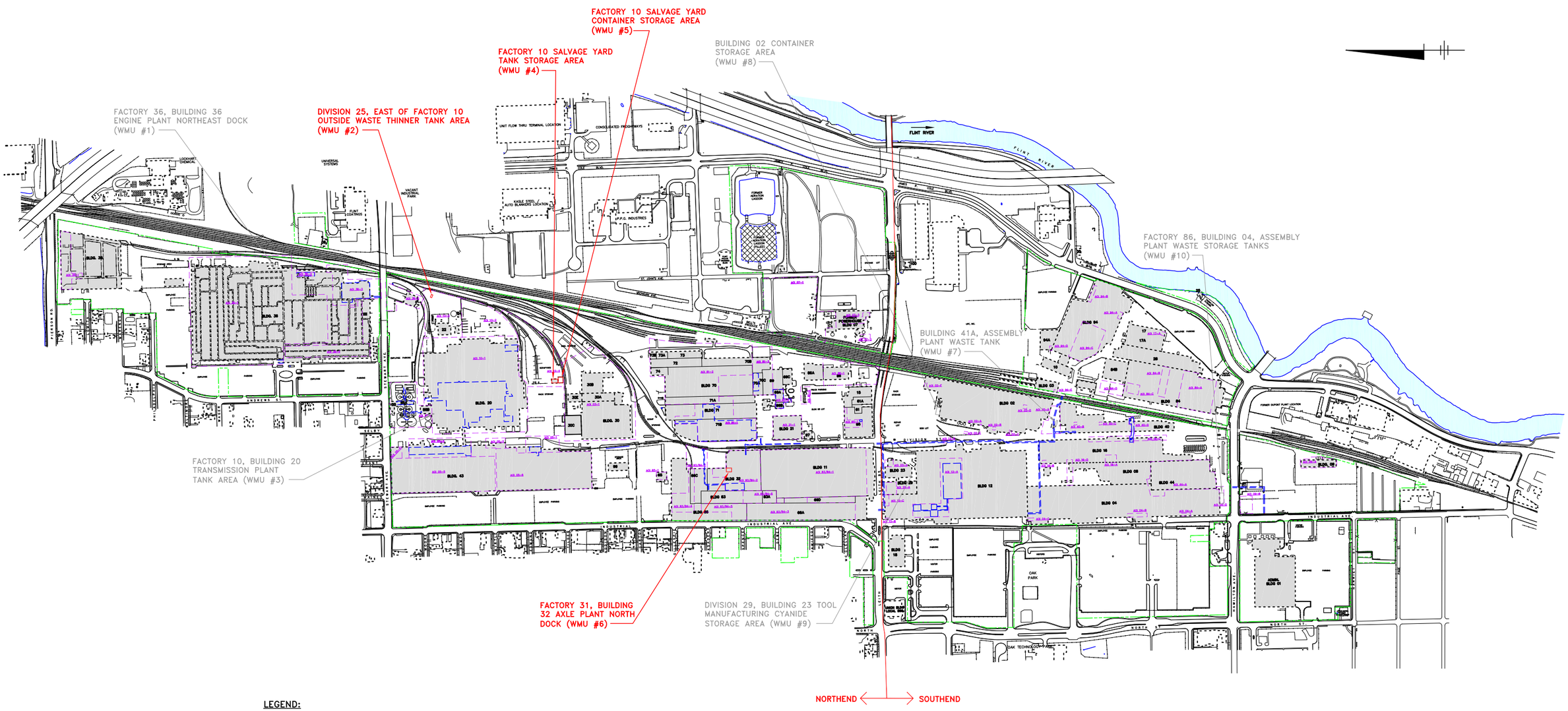
**NORTHEND CERTIFICATION OF CLOSURE**

# SITE LOCATION MAP

ARCADIS

FIGURE
**1**

03/22/2012 SYRACUSE, NY-ENV/CAD-141-DJHOWES
B0064410/2010/00900/CDR/64410N01.CDR




**LEGEND:**

- PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- APPROXIMATE WMU AREA ADDRESSED IN SEPARATE CERTIFICATION OF CLOSURE

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.

0 400' 800'
GRAPHIC SCALE

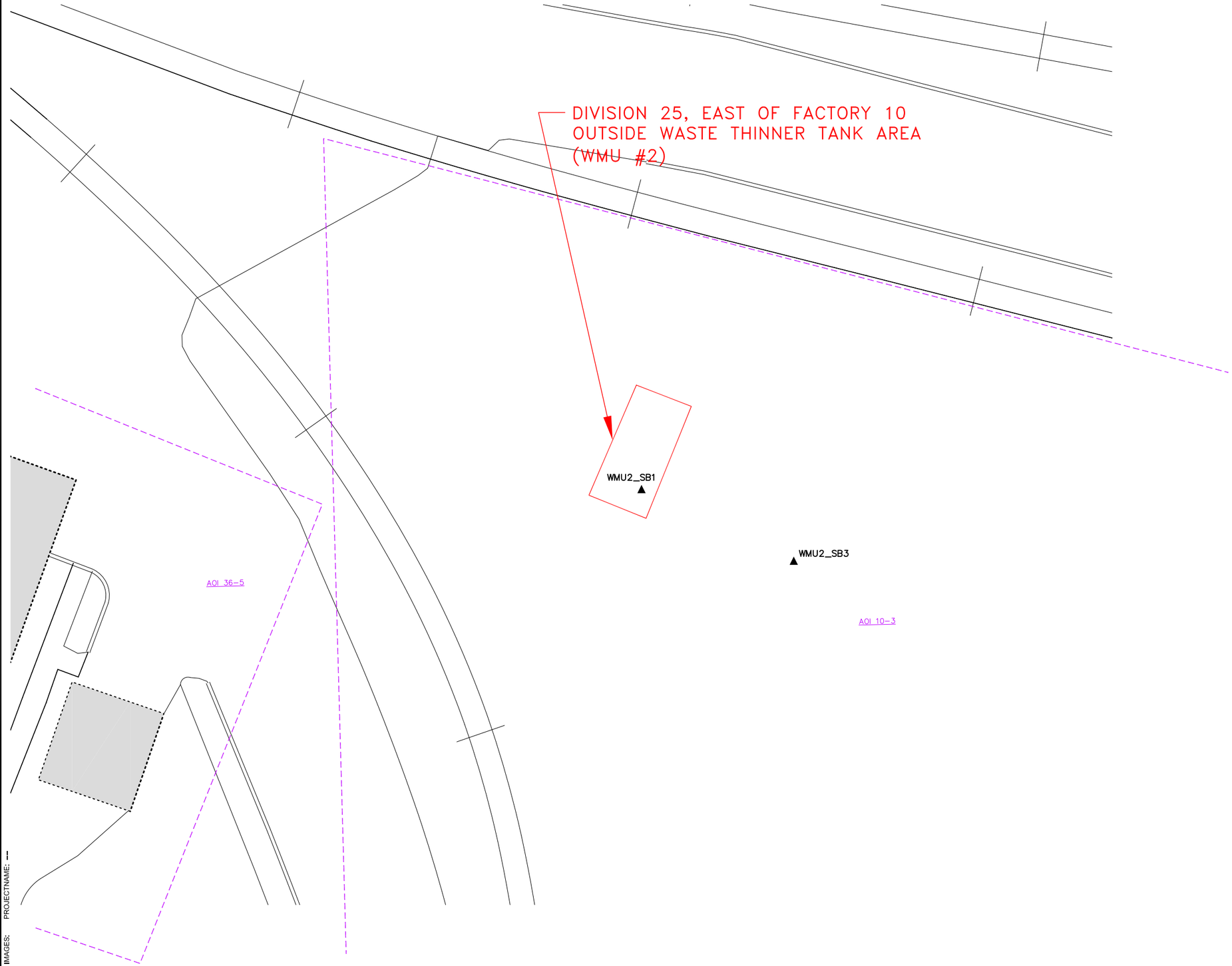
RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**NORTHEND CERTIFICATION OF CLOSURE**

**SITE PLAN**

ARCADIS

FIGURE
**2**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\REVISED\64410G08.DWG LAYOUT: 2 SAVED: 3/28/2012 11:28 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD28-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:13 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X02 64410X00 IMAGES: PROJECTNAME: ---




**LEGEND:**

- APPROXIMATE AOI BOUNDARY
- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- ▲ SOIL SAMPLING LOCATION

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED DECEMBER 2011. BOTH SURVEYS WERE COMPLETED BY BMJ INC.

0 10' 20'
GRAPHIC SCALE

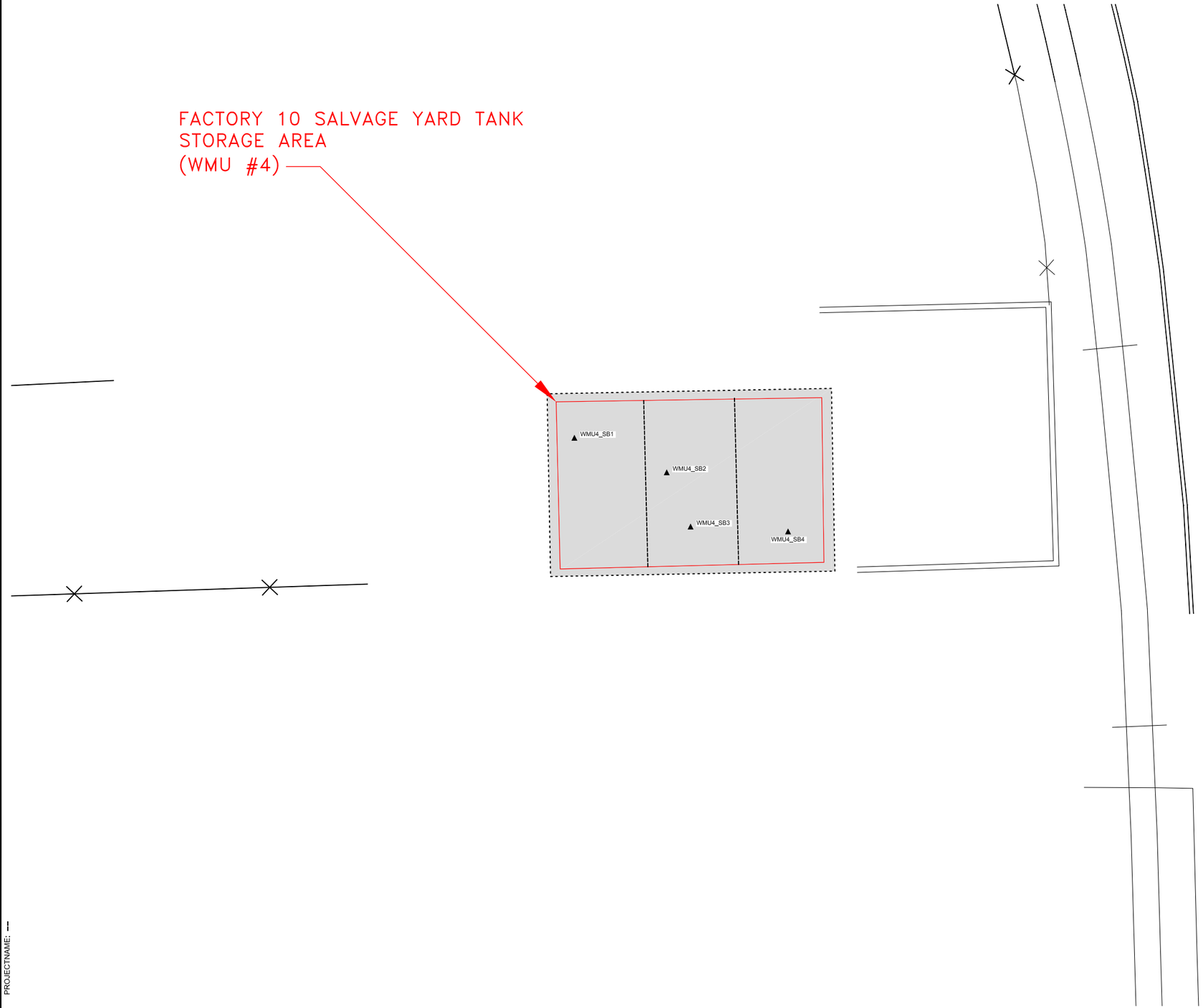
RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**NORTHEND CERTIFICATION OF CLOSURE**

# WMU # 2 SOIL SAMPLING LOCATIONS

ARCADIS

FIGURE
**3**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\REVISED\64410G01.DWG LAYOUT: 3 SAVED: 3/28/2012 11:29 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:11 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---




**LEGEND:**

- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- ▲ SOIL SAMPLING LOCATION
- ------- APPROXIMATE LOCATION OF SECONDARY CONTAINMENT WALL

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.

0 10' 20'
GRAPHIC SCALE

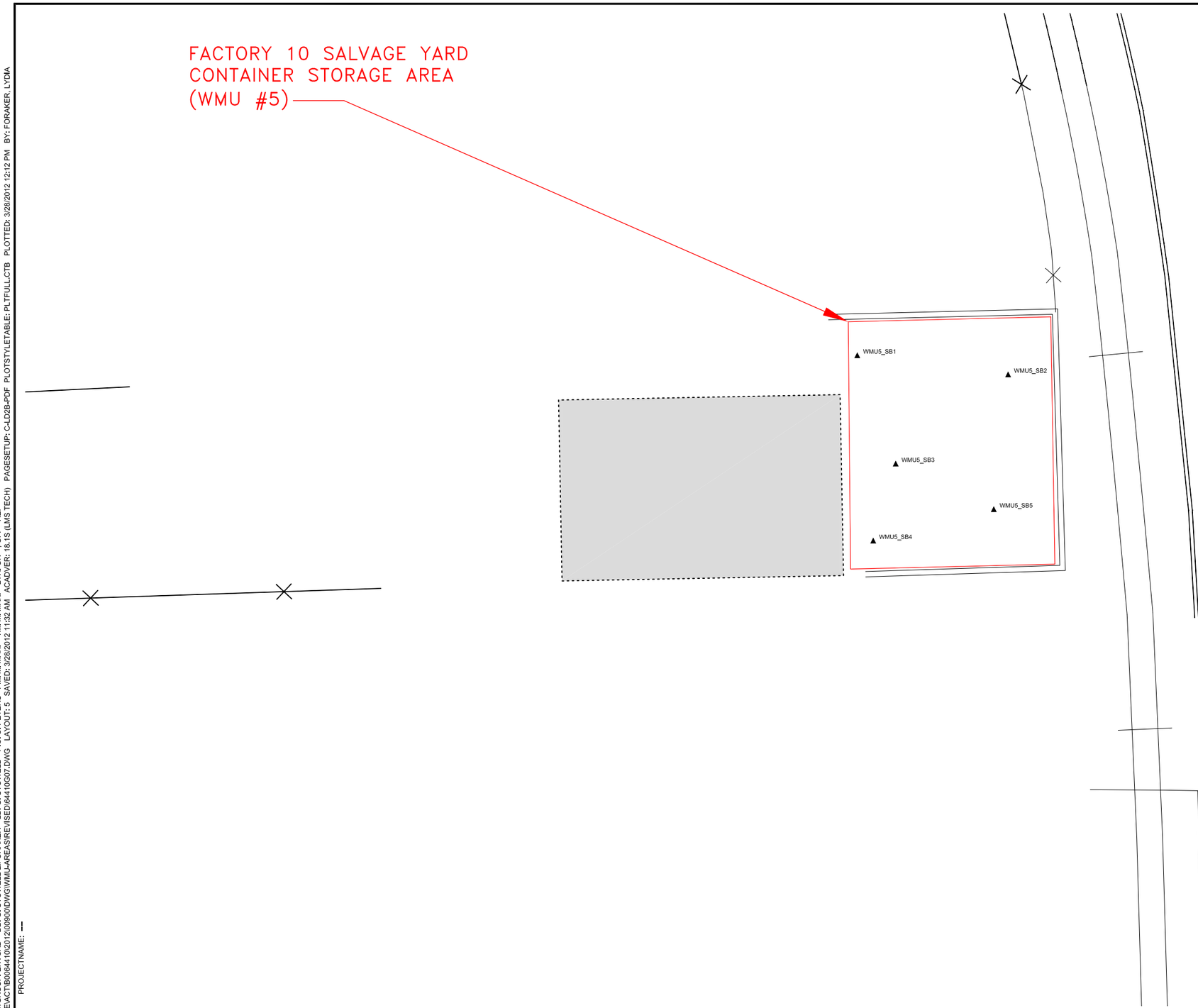
RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**NORTHEND CERTIFICATION OF CLOSURE**

# WMU # 4 SOIL SAMPLING LOCATIONS

ARCADIS

FIGURE
**4**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL LD: G. STOWELL L.FORAKER PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\REVISED\64410G06.DWG LAYOUT: 4 SAVED: 3/28/2012 11:30 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:12 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---




**LEGEND:**

- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- ▲ SOIL SAMPLING LOCATION

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED DECEMBER 2011. BOTH SURVEYS COMPLETED BY BMJ INC.

0 10' 20'
GRAPHIC SCALE

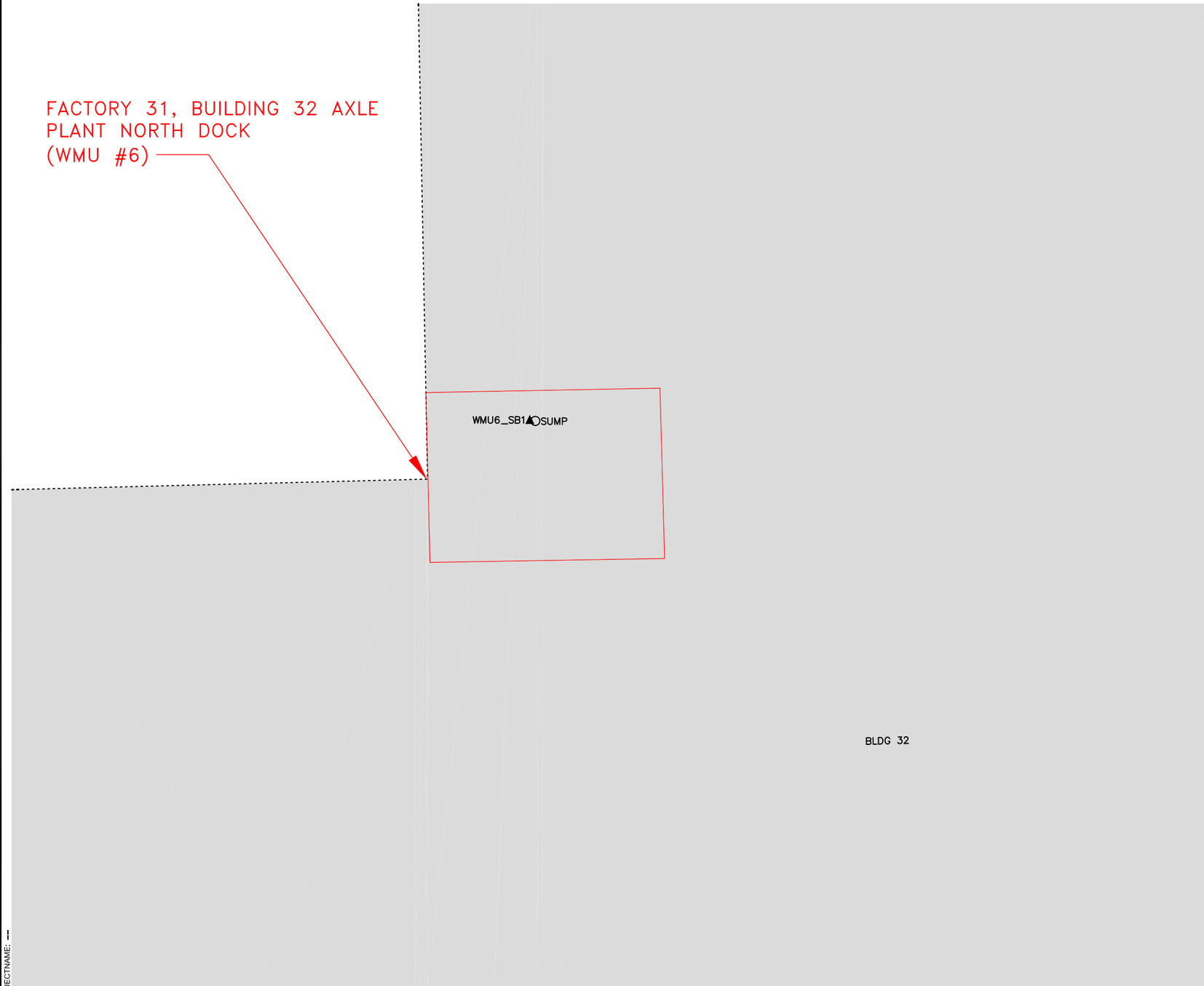
RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**NORTHEND CERTIFICATION OF CLOSURE**

# WMU # 5 SOIL SAMPLING LOCATIONS

ARCADIS

FIGURE
**5**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL L.FORAKER LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\REVISED\64410G07.DWG LAYOUT: 5 SAVED: 3/28/2012 11:32 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:12 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---




**LEGEND:**

- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION REPORT (MODIFIED FROM AREA PRESENTED IN THE WORK PLAN BASED ON SITE MEETING WITH MDEQ ON 1/24/12)
- ▲ SOIL SAMPLING LOCATION
- ○ SUMP LOCATION

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING/SURVEY LOCATIONS FROM A SURVEY DATED DECEMBER 2011. BOTH SURVEYS WERE COMPLETED BY BMJ INC.

0 10' 20'
GRAPHIC SCALE

RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**NORTHEND CERTIFICATION OF CLOSURE**

# WMU # 6 SOIL SAMPLING LOCATIONS

ARCADIS

FIGURE
**6**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL L.FORAKER LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\REVISED\64410G04.DWG LAYOUT: 6 SAVED: 3/28/2012 11:38 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:12 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---

## Appendix A

MDEQ Approval of Northend Work Plan

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

August 4, 2011

Mr. Grant Trigger
Cleanup Manager
RACER Trust
401 South Old Woodward Avenue Suite 370
Birmingham, Michigan 48009

Dear Mr. Trigger:

SUBJECT: Approval with Modifications of Northend: Work Plan for Closure Response Activities at RCRA Waste Management Units (Work Plan); RACER Trust, Former General Motors Corporation North American Operations Facility; MID 005 356 712

The Michigan Department of Environmental Quality (MDEQ), Resource Management Division (RMD), has reviewed the June 7, 2011, Work Plan for the remaining hazardous waste management units on the north end of the site. Based on our review pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the administrative rules promulgated thereto, the RMD has determined that Work Plan is approved with the following modifications:

1. In the discussion of sampling throughout the document, it mentions the interval of the boring, implying that the closure sample will be comprised of the entire interval. The sampling for these units is biased; therefore, the sample sent in for analysis should not comprise more than a continuous six-inch interval of the entire boring, and it should represent the worst case within the boring. If there is more than one interval of interest, then additional samples will be submitted to the laboratory for analysis.

2. Hazardous Waste Management Unit (WMU) #2 (Division 25, East of Factory 10, Outside Waste Thinner Tank Area): This WMU's location was approximated earlier based upon a map in the January 1988 Closure Plan for the "East of Factory 10 Tank Storage Area." The approximated location has been subsequently refined by accessing 1988 aerial photographs from the DNR's aerial imagery archive. The enclosed aerial photo shows an item in the general vicinity identified in the January 1988 Closure Plan. While this location is not precise, artifacts of the tank's mounting may be still present. The area is currently covered with gravel. Prior to attempting to determine any sample locations, the surficial gravel must be cleared from a circular area to potentially expose any tank mounting pads, etc., starting approximately at a location centered at 83.680418°W 43.052951°N (dec deg WGS84) with radius of 15 feet. If mounting pads are located, then the two samples must be biased to any

stained areas within the area. Since this is a biased sampling, soil will be collected from the zero- to two-foot range. The depth range of the greatest staining or PID readings should be the interval that is submitted to the laboratory, not to exceed a six-inch interval within the two-foot boring

Should you require further information, please contact me at 517-373-7397; quackenbushp@michigan.gov; or MDEQ, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Peter Quackenbush
Hazardous Waste Section
Resource Management Division
517-373-7397

Enclosure
cc: Mr. Chris Peters, ARCADIS
Mr. Dave Favero, RACER Trust
Mr. Chris Black, U.S. Environmental Protection Agency, Region 5
Mr. Dale Bridgford/Mr. Peter Quackenbush, MDEQ
HWS-C&E File

# GM NAO Flint MID 005 356 712
# Hazardous Waste Unit #2

A circular area with radius of 15 feet centered on 83.680418°W 43.052951°N (dec deg WGS84) should be cleared of gravel of the loose to find evidence of the tank mounting foundations.

Aerial photo extracted from the June 24, 1988 MDNR flight. Roll/Photo MDNR 436-370-30

Map Drawn 07/27/2011 by DRB

Map Linework from EDI Engineering & Science Closure Plan dated January 1988.

N

0 12.5 25 50 75 100 Feet

**Appendix B**

Photo Summary Log

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# PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 1 | 12-7-2011 |

**Direction Photo Taken:**

Facing south.

**Description:**

View of WMU 2 with center location staked and marked with paint during GPRS investigation.

ARCADIS
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PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 2 | 12-15-2011 |

**Direction Photo Taken:**

Facing northeast.

**Description:**

View of WMU 2 during excavation to determine location of concrete pad. Center pin flag can be seen in center of photo where SB-1 was collected.

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## PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 3 | 9-20-2011 |

**Direction Photo Taken:**

Facing southeast.

**Description:**

View of WMU #4 area with the ASTs and secondary containments shown prior to closure activities.

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## PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 4 | 12-15-2011 |

**Direction Photo Taken:**

Facing east.

**Description:**

View of middle containment area at WMU 4, after containment walls were partially removed and ASTs were removed. Sample locations visible in far left corner and near right corner.

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# PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 5 | 12-15-2011 |

**Direction Photo Taken:**

Facing east.

**Description:**

View of south containment area at WMU 4, after containment walls were partially removed and ASTs were removed. Sample location visible in center of photo.

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# PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 6 | 10-3-2011 |

**Direction Photo Taken:**

Facing southwest

**Description:**

View of WMU 5 prior to decontamination with steel totes shown to the right.

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# PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2011.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 7 | 10-3-2011 |

**Direction Photo Taken:**

Facing west.

**Description:**

View of WMU 5 during decontamination.

ARCADIS
Infrastructure · Water · Environment · Buildings

# PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 8 | 12-15-2011 |

**Direction Photo Taken:**

Facing east.

**Description:**

View of north side of WMU 5 showing 2 sample locations.

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## PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 9 | 2-7-2012 |

**Direction Photo Taken:**

Facing northeast.

**Description:**

View of WMU #4 (background) and #5 (foreground) areas after ASTs, totes, and above-ground features have been removed.

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Infrastructure · Water · Environment · Buildings

## PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 10 | 12-7-2011 |

**Direction Photo Taken:**

Facing northeast.

**Description:**

View of WMU #4 (background) and #5 (foreground) areas after backfill has been completed.

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# PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 11 | 11-16-2011 |

**Direction Photo Taken:**

Facing west.

**Description:**

View of WMU 6 area.

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PHOTOGRAPHIC LOG

| Project: Buick City | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 12 | 12-7-2011 |

**Direction Photo Taken:**

Facing northwest.

**Description:**

View of WMU 6 sump location. Sample collected just north of sump.

**Appendix C**

Soil Boring Logs

| | | |
|---|---|---|
| **Date Start/Finish:** 1/23/2012<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3.5' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU2_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3.5 | 3.5 | 1.3 | | | (0-1) GRAVEL; medium to large pebble, subrounded to subangular, little sand, fine to medium, poorly sorted; moist, dark brown (10YR 3/2). | Borehole backfilled with bentonite. |
| | | | | | 0.8 | | | (1-2) GRAVEL; medium to large cobble, trace sand, fine to medium, poorly sorted, moist, dark brown (10YR 3/2). | |
| | | | | | 2.1 | X | | (2-3.5) SAND; fine to medium, trace medium to large pebble, poorly sorted; moist, dark brown (10YR 3/1) | |
| | | | | | | | | End of boring at 3.5' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

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**Remarks:** bgs = below ground surface

Hand auger from 0-3.5' bgs
Groundwater not encountered
No odor or staining observed

| | | |
|---|---|---|
| **Date Start/Finish:** 1/23/2012<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 2.5' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU2_SB2A**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-2.5 | 2.5 | 0.2 | | | (0-1) GRAVEL; medium to large pebble, subangular, some silt, some sand, poorly sorted, brown (10YR 3/4). | Borehole backfilled with bentonite. |
| | | 2 | | | 0.4 | | | (1-2.5) SAND; trace silt, trace small granule, subangular, poorly sorted; dry, dark brown (10YR 3/2).<br><br>NOTE: subsurface concrete pad at 2.5' bgs. | |
| | | | | | | | | End of boring at 2.5' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

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**Remarks:** bgs = below ground surface

Hand auger from 0-2.5' bgs
Groundwater not encountered
Soil sample not collected for laboratory analysis
No odor or staining observed
Boring located ~4' west of WMU 2_SB1

| | | |
|---|---|---|
| **Date Start/Finish:** 1/23/2012<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 2.5' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU2_SB2B**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-2.5 | 2.0 | 0.2<br>0.3 | | | (0-0.5) GRAVEL; small to large pebble, subangular, some sand, poorly sorted.<br>(0.5-1) SAND; fine to medium, trace pebble, small, well sorted; dry, dark brown (10 YR 2/1).<br>(1-2.5) SAND; fine to medium, trace small to medium pebble, well sorted; dry, dark brown ( 10YR 2/1).<br>NOTE: subsurface concrete pad at 2.5' bgs.<br>End of boring at 2.5' bgs. | Borehole backfilled with bentonite. |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

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**Remarks:** bgs = below ground surface

Hand auger from 0-2.5 bgs
Groundwater not encountered
Soil sample not collected for laboratory analysis
No odor or staining observed
Boring located on the west side of WMU 2_SB1

| | | |
|---|---|---|
| **Date Start/Finish:** 1/26/2012<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 2.2' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU2_SB3**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-2.2 | 2.2 | 0.6<br>1.0 | | | (0-0.4) GRAVEL<br>(0.4-1) SAND; medium to coarse, little granule, small, subrounded, trace silt, poorly sorted, black to brown (10YR 2/1).<br>(1-2) SAND; medium to coarse, trace silt, little large pebble, subrounded, poorly sorted; dry, dark brown (10YR 2/2).<br>(2-2.2) SAND; medium, well sorted; dry, dark brown (10YR 2/1) to brown (7.5YR 5/6).<br>End of boring at 2.2' bgs. | Borehole backfilled with bentonite. |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

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**Remarks:** bgs = below ground surface

Hand auger from 0-2.2' bgs
Groundwater not encountered
No odor or staining observed
Boring located ~25' south of WMU2_SB1

| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU4_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 2.0 | 5.1<br>2.4 | X | | (0-0.8) CONCRETE<br>(0.8-2) SAND; fine to medium, trace small to large granule, subrounded, well sorted; dry, brown (10YR 4/3).<br>(2-3) SAND; very fine to medium, little silt, trace small to medium granule, subangular, poorly sorted; dry, light yellow brown (10YR 5/6). | Borehole capped with concrete.<br>Borehole backfilled with bentonite. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger from 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** ARCADIS<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NS<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU4_SB2**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 2.0 | 0.3<br>0.2 | X | | (0-0.8) CONCRETE<br>(0.8-2) SAND; fine to medium, trace silt, trace clay, trace medium to large granule, subangular, poorly sorted; dry, brown (7.5YR 4/4).<br>(2-3) SAND; fine to coarse, trace small to large granule, subangular to subrounded, poorly sorted, brown (7.5YR 4/4). | Borehole capped with concrete.<br>Borehole backfilled with bentonite. |
| | | | | | | | | End of boring 3' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger from 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** ARCADIS<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU4_SB3**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 0.4<br>0.2 | X | | (0-0.8) CONCRETE<br>(0.8-2) SAND; very fine to medium, trace small granule, subrounded, well sorted; dry, brown (10YR 4/6).<br>(2-3) SAND; very fine to medium, trace silt, trace small granule, subrounded, poorly sorted; dry, light brown (10YR 4/6). | Borehole capped with concrete.<br>Borehole backfilled with bentonite. |
| | | | | | | | | End of boring 3' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand Auger from 0-3' bgs.
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** ARCADIS<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU4_SB4**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 1.0<br>0.2 | X | | (0-1) CONCRETE<br>(1-2) SAND; fine to medium, little silte, trace small granule, subangular, poorly sorted, light brown (10YR 4/6).<br>(2-3) SAND; fine to coarse, trace small to medium granule, subangular to subrounded, trace silt, poorly sorted; dry, brown (10YR 4/6). | Borehole capped with concrete.<br>Borehole backfilled with bentonite. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger from 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU5_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 0.3<br>0.2 | X | | (0-0.8) CONCRETE<br>(0.8-1.3) GRAVEL; large pebbles, subangular; dry. NOTE: fill.<br>(1.3-1.8) SAND; very fine to fine, trace coarse, little silt, trace granule, small, subangular, poorly sorted; moist, dark brown (7.5YR 2/5).<br>(1.8-3) SAND; fine, little silt, well sorted; dry, dark brown (10YR 2/1). | Borehole backfilled with soil cuttings. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger from 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU5_SB2**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 0.1<br>0.2 | X | | (0-0.9) CONCRETE<br><br>(0.9-3) GRAVEL; medium to large pebble, little coarse sand, little small to large granule, subangular, poorly sorted; dry, dark brown (7.5YR 3/2). NOTE: removed large pebbles in order to collect sample. | Borehole backfilled with soil cuttings. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU5_SB3**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 0.4<br>1.5 | X | | (0-0.8) CONCRETE<br>(0.8-2.3) SAND; fine to medium, trace coarse, trace silt, trace small to large granule, trace small to large pebble, subrounded, poorly sorted; moist, dark brown (7.5YR 2.5/1).<br>(2.3-3) GRAVEL; large pebble, small cobble, subangular, little sand, medium to coarse; dry, dark brown (10YR 4/6). | Borehole backfilled with soil cuttings. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU5_SB4**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 0.1<br>0.2 | X | | (0-0.7) CONCRETE<br>(0.7-1.7) SAND; fine to coarse, trace silt, trace granule, medium, subangular, poorly sorted; moist, dark brown (10YR 2/1).<br>(1.7-3) SAND; fine, trace pebble, small, subrounded, well sorted; dry, dark brown (10YR 2/2) with dark tan (7YR 5/8) mottled. | Borehole backfilled with soil cuttings. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU5_SB5**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-3 | 3.0 | 0.2<br>0.3 | X | | (0-0.8) CONCRETE<br>(0.8-2.3) SAND; fine to medium, little silt, trace granule, small to large, subrounded, trace pebble, medium, poorly sorted; dry, dark brown (7.5YR 2.5/1).<br>(2.3-3) GRAVEL; medium to large pebble, small cobble, subangular to subrounded, little sand, coarse, poorly sorted; dry, dark brown (10YR 3/2). | Borehole backfilled with soil cuttings. |
| | | | | | | | | End of boring 3' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger 0-3' bgs
Groundwater not encountered
No order or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 12/15/2011<br>**Drilling Company:** ARCADIS<br>**Driller's Name:** M. Meckley/J. Kotwicki<br>**Drilling Method:** Hand Auger<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 4' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** M. Meckley | **Well/Boring ID:** **WMU6_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, MI |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-4 | 4.0 | 0.3<br>0.5<br>2.2<br>5.1 | X | | (0-0.3) CONCRETE<br>(0.3-4) SAND; fine to medium, trace silt, well sorted; dry, black to dark brown (10YR 3/2). NOTE: strong odoer. | Borehole backfilled with bentonite. |
| | | | | | | | | End of boring 4' bgs | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger 0-4' bgs
Groundwater not encountered
No staining observed

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**Appendix D**

Laboratory Data

# Analytical Laboratory Report

Report ID: S51410.01(01)
Generated on 02/01/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51410.01-S51410.23
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/23/2012 - 01/25/2012
Submitted Date/Time: 01/25/2012 14:00
Sampled by: Megan Meckley
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (23 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51410.01 | WMU2_SB1_01232012 (3'-3.5') | Soil | 01/23/2012 11:10 |
| S51410.02 | WMU7_SB1_01232012 (15.5-16') | Soil | 01/23/2012 13:40 |
| S51410.03 | WMU7_SB2_01232012 (14.5-15') | Soil | 01/23/2012 16:25 |
| S51410.04 | WMU7_SB3_01242012 (15.5-16') | Soil | 01/24/2012 09:55 |
| S51410.05 | WMU8_SB1_01242012 (2-2.8') | Soil | 01/24/2012 10:40 |
| S51410.06 | WMU8_SB2_01242012 (1.5-2') | Soil | 01/24/2012 10:55 |
| S51410.07 | WMU8_SB3_01242012 (3.5-4') | Soil | 01/24/2012 11:20 |
| S51410.08 | WMU8_SB4_01242012 (1.2-1.7') | Soil | 01/24/2012 11:10 |
| S51410.09 | WMU8_SB5_01242012 (4.2-5') | Soil | 01/24/2012 11:50 |
| S51410.10 | WMU10_SB1_01242012 (17.2-17.7) | Soil | 01/24/2012 14:30 |
| S51410.11 | WMU10_SB2_01242012 (16-16.5) | Soil | 01/24/2012 15:45 |
| S51410.12 | WMU10_SB3_01242012 (15.5-16) | Soil | 01/24/2012 16:40 |
| S51410.13 | WMU10_SB4_01242012 (20-20.5) | Soil | 01/25/2012 10:20 |
| S51410.14 | WMU10_SB5_01242012 (18.5-19) | Soil | 01/25/2012 12:00 |
| S51410.15 | WMU10_SB5A_01242012 (17.5-18') | Soil | 01/25/2012 11:55 |
| S51410.16 | WMU10_SB1A_01242012 (16-16.5') | Soil | 01/24/2012 14:45 |
| S51410.17 | WMU10_SB2C_01242012 (13-13.5') | Soil | 01/24/2012 15:35 |
| S51410.18 | WMU10_SB3C_01242012 (12.5-13') | Soil | 01/24/2012 16:30 |
| S51410.19 | WMU10_SB4C_01242012 (14.5-15') | Soil | 01/25/2012 09:55 |
| S51410.20 | WMU10_SB5C_01242012 (16.5-17') | Soil | 01/25/2012 11:50 |
| S51410.21 | WMU10_SB5B_01252012 (14.5-15') | Soil | 01/25/2012 12:05 |
| S51410.22 | TB1_01232011 | Methanol | 01/23/2012 09:00 |
| S51410.23 | WMU10_SB4A_01252012 (17-17.5') | Soil | 01/25/2012 10:30 |

# Analytical Laboratory Report

Lab Sample ID: S51410.01
Sample Tag: WMU2_SB1_01232012 (3'-3.5')
Collected Date/Time: 01/23/2012 11:10
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 82 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 15:42 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:03 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:03 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | 320 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 95-50-1 | |
| Ethylbenzene | 670 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 127-18-4 | |
| Toluene | 6,160 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | 100 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 75-69-4 | |
| p,m-Xylene | 1,870 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | | |
| o-Xylene | 680 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 60-29-7 | |

Lab Sample ID: S51410.01 (continued)
Sample Tag: WMU2_SB1_01232012 (3'-3.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:03 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:03 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 30,000 | ug/kg | 4,400 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.02
Sample Tag: WMU7_SB1_01232012 (15.5-16')
Collected Date/Time: 01/23/2012 13:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 85 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 15:58 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:22 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:22 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 60-29-7 | |

Lab Sample ID: S51410.02 (continued)
Sample Tag: WMU7_SB1_01232012 (15.5-16')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:22 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:22 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 13,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.03
Sample Tag: WMU7_SB2_01232012 (14.5-15')
Collected Date/Time: 01/23/2012 16:25
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 84 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 16:15 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:40 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:40 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 60-29-7 | |

Lab Sample ID: S51410.03 (continued)
Sample Tag: WMU7_SB2_01232012 (14.5-15')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:40 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:40 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 10,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.04
Sample Tag: WMU7_SB3_01242012 (15.5-16')
Collected Date/Time: 01/24/2012 09:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 81 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 16:31 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:59 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:59 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 60-29-7 | |

Lab Sample ID: S51410.04 (continued)
Sample Tag: WMU7_SB3_01242012 (15.5-16')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:59 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:59 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 10,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.05
Sample Tag: WMU8_SB1_01242012 (2-2.8')
Collected Date/Time: 01/24/2012 10:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 83 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 16:47 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:17 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:17 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 60-29-7 | |

Lab Sample ID: S51410.05 (continued)
Sample Tag: WMU8_SB1_01242012 (2-2.8')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:17 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:17 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 29,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.06
Sample Tag: WMU8_SB2_01242012 (1.5-2')
Collected Date/Time: 01/24/2012 10:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 87 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:03 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 17:35 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 17:35 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 95-50-1 | |
| Ethylbenzene | 80 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 127-18-4 | |
| Toluene | 220 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | 70 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 75-69-4 | |
| p,m-Xylene | 290 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | | |
| o-Xylene | 210 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 60-29-7 | |

Lab Sample ID: S51410.06 (continued)
Sample Tag: WMU8_SB2_01242012 (1.5-2')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 17:35 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 17:35 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.07
Sample Tag: WMU8_SB3_01242012 (3.5-4')
Collected Date/Time: 01/24/2012 11:20
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 84 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:19 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:54 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:54 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 60-29-7 | |

Lab Sample ID: S51410.07 (continued)
Sample Tag: WMU8_SB3_01242012 (3.5-4')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:54 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:54 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 26,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.08
Sample Tag: WMU8_SB4_01242012 (1.2-1.7')
Collected Date/Time: 01/24/2012 11:10
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:35 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:12 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:12 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 60-29-7 | |

Lab Sample ID: S51410.08 (continued)
Sample Tag: WMU8_SB4_01242012 (1.2-1.7')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:12 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:12 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.09
Sample Tag: WMU8_SB5_01242012 (4.2-5')
Collected Date/Time: 01/24/2012 11:50
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:51 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:30 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:30 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 71-55-6 | |

S-Surrogate recovery outside of control limits

# Analytical Laboratory Report

Lab Sample ID: S51410.09 (continued)
Sample Tag: WMU8_SB5_01242012 (4.2-5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:30 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:30 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 50,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.10
Sample Tag: WMU10_SB1_01242012 (17.2-17.7)
Collected Date/Time: 01/24/2012 14:30
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 90 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.98 | mg/kg | 0.30 | 6020 | 01/30/12 12:42 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:07 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:48 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:48 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | | |

Lab Sample ID: S51410.10 (continued)
Sample Tag: WMU10_SB1_01242012 (17.2-17.7)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:48 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:48 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.11
Sample Tag: WMU10_SB2_01242012 (16-16.5)
Collected Date/Time: 01/24/2012 15:45
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 3.03 | mg/kg | 0.30 | 6020 | 01/30/12 12:44 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:23 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:06 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:06 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.11 (continued)
Sample Tag: WMU10_SB2_01242012 (16-16.5)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:06 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:06 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 19,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.12
Sample Tag: WMU10_SB3_01242012 (15.5-16)
Collected Date/Time: 01/24/2012 16:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.50 | mg/kg | 0.30 | 6020 | 01/30/12 12:45 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:39 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:24 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:24 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.12 (continued)
Sample Tag: WMU10_SB3_01242012 (15.5-16)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:24 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:24 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 9,400 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.13
Sample Tag: WMU10_SB4_01242012 (20-20.5)
Collected Date/Time: 01/25/2012 10:20
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 01/25/12 17:00 | PCS | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.14
Sample Tag: WMU10_SB5_01242012 (18.5-19)
Collected Date/Time: 01/25/2012 12:00
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| DRO Extraction | Completed | | | 3510C | 01/27/12 17:44 | EMR | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 13.2 | mg/kg | 0.30 | 6020 | 01/30/12 12:53 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| TPH DRO (C10-C28) | 11,710,000 | ug/kg | 562,000 | 8015M | 01/31/12 14:39 | PL | | XY |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:48 | JGH | 110-80-5 | |
| TPH GRO (C6-C10) | 550,000 | ug/kg | 60,000 | 8015M | 01/31/12 17:53 | JGH | | Y |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 1,000,000 | 8260M | 01/30/12 21:51 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 1,000,000 | 8260M | 01/30/12 21:51 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 71-43-2 | Y |
| Carbon tetrachloride | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 56-23-5 | Y |
| Chlorobenzene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 108-90-7 | Y |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 95-50-1 | Y |
| Ethylbenzene | 11,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 100-41-4 | Y |
| Methylene chloride | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 75-09-2 | Y |
| Tetrachloroethene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 127-18-4 | Y |
| Toluene | 118,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 108-88-3 | Y |

X-Elevated reporting limit due to matrix interference  Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S51410.14 (continued)
Sample Tag: WMU10_SB5_01242012 (18.5-19)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 71-55-6 | Y |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 79-00-5 | Y |
| Trichloroethene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 79-01-6 | Y |
| Trichlorofluoromethane | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 75-69-4 | Y |
| p,m-Xylene | 46,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | | Y |
| o-Xylene | 16,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 95-47-6 | Y |
| Acetone | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 67-64-1 | Y |
| 2-Butanone (MEK) | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 78-93-3 | Y |
| Carbon disulfide | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 75-15-0 | Y |
| Diethyl ether | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 60-29-7 | Y |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 108-10-1 | Y |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 1,000 | 8260B | 01/30/12 21:51 | JGH | 75-71-8 | Y |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 1,000 | 8260B | 01/30/12 21:51 | JGH | 76-13-1 | Y |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

Y-Elevated reporting limit due to high target concentration
O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.15
Sample Tag: WMU10_SB5A_01242012 (17.5-18')
Collected Date/Time: 01/25/2012 11:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 01/25/12 17:00 | PCS | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.16
Sample Tag: WMU10_SB1A_01242012 (16-16.5')
Collected Date/Time: 01/24/2012 14:45
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 83 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 5.83 | mg/kg | 0.30 | 6020 | 01/30/12 12:55 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:55 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 19:42 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 19:42 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | | |

Lab Sample ID: S51410.16 (continued)
Sample Tag: WMU10_SB1A_01242012 (16-16.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 19:42 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 19:42 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.17
Sample Tag: WMU10_SB2C_01242012 (13-13.5')
Collected Date/Time: 01/24/2012 15:35
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 3.13 | mg/kg | 0.30 | 6020 | 01/30/12 12:56 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 19:11 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:00 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:00 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 95-50-1 | |

S-Surrogate recovery outside of control limits

Lab Sample ID: S51410.17 (continued)
Sample Tag: WMU10_SB2C_01242012 (13-13.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 75-69-4 | |
| p,m-Xylene | 60 | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:00 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:00 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 6,100 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.18
Sample Tag: WMU10_SB3C_01242012 (12.5-13')
Collected Date/Time: 01/24/2012 16:30
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 93 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 4.83 | mg/kg | 0.30 | 6020 | 01/30/12 12:57 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 19:28 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:18 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:18 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 95-50-1 | |

S-Surrogate recovery outside of control limits

Lab Sample ID: S51410.18 (continued)
Sample Tag: WMU10_SB3C_01242012 (12.5-13')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:18 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:18 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 19,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.19
Sample Tag: WMU10_SB4C_01242012 (14.5-15')
Collected Date/Time: 01/25/2012 09:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 8.46 | mg/kg | 0.30 | 6020 | 01/30/12 12:59 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:16 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:14 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:14 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 71-43-2 | X |
| Carbon tetrachloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 56-23-5 | X |
| Chlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 108-90-7 | X |

S-Surrogate recovery outside of control limits
X-Elevated reporting limit due to matrix interference

Lab Sample ID: S51410.19 (continued)
Sample Tag: WMU10_SB4C_01242012 (14.5-15')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 95-50-1 | X |
| Ethylbenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 100-41-4 | X |
| Methylene chloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 75-09-2 | X |
| Tetrachloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 127-18-4 | X |
| Toluene | 900 | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 108-88-3 | X |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 71-55-6 | X |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 79-00-5 | X |
| Trichloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 79-01-6 | X |
| Trichlorofluoromethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 75-69-4 | X |
| p,m-Xylene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | | X |
| o-Xylene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 95-47-6 | X |
| Acetone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 67-64-1 | X |
| 2-Butanone (MEK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 78-93-3 | X |
| Carbon disulfide | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 75-15-0 | X |
| Diethyl ether | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 60-29-7 | X |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 108-10-1 | X |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:14 | JGH | 75-71-8 | X |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:14 | JGH | 76-13-1 | X |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.20
Sample Tag: WMU10_SB5C_01242012 (16.5-17')
Collected Date/Time: 01/25/2012 11:50
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 8.64 | mg/kg | 0.30 | 6020 | 01/30/12 13:00 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 700 | 8270C | 01/31/12 17:47 | PL | 95-48-7 | X |
| p,m-Cresol | Not detected | ug/kg | 700 | 8270C | 01/31/12 17:47 | PL | 3/4-Cresol | X |
| o-Cresol | Not detected | ug/kg | 400 | 8270C | 01/31/12 17:47 | PL | 95-48-7 | X |
| Nitrobenzene | Not detected | ug/kg | 400 | 8270C | 01/31/12 17:47 | PL | 98-95-3 | X |
| Pyridine | Not detected | ug/kg | 400 | 8270C | 01/31/12 17:47 | PL | 110-86-1 | X |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:32 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:33 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:33 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 71-43-2 | X |
| Carbon tetrachloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 56-23-5 | X |
| Chlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 108-90-7 | X |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 95-50-1 | X |
| Ethylbenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 100-41-4 | X |
| Methylene chloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 75-09-2 | X |
| Tetrachloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 127-18-4 | X |
| Toluene | 2,400 | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 108-88-3 | X |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 71-55-6 | X |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 79-00-5 | X |
| Trichloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 79-01-6 | X |
| Trichlorofluoromethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 75-69-4 | X |

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S51410.20 (continued)
Sample Tag: WMU10_SB5C_01242012 (16.5-17')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| p,m-Xylene | 1,300 | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | | X |
| o-Xylene | 600 | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 95-47-6 | X |
| Acetone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 67-64-1 | X |
| 2-Butanone (MEK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 78-93-3 | X |
| Carbon disulfide | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 75-15-0 | X |
| Diethyl ether | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 60-29-7 | X |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 108-10-1 | X |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:33 | JGH | 75-71-8 | X |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:33 | JGH | 76-13-1 | X |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.21
Sample Tag: WMU10_SB5B_01252012 (14.5-15')
Collected Date/Time: 01/25/2012 12:05
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 01/25/12 17:00 | PCS | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.22
Sample Tag: TB1_01232011
Collected Date/Time: 01/23/2012 09:00
Matrix: Methanol
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 19:44 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 50,000 | 8260M | 01/31/12 16:39 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 50,000 | 8260M | 01/31/12 16:39 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | | |
| o-Xylene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 50 | 8260B | 01/31/12 16:39 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 50 | 8260B | 01/31/12 16:39 | JGH | 76-13-1 | |

# Analytical Laboratory Report

Lab Sample ID: S51410.23
Sample Tag: WMU10_SB4A_01252012 (17-17.5')
Collected Date/Time: 01/25/2012 10:30
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 9.63 | mg/kg | 0.30 | 6020 | 01/30/12 13:02 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:00 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 600,000 | 8260M | 01/31/12 18:10 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 600,000 | 8260M | 01/31/12 18:10 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 71-43-2 | X |
| Carbon tetrachloride | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 56-23-5 | X |
| Chlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 108-90-7 | X |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 95-50-1 | X |
| Ethylbenzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 100-41-4 | X |
| Methylene chloride | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 75-09-2 | X |
| Tetrachloroethene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 127-18-4 | X |
| Toluene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 108-88-3 | X |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 71-55-6 | X |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 79-00-5 | X |
| Trichloroethene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 79-01-6 | X |
| Trichlorofluoromethane | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 75-69-4 | X |

X-Elevated reporting limit due to matrix interference

# Analytical Laboratory Report

Lab Sample ID: S51410.23 (continued)
Sample Tag: WMU10_SB4A_01252012 (17-17.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| p,m-Xylene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | | X |
| o-Xylene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 95-47-6 | X |
| Acetone | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 67-64-1 | X |
| 2-Butanone (MEK) | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 78-93-3 | X |
| Carbon disulfide | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 75-15-0 | X |
| Diethyl ether | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 60-29-7 | X |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 108-10-1 | X |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 600 | 8260B | 01/31/12 18:10 | JGH | 75-71-8 | X |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 600 | 8260B | 01/31/12 18:10 | JGH | 76-13-1 | X |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012512.1

| Send Results To: | |
|---|---|
| Contact & Company Name: Mike Brennan ARCADIS | Telephone: 248-994-2276 |
| Address: 10559 Citation Dr, Suite 100 | Fax: 810-229-8837 |
| City State Zip: Brighton, MI 48116 | E-mail Address: michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): Buick City/ Flint, MI | Project #: B0064410.2012.00900 |
| Sampler's Printed Name: Megan Meckley | Sampler's Signature: Megan Meckley |

| Preservative | E | F | E | E |
|---|---|---|---|---|
| Filtered (✓) | NA | NA | NA | NA |
| # of Containers | 1 | 1 | 1 | 1 |
| Container Information | 10 | 1 | 10 | 10 |

PARAMETER ANALYSIS & METHOD

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane | Methanol | Fscan SVOCs, Total Solids, Ignitability, Lead | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 51410 | | | | | | | | | | |
| .01 WMU2_SB1_01232012 (3-3.5') | 1/23/12 | 1110 | | X | SO | 1 | 1 | 1 | | |
| .02 WMU7_SB1_01232012 (15.5-16') | 1/23/12 | 1340 | | X | SO | 1 | 1 | 1 | | |
| .03 WMU7_SB2_01232012 (14.5-15') | 1/23/12 | 1625 | | X | SO | 1 | 1 | 1 | | |
| .04 WMU7_SB3_01242012 (15.5-16') | 1/24/12 | 955 | | x | SO | 1 | 1 | 1 | | |
| .05 WMU8_SB1_01242012 (2-2.8') | 1/24/12 | 1040 | | x | SO | 1 | 1 | 1 | | |
| .06 WMU8_SB2_01242012 (1.5-2') | 1/24/12 | 1055 | | x | SO | 1 | 1 | 1 | | |
| .07 WMU8_SB3_01242012 (3.5-4') | 1/24/12 | 1120 | | x | SO | 1 | 1 | 1 | | |
| .08 WMU8_SB4_01242012 (1,2-1,7') | 1/24/12 | 1110 | | x | SO | 1 | 1 | 1 | | |
| .09 WMU8_SB5_01242012 (4.5-5') | 1/24/12 | 1150 | | x | SO | 1 | 1 | 1 | | |
| .10 WMU10_SB1_01242012 (17.2-17.7') | 1/24/12 | 1430 | | x | SO | 1 | | 1 | 1 | |
| .11 WMU10_SB2_01242012 (16-16.5') | 1/24/12 | 1545 | | x | SO | 1 | | 1 | 1 | |
| .12 WMU10_SB3_01242012 (15.5-16') | 1/24/12 | 1640 | | x | SO | 1 | | 1 | 1 | |
| .13 WMU10_SB4_01242012 (20-20.5') | 1/25/12 | 1020 | | x | SO | 1 | | 1 | 1 | |
| .14 WMU10_SB5_01242012 (18.5-19') | 1/25/12 | 1200 | | x | SO | 1 | | 1 | 1 | |
| .15 WMU10_SB5A_01242012 (17.5-18') | 1/25/12 | 1155 | | x | SO | 1 | | 1 | 1 | |
| .16 WMU10_SB1A_01242012 (16-16.5') | 1/24/12 | 1445 | | x | SO | 1 | | 1 | 1 | |
| .17 WMU10_SB2C_01242012 (13-13.5) | 1/24/12 | 1535 | | x | SO | 1 | | 1 | 1 | concrete |
| .18 WMU10_SB3C_01242012 (12.5-13') | 1/24/12 | 1630 | | x | SO | 1 | | 1 | 1 | concrete |
| .19 WMU10_SB4C_01242012 (14.5-15') | 1/25/12 | 955 | | x | SO | 1 | | 1 | 1 | concrete |
| .20 WMU10_SB5C_01242012 (16.5-17') | 1/25/12 | 1150 | | x | SO | 1 | | 1 | 1 | concrete |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment
SO = Soil
Wipe
W = Water
A = Air
NL = NAPL / Oil
T = Tissue
SL = Sludge
SW = Surface

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: Megan Meckley | Printed Name: Chris Gauthier | Printed Name: Paula Shaw |
| ☑ Cooler packed with ice (✓) | | Signature: Megan Meckley | Signature: | Signature: |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 4.7° | Date/Time: 1-25-12 1235 | Date/Time: 1-25-12 1255 | Date/Time: 1-25-12 1400 |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012512.1

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| Address: | Fax: |
| 10559 Citation Dr, Suite 100 | 810-229-6837 |
| City State Zip | E-mail Address: |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): | Project #: |
| Buick City/ Flint, MI | B0064410.2012.00900 |
| Sampler's Printed Name: | Sampler's Signature: |
| Megan Meckley | Megan Meckley |

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane | Methanol | Fscan SVOCs, Total Solids, Ignitability, Lead | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | E | F | E | E | | | | | |
| Filtered (✓) | | | | | | NA | NA | NA | NA | | | | | |
| # of Containers | | | | | | 1 | 1 | 1 | 1 | | | | | |
| Container Information | | | | | | 10 | 1 | 10 | 10 | | | | | |
| 51410 .21 WMU10_SB5B_01252012 (14.5-15') | 1/25/12 | 1205 | | x | SO | | 1 | | 1 | 1 | | | | |
| .22 TB1_01232011 | 1/23/12 | 900 | | x | w | | 1 | | | | | | | |
| .23 WMU10_SB4A_01252012 (17-17.5) | 1/25/12 | 1030 | | x | SO | | 1 | | 1 | 1 | | | | |

PARAMETER ANALYSIS & METHOD

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge, SO = Soil, NL = NAPL / Oil, SW = Surface Wipe, W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: Megan Meckley | Printed Name: Chris Gauthier | Printed Name: Paula Stan |
| ☑ Cooler packed with ice (✓) | | Signature: Megan Meckley | Signature: | Signature: |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 4.7° | Date/Time: 1/25/12 - 1235 | Date/Time: 1-25-12 1255 | Date/Time: 1-25-12 1400 |

Fibertec
environmental
services

Tuesday, January 31, 2012

Fibertec Project Number: 48342
Project Identification: 51410 /
Submittal Date: 01/25/2012

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

Samples were received at 17 degrees Celsius.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

*1914 Holloway Drive* *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
*11766 E. Grand River* *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
*8660 S. Mackinaw Trail* *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.01** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **1** | Collect Date: | **01/23/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:10** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-001** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **13** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-001** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **30000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/30/12 | SD12A30A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.02** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **2** | Collect Date: | **01/23/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **13:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-002** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **15** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-002** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **13000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.03** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **3** | Collect Date: | **01/23/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **16:25** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-003** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **15** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-003** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **10000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.04** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **4** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **09:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-004** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **17** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-004** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **10000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.05** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **5** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-005** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **15** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-005** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **29000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.06** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **6** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-006** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **10** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-006** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.07** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **7** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:20** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-007** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **17** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-007** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **26000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.08** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **8** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:10** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-008** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **6.8** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-008** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.09** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **9** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:50** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-009** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.7** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-009** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **50000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.10** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **10** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-010** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **9.6** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-010** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.11** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **11** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:45** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-011** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.0** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-011** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **19000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.12** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **12** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **16:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-012** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.1** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-012** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **9400** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.14** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **13** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **12:00** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-013** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **11** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-013** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.16** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **14** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:45** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-014** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **14** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-014** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.17** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **15** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:35** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-015** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.7** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-015** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **6100** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.18** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **16** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **16:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-016** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **6.4** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-016** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **19000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.19** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **17** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **09:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-017** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **6.5** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-017** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.20** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **18** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:50** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-018** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.9** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-018** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.23** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **19** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-019** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **12** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-019** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Report ID: S51442.01(01)
Generated on 02/02/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51442.01-S51442.06
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/25/2012 - 01/26/2012
Submitted Date/Time: 01/27/2012 13:00
Sampled by: Megan Meckley
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#L11-184), WBENC (#2005110032)
Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814), NELAC FL (#E871045)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (6 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51442.01 | WMU10_SB5_01252012 | Groundwater | 01/25/2012 15:45 |
| S51442.02 | WMU2_SB3_01262012 (2-2.2') | Soil | 01/26/2012 11:30 |
| S51442.03 | Tripblank2_01252012 | Water | 01/25/2012 16:00 |
| S51442.04 | Tripblank_01252012 | Methonal | 01/25/2012 13:00 |
| S51442.05 | WMU10_SB6_01252012 (11.5-12) | Soil | 01/25/2012 14:55 |
| S51442.06 | WMU10_SB6A_01252012 (17.5-18') | Soil | 01/25/2012 15:00 |

# Analytical Laboratory Report

Lab Sample ID: S51442.01
Sample Tag: WMU10_SB5_01252012
Collected Date/Time: 01/25/2012 15:45
Matrix: Groundwater
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 40ml Glass | None | Yes | 4.4 | IR |
| 1 | 4oz Glass | None | Yes | 4.4 | IR |
| 2 | 40ml Glass | HCL | Yes | 4.4 | IR |
| 4 | 1L Amber | None | Yes | 4.4 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Inorganics*** | | | | | | | | |
| Flash Point | Not detected | oF | 180 | ASTM D3278 | 01/27/12 14:18 | PL | | |

# Analytical Laboratory Report

Lab Sample ID: S51442.02
Sample Tag: WMU2_SB3_01262012 (2-2.2')
Collected Date/Time: 01/26/2012 11:30
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |
| 2 | 4oz Glass | None | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/30/12 12:00 | WAR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/27/12 15:26 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 16:57 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 16:57 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 75-69-4 | |
| p,m-Xylene | 320 | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | | |
| o-Xylene | 140 | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 60-29-7 | |

Lab Sample ID: S51442.02 (continued)
Sample Tag: WMU2_SB3_01262012 (2-2.2')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 16:57 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 16:57 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 6,400 | ug/kg | 4,400 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51442.03
Sample Tag: Tripblank2_01252012
Collected Date/Time: 01/25/2012 16:00
Matrix: Water
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | HCL | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| **Volatile Organics - DEQ List** | | | | | | | | |
| Diethyl ether | Not detected | ug/L | 10 | 8260B | 01/30/12 17:46 | JGH | 60-29-7 | |
| Acetone | Not detected | ug/L | 50 | 8260B | 01/30/12 17:46 | JGH | 67-64-1 | |
| Methyl iodide | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 74-88-4 | |
| Carbon disulfide | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-15-0 | |
| tert-Methyl butyl ether (MTBE) | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 1634-04-4 | |
| Acrylonitrile | Not detected | ug/L | 2 | 8260B | 01/30/12 17:46 | JGH | 107-13-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 25 | 8260B | 01/30/12 17:46 | JGH | 78-93-3 | |
| Dichlorodifluoromethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-71-8 | |
| Chloromethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 74-87-3 | |
| Vinyl chloride | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-01-4 | |
| Bromomethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 74-83-9 | |
| Chloroethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-00-3 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-69-4 | |
| 1,1-Dichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-35-4 | |
| Methylene chloride | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-09-2 | |
| trans-1,2-Dichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 156-60-5 | |
| 1,1-Dichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-34-3 | |
| cis-1,2-Dichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 156-59-2 | |
| Tetrahydrofuran | Not detected | ug/L | 90 | 8260B | 01/30/12 17:46 | JGH | 109-99-9 | |
| Chloroform | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 67-66-3 | |
| Bromochloromethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 74-97-5 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 71-55-6 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 50 | 8260B | 01/30/12 17:46 | JGH | 108-10-1 | |
| 2-Hexanone | Not detected | ug/L | 50 | 8260B | 01/30/12 17:46 | JGH | 591-78-6 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 56-23-5 | |
| Benzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 71-43-2 | |
| 1,2-Dichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 107-06-2 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 79-01-6 | |
| 1,2-Dichloropropane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 78-87-5 | |
| Bromodichloromethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-27-4 | |
| Dibromomethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 74-95-3 | |
| cis-1,3-Dichloropropene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 10061-01-5 | |
| Toluene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-88-3 | |
| trans-1,3-Dichloropropene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 10061-02-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 79-00-5 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 127-18-4 | |
| trans-1,4-Dichloro-2-butene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 110-57-6 | |
| Dibromochloromethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 124-48-1 | |
| 1,2-Dibromoethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 106-93-4 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-90-7 | |
| 1,1,1,2-Tetrachloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 630-20-6 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 100-41-4 | |

Lab Sample ID: S51442.03 (continued)
Sample Tag: Tripblank2_01252012

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Organics - DEQ List (continued)** | | | | | | | | |
| p,m-Xylene | Not detected | ug/L | 2 | 8260B | 01/30/12 17:46 | JGH | | |
| o-Xylene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 95-47-6 | |
| Styrene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 100-42-5 | |
| Isopropylbenzene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 98-82-8 | |
| Bromoform | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-25-2 | |
| 1,1,2,2-Tetrachloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 79-34-5 | |
| 1,2,3-Trichloropropane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 96-18-4 | |
| n-Propylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 103-65-1 | |
| Bromobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-86-1 | |
| 1,3,5-Trimethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-67-8 | |
| tert-Butylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 98-06-6 | |
| 1,2,4-Trimethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 95-63-6 | |
| sec-Butylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 135-98-8 | |
| p-Isopropyltoluene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 99-87-6 | |
| 1,3-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 541-73-1 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 106-46-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 95-50-1 | |
| 1,2,3-Trimethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 526-73-8 | |
| n-Butylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 104-51-8 | |
| Hexachloroethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 67-72-1 | |
| 1,2-Dibromo-3-chloropropane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 96-12-8 | |
| 1,2,4-Trichlorobenzene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 120-82-1 | |
| 1,2,3-Trichlorobenzene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 87-61-6 | |
| Naphthalene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 91-20-3 | |
| 2-Methylnaphthalene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 91-57-6 | |

# Analytical Laboratory Report

Lab Sample ID: S51442.04
Sample Tag: Tripblank_01252012
Collected Date/Time: 01/25/2012 13:00
Matrix: Methonal
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| **Volatile Organics 5035** | | | | | | | | |
| Diethyl ether | Not detected | ug/kg | 200 | 8260B/5035 | 01/31/12 17:16 | JGH | 60-29-7 | |
| Acetone | Not detected | ug/kg | 1,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 67-64-1 | |
| Methyl iodide | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-88-4 | |
| Carbon disulfide | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-15-0 | |
| tert-Methyl butyl ether (MTBE) | Not detected | ug/kg | 200 | 8260B/5035 | 01/31/12 17:16 | JGH | 1634-04-4 | |
| Acrylonitrile | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 107-13-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 750 | 8260B/5035 | 01/31/12 17:16 | JGH | 78-93-3 | |
| Dichlorodifluoromethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-71-8 | |
| Chloromethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-87-3 | |
| Vinyl chloride | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-01-4 | |
| Bromomethane | Not detected | ug/kg | 200 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-83-9 | |
| Chloroethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-00-3 | |
| Trichlorofluoromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-69-4 | |
| 1,1-Dichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-35-4 | |
| Methylene chloride | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-09-2 | |
| trans-1,2-Dichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 156-60-5 | |
| 1,1-Dichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-34-3 | |
| cis-1,2-Dichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 156-59-2 | |
| Tetrahydrofuran | Not detected | ug/kg | 1,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 109-99-9 | |
| Chloroform | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 67-66-3 | |
| Bromochloromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-97-5 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 71-55-6 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 3,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-10-1 | |
| 2-Hexanone | Not detected | ug/kg | 3,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 591-78-6 | |
| Carbon tetrachloride | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 56-23-5 | |
| Benzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 71-43-2 | |
| 1,2-Dichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 107-06-2 | |
| Trichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 79-01-6 | |
| 1,2-Dichloropropane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 78-87-5 | |
| Bromodichloromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-27-4 | |
| Dibromomethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-95-3 | |
| cis-1,3-Dichloropropene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 10061-01-5 | |
| Toluene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-88-3 | |
| trans-1,3-Dichloropropene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 10061-02-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 79-00-5 | |
| Tetrachloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 127-18-4 | |
| trans-1,4-Dichloro-2-butene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 110-57-6 | |
| Dibromochloromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 124-48-1 | |
| 1,2-Dibromoethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 106-93-4 | |
| Chlorobenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-90-7 | |
| 1,1,1,2-Tetrachloroethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 630-20-6 | |
| Ethylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 100-41-4 | |

Lab Sample ID: S51442.04 (continued)
Sample Tag: Tripblank_01252012

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Organics 5035 (continued)** | | | | | | | | |
| p,m-Xylene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | | |
| o-Xylene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 95-47-6 | |
| Styrene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 100-42-5 | |
| Isopropylbenzene | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 98-82-8 | |
| Bromoform | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-25-2 | |
| 1,1,2,2-Tetrachloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 79-34-5 | |
| 1,2,3-Trichloropropane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 96-18-4 | |
| n-Propylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 103-65-1 | |
| Bromobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-86-1 | |
| 1,3,5-Trimethylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-67-8 | |
| tert-Butylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 98-06-6 | |
| 1,2,4-Trimethylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 95-63-6 | |
| sec-Butylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 135-98-8 | |
| p-Isopropyltoluene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 99-87-6 | |
| 1,3-Dichlorobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 541-73-1 | |
| 1,4-Dichlorobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 106-46-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 95-50-1 | |
| 1,2,3-Trimethylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 526-73-8 | |
| n-Butylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 104-51-8 | |
| Hexachloroethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 67-72-1 | |
| 1,2-Dibromo-3-chloropropane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 96-12-8 | |
| 1,2,4-Trichlorobenzene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 120-82-1 | |
| 1,2,3-Trichlorobenzene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 87-61-6 | |
| Naphthalene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 91-20-3 | |
| 2-Methylnaphthalene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 91-57-6 | |

# Analytical Laboratory Report

Lab Sample ID: S51442.05
Sample Tag: WMU10_SB6_01252012 (11.5-12)
Collected Date/Time: 01/25/2012 14:55
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |
| 2 | 4oz Glass | None | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 02/01/12 01:00 | SLR | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/30/12 12:00 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.62 | mg/kg | 0.30 | 6020 | 02/02/12 15:44 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/27/12 15:58 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 17:34 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 17:34 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51442.05 (continued)
Sample Tag: WMU10_SB6_01252012 (11.5-12)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 17:34 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 17:34 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 99,000 | ug/kg | 13,000 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51442.06
Sample Tag: WMU10_SB6A_01252012 (17.5-18')
Collected Date/Time: 01/25/2012 15:00
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |
| 2 | 4oz Glass | None | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 02/01/12 01:00 | SLR | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 82 | % | 1 | Std M 2540 B | 01/30/12 12:00 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.61 | mg/kg | 0.30 | 6020 | 02/02/12 15:47 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 2,000 | 8260M | 01/27/12 16:15 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 80,000 | 8260M | 01/31/12 17:52 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 80,000 | 8260M | 01/31/12 17:52 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51442.06 (continued)
Sample Tag: WMU10_SB6A_01252012 (17.5-18')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 80 | 8260B | 01/31/12 17:52 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 80 | 8260B | 01/31/12 17:52 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 110,000 | ug/kg | 15,000 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012712.1

**Send Results To:**

| | |
|---|---|
| Contact & Company Name: Mike Brennan ARCADIS | Telephone: 248-994-2276 |
| Address: 10559 Citation Dr, Suite 100 | Fax: 810-229-8837 |
| City State Zip: Brighton, MI 48116 | E-mail Address: michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): Buick City/ Flint, MI | Project #: B0064410.2012.00900 |
| Sampler's Printed Name: Megan Meckley | Sampler's Signature: Megan Meckley |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Preservative | E | F | E | E | B | D | E | E |
| | | | | | Filtered (✓) | NA | NA | NA | NA | NA | NA | NA | NA |
| | | | | | # of Containers | 1 | 1 | 1 | 4 | 2 | 1 | 1 | 1 |
| | | | | | Container Information | 10 | 1 | 10 | 2 | 1 | 3 | 10 | 10 |
| | | | | | **PARAMETER ANALYSIS & METHOD** | | | | | | | | |
| **Sample ID** | **Collection w2 Date** | **Time** | **Type Comp** | **Type Grab** | **Matrix** | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane | Methanol | PCBs/SVOCs | VOCs | Total Metals | Ignitability | Fscan SVOCs, Total Solids, Ignitability, Lead | **REMARKS** |
| 51447.01 WMU10_SB5_01252012 | 1/25/12 | 1545 | | X | GW | | | X | X | X | X | X | | |
| .02 WMU2_SB3_01262012 (2-2.2') | 1/26/12 | 1130 | | X | SO | X | X | X | | | | | | |
| .03 TRIPBLANK2_01252012 | 1/25/12 | 1600 | | X | W | | | | | X | | | | Lab filled water VOA |
| .04 TRIPBLANK_01252012 | 1/25/12 | 1300 | | X | W | | | X | | | | | | |
| .05 WMU10_SB6_01252012 (11.5-12) | 1/25/12 | 1455 | | X | SO | | X | X | | | | | X | |
| .06 WMU10_SB6A_01252012 (17.5-18') | 1/25/12 | 1500 | | X | SO | | X | X | | | | | X | |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge
SO = Soil, NL = NAPL / Oil, SW = Surface
Wipe
W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| **Laboratory Information and Receipt** | | **Relinquished By** | **Received By** | **Laboratory Received By** |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: Megan Meckley | Printed Name: Chris Gosthice | Printed Name: Andrew Ball |
| ☑ Cooler packed with ice (✓) | | Signature: Megan Meckley | Signature: [signature] | Signature: Andrew Ball |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: MERIT |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 4.4° | Date/Time: 1/27/2012 1200 | Date/Time: 1-27-12 1200 | Date/Time: 27 JAN 12 1300 |

Fibertec
environmental
services

Thursday, February 02, 2012

Fibertec Project Number: 48376
Project Identification: 51442 /
Submittal Date: 01/27/2012

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51442.02** | Chain of Custody: | **64414** |
| Client Project Name: | **51442** | Sample No: | **1** | Collect Date: | **01/26/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48376-001** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.2** | | % | 0.1 | 1.0 | 01/30/12 | MC120130 | 01/31/12 | MC120130 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48376-001** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **6400** | | µg/kg | 4400 | 1.0 | 01/30/12 | PS12A30A | 01/30/12 | SD12A30A |

**Analytical Laboratory Report**
**Laboratory Project Number: 48376**
**Laboratory Sample Number: 48376-002**



| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51442.05** | Chain of Custody: | **64414** |
| Client Project Name: | **51442** | Sample No: | **2** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48376-002** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.1** | | % | 0.1 | 1.0 | 01/30/12 | MC120130 | 01/31/12 | MC120130 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48376-002** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **99000** | | µg/kg | 13000 | 5.0 | 01/30/12 | S812A30A | 01/30/12 | S812A30A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51442.06** | Chain of Custody: | **64414** |
| Client Project Name: | **51442** | Sample No: | **3** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:00** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48376-003** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **18** | | % | 0.1 | 1.0 | 01/30/12 | MC120130 | 01/31/12 | MC120130 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48376-003** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **110000** | | µg/kg | 15000 | 5.0 | 01/30/12 | PS12A30A | 01/30/12 | SD12A30A |

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Report ID: S50304.01(01)
Generated on 10/17/2011

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S50304.01-S50304.13
Project: B0064410.2011.00900 / Buick City / Flint MI
Collected Date: 10/07/2011
Submitted Date/Time: 10/10/2011 11:50
Sampled by: Tony Maffeo
P.O. #: MT1295A

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (13 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S50304.01 | WMU#4-TANK1-FR | Water | 10/07/2011 14:10 |
| S50304.02 | WMU#4-TANK2-FR | Water | 10/07/2011 13:30 |
| S50304.03 | WMU#4-TANK3-FR | Water | 10/07/2011 13:20 |
| S50304.04 | WMU#4-TANK4-FR | Water | 10/07/2011 14:55 |
| S50304.05 | WMU#4-TANK5-FR | Water | 10/07/2011 14:35 |
| S50304.06 | WMU#4-TANK6-FR | Water | 10/07/2011 10:45 |
| S50304.07 | WMU#4-TANK1&2SC-FR | Water | 10/07/2011 14:25 |
| S50304.08 | WMU#4-TANK3&4SC-FR | Water | 10/07/2011 14:30 |
| S50304.09 | WMU#4-TANK5&6SC-FR | Water | 10/07/2011 11:30 |
| S50304.10 | WMU#5-SUMP-FR | Water | 10/07/2011 12:55 |
| S50304.11 | WMU#5-FLOOR-FR | Water | 10/07/2011 12:15 |
| S50304.12 | WMU#5-TOTE-FR | Water | 10/07/2011 11:50 |
| S50304.13 | Trip Blank | Water | 10/07/2011 00:01 |

# Analytical Laboratory Report

Lab Sample ID: S50304.01
Sample Tag: WMU#4-TANK1-FR
Collected Date/Time: 10/07/2011 14:10
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 18:02 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:02 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:02 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 18:02 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 18:02 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 15:21 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 15:31 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 15:31 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 127-18-4 | |
| Toluene | 158 | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 15:31 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 15:31 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.01 (continued)
Sample Tag: WMU#4-TANK1-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 15:31 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 15:31 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 15:31 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.02
Sample Tag: WMU#4-TANK2-FR
Collected Date/Time: 10/07/2011 13:30
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 21:12 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 21:12 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 21:12 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 21:12 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 21:12 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 15:37 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 16:08 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 16:08 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 16:08 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 16:08 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 16:08 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 127-18-4 | |
| Toluene | 20 | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:36 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/14/11 12:36 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/14/11 12:36 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/14/11 12:36 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/14/11 12:36 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/14/11 12:36 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.02 (continued)
Sample Tag: WMU#4-TANK2-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/14/11 12:36 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/14/11 12:36 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/14/11 12:36 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.03
Sample Tag: WMU#4-TANK3-FR
Collected Date/Time: 10/07/2011 13:20
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 21:32 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 21:32 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 21:32 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 21:32 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 21:32 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 15:53 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 16:26 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 16:26 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 127-18-4 | |
| Toluene | 113 | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 16:26 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 16:26 | WAT | 108-10-1 | |

Lab Sample ID: S50304.03 (continued)
Sample Tag: WMU#4-TANK3-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 16:26 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 16:26 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 16:26 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.04
Sample Tag: WMU#4-TANK4-FR
Collected Date/Time: 10/07/2011 14:55
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 21:50 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 21:50 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 21:50 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 21:50 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 21:50 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 16:09 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 16:45 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 16:45 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 16:45 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 16:45 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 16:45 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 127-18-4 | |
| Toluene | 4 | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 75-69-4 | |
| p,m-Xylene | 2 | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/14/11 12:54 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/14/11 12:54 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/14/11 12:54 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/14/11 12:54 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/14/11 12:54 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/14/11 12:54 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.04 (continued)
Sample Tag: WMU#4-TANK4-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/14/11 12:54 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/14/11 12:54 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/14/11 12:54 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.05
Sample Tag: WMU#4-TANK5-FR
Collected Date/Time: 10/07/2011 14:35
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 22:09 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 22:09 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 22:09 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 22:09 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 22:09 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 16:25 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:03 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:03 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 127-18-4 | |
| Toluene | 58 | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:03 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:03 | WAT | 108-10-1 | |

Lab Sample ID: S50304.05 (continued)
Sample Tag: WMU#4-TANK5-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:03 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:03 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:03 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.06
Sample Tag: WMU#4-TANK6-FR
Collected Date/Time: 10/07/2011 10:45
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 22:28 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 22:28 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 22:28 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 22:28 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 22:28 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 16:41 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:21 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:21 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 127-18-4 | |
| Toluene | 3 | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:21 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:21 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.06 (continued)
Sample Tag: WMU#4-TANK6-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:21 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:21 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:21 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.07
Sample Tag: WMU#4-TANK1&2SC-FR
Collected Date/Time: 10/07/2011 14:25
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 22:47 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 22:47 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 22:47 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 22:47 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 22:47 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 16:57 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:39 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:39 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 127-18-4 | |
| Toluene | 6 | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:39 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:39 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.07 (continued)
Sample Tag: WMU#4-TANK1&2SC-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:39 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:39 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:39 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.08
Sample Tag: WMU#4-TANK3&4SC-FR
Collected Date/Time: 10/07/2011 14:30
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 23:06 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 23:06 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 23:06 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 23:06 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 23:06 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 17:13 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:57 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 17:57 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 127-18-4 | |
| Toluene | 13 | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 75-69-4 | |
| p,m-Xylene | 1 | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 17:57 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 17:57 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.08 (continued)
Sample Tag: WMU#4-TANK3&4SC-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:57 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:57 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 17:57 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.09
Sample Tag: WMU#4-TANK5&6SC-FR
Collected Date/Time: 10/07/2011 11:30
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 23:25 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 23:25 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 23:25 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 23:25 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 23:25 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 17:29 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 18:16 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 18:16 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 127-18-4 | |
| Toluene | 4 | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:16 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 18:16 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.09 (continued)
Sample Tag: WMU#4-TANK5&6SC-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:16 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:16 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:16 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.10
Sample Tag: WMU#5-SUMP-FR
Collected Date/Time: 10/07/2011 12:55
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 18:21 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:21 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:21 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 18:21 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 18:21 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 17:45 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 18:34 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 18:34 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 127-18-4 | |
| Toluene | 2 | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:34 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 18:34 | WAT | 108-10-1 | |

Lab Sample ID: S50304.10 (continued)
Sample Tag: WMU#5-SUMP-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:34 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:34 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:34 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.11
Sample Tag: WMU#5-FLOOR-FR
Collected Date/Time: 10/07/2011 12:15
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 18:40 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:40 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:40 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 18:40 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 18:40 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 18:01 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 18:52 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 18:52 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 127-18-4 | |
| Toluene | 59 | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 18:52 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 18:52 | WAT | 108-10-1 | |

Lab Sample ID: S50304.11 (continued)
Sample Tag: WMU#5-FLOOR-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:52 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:52 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 18:52 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.12
Sample Tag: WMU#5-TOTE-FR
Collected Date/Time: 10/07/2011 11:50
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 20:19 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 18:59 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:59 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 18:59 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 18:59 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 18:59 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 18:17 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 19:10 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 19:10 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:10 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 19:10 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50304.12 (continued)
Sample Tag: WMU#5-TOTE-FR

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:10 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:10 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:10 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S50304.13
Sample Tag: Trip Blank
Collected Date/Time: 10/07/2011 00:01
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 18:34 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 19:29 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 19:29 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:29 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 19:29 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:29 | WAT | 75-71-8 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:29 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:29 | WAT | 76-13-1 | |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC101011.01

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| Address: | Fax: |
| 10559 Citation DR., Suite 100 | 810-229-8837 |
| City State Zip | E-mail Address: |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): | Project #: |
| Buick City/ Flint, MI | B0064410.2011.00900 |
| Sampler's Printed Name: | Sampler's Signature: |
| Tony Maffeo | |

| Preservation | B | E | E | B |
|---|---|---|---|---|
| Filtered (Y/N) | NA | NA | NA | NA |
| # of Containers | 2 | 2 | 2 | 1 |
| Container Identifier | 1 | 1 | 2 | 1 |

**PARAMETER ANALYSIS & METHOD**

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | See attached Sheet For "Buick City F-List Analyte List" | See attached Sheet For "Buick City F-List Analyte List" | See attached Sheet For "Buick City F-List Analyte List" | See attached Sheet For "Buick City F-List Analyte List" - VOC's Only | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 50304.01 WMU#4-TANK1-FR | 10/7/11 | 1410 | X | | W | X | X | X | | |
| .02 WMU#4-TANK2-FR | 10/7/11 | 1330 | X | | W | X | X | X | | |
| .03 WMU#4-TANK3-FR | 10/7/11 | 1320 | X | | W | X | X | X | | |
| .04 WMU#4-TANK4-FR | 10/7/11 | 1455 | X | | W | X | X | X | | |
| .05 WMU#4-TANK5-FR | 10/7/11 | 1435 | X | | W | X | X | X | | |
| .06 WMU#4-TANK6-FR | 10/7/11 | 1045 | X | | W | X | X | X | | |
| .07 WMU#4-TANK1&2SC-FR | 10/7/11 | 1425 | X | | W | X | X | X | | |
| .08 WMU#4-TANK3&4SC-FR | 10/7/11 | 1430 | X | | W | X | X | X | | |
| .09 WMU#4-TANK5&6SC-FR | 10/7/11 | 1130 | X | | W | X | X | X | | |
| .10 WMU#5-SUMP-FR | 10/7/11 | 1255 | X | | W | X | X | X | | |
| .11 WMU#5-FLOOR-FR | 10/7/11 | 1215 | X | | W | X | X | X | | |
| .12 WMU#5-TOTE-FR | 10/7/11 | 1150 | X | | W | X | X | X | | |
| .13 TRIP BLANK | | | | X | W | | | | X | |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F.
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 4 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge, SO = Soil, NL = NAPL / Oil, SW = Surface Wipe, W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal | Printed Name: Tony Maffeo | Printed Name: Jim Glass | Printed Name: Paula Shaw |
| ☑ Cooler packed with ice (✓) | ☐ Intact ☐ Not Intact | Signature: | Signature: | Signature: |
| Specify Turnaround Requirements: 5-Day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: | Date/Time: 10-10-11 10:45 | Date/Time: 10-10-11 10:45 | Date/Time: 10-10-11 1150 |

## BUICK CITY F-LIST SELECT ANALYTE LIST

**Select VOCs (USEPA Method 8260)**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, Trichlorofluoromethane, and Xylenes.

**Select F-Scan VOCs (USEPA Method 8260)**: Cyclohexanone and Ethyl Acetate.

**Select USEPA Method 8015:** Isobutanol, methanol, and n-butyl alcohol.

**Select F-Scan SVOCs (USEPA Method 8270)**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine.

Fibertec
environmental
services

Monday, October 17, 2011

Fibertec Project Number: 46757
Project Identification: 50304 /
Submittal Date: 10/10/2011

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

Samples were received at 14.7 degrees Celsius.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.01** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **1** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **14:10** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-001** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.02** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **2** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **13:30** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-002** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.03** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **3** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **13:20** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-003** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.04** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **4** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **14:55** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-004** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.05** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **5** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **14:35** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-005** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.06** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **6** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **10:45** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-006** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.07** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **7** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **14:25** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-007** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.08** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **8** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **14:30** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-008** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.09** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **9** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **11:30** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-009** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.10** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **10** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **12:55** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-010** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.11** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **11** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **12:15** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-011** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50304.12** | Chain of Custody: | **62695** |
| Client Project Name: | **50304** | Sample No: | **12** | Collect Date: | **10/07/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **11:50** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46757-012** **Matrix: Ground Water** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 10/12/11 | PS11J12A | 10/14/11 | S811J13A |

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Final Report

Report ID: S51100.01(02)
Generated on 12/27/2011
Replaces report S51100.01(01) generated on 12/23/2011

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51100.01-S51100.11
Project: B0064410.2011.00900 / Buick City / Flint MI
Collected Date: 12/15/2011
Submitted Date/Time: 12/16/2011 16:50
Sampled by: Megan Meckley
P.O. #: MLT1295

All analyses completed

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (11 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51100.01 | Tripblank_12152011 | Methanol | 12/15/2011 08:00 |
| S51100.02 | WMU4_SB1_12152011 | Soil | 12/15/2011 10:40 |
| S51100.03 | WMU4_SB2_12152011 | Soil | 12/15/2011 11:35 |
| S51100.04 | WMU4_SB3_12152011 | Soil | 12/15/2011 11:50 |
| S51100.05 | WMU4_SB4_12152011 | Soil | 12/15/2011 12:15 |
| S51100.06 | WMU5_SB1_12152011 | Soil | 12/15/2011 14:50 |
| S51100.07 | WMU5_SB2_12152011 | Soil | 12/15/2011 15:10 |
| S51100.08 | WMU5_SB3_12152011 | Soil | 12/15/2011 15:40 |
| S51100.09 | WMU5_SB4_12152011 | Soil | 12/15/2011 15:25 |
| S51100.10 | WMU5_SB5_12152011 | Soil | 12/15/2011 15:15 |
| S51100.11 | WMU6_SB1_12152011 | Soil | 12/15/2011 16:30 |

# Analytical Laboratory Report

Lab Sample ID: S51100.01
Sample Tag: Tripblank_12152011
Collected Date/Time: 12/15/2011 08:00
Matrix: Methanol
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 12/19/11 16:45 | PCS | | |

Lab Sample ID: S51100.02
Sample Tag: WMU4_SB1_12152011
Collected Date/Time: 12/15/2011 10:40
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 12:56 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 12:56 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 12:56 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 12:56 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 12:56 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 16:43 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:32 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:32 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:32 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:32 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:32 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 03:48 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 03:48 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 03:48 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 03:48 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 03:48 | WAT | 60-29-7 | |

Lab Sample ID: S51100.02 (continued)
Sample Tag: WMU4_SB1_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 03:48 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 03:48 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 03:48 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 28,000 | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.03
Sample Tag: WMU4_SB2_12152011
Collected Date/Time: 12/15/2011 11:35
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:14 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:14 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:14 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:14 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:14 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 17:00 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:50 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:50 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:50 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:50 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 20:50 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 12/21/11 04:07 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 04:07 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 04:07 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 04:07 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 04:07 | WAT | 60-29-7 | |

Lab Sample ID: S51100.03 (continued)
Sample Tag: WMU4_SB2_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 04:07 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 12/21/11 04:07 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 12/21/11 04:07 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 150,000 | ug/kg | 14,000 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.04
Sample Tag: WMU4_SB3_12152011
Collected Date/Time: 12/15/2011 11:50
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:33 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:33 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:33 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:33 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:33 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 17:16 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:08 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:08 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:08 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:08 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:08 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:26 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:26 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:26 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:26 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:26 | WAT | 60-29-7 | |

Lab Sample ID: S51100.04 (continued)
Sample Tag: WMU4_SB3_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:26 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 04:26 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 04:26 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.05
Sample Tag: WMU4_SB4_12152011
Collected Date/Time: 12/15/2011 12:15
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:53 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:53 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:53 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:53 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 13:53 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 17:32 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:26 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:26 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:26 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:26 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:26 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | 120 | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 04:46 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:46 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:46 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:46 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:46 | WAT | 60-29-7 | |

Lab Sample ID: S51100.05 (continued)
Sample Tag: WMU4_SB4_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 04:46 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 04:46 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 04:46 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.06
Sample Tag: WMU5_SB1_12152011
Collected Date/Time: 12/15/2011 14:50
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:31 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:31 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:31 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:31 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:31 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 17:48 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:44 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:44 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:44 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:44 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 21:44 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 75-09-2 | |
| Tetrachloroethene | 80 | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 127-18-4 | |
| Toluene | 80 | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | 1,770 | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 75-69-4 | |
| p,m-Xylene | 150 | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | | |
| o-Xylene | 90 | ug/kg | 60 | 8260M | 12/21/11 05:05 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:05 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:05 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:05 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:05 | WAT | 60-29-7 | |

Lab Sample ID: S51100.06 (continued)
Sample Tag: WMU5_SB1_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:05 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 05:05 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 05:05 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.07
Sample Tag: WMU5_SB2_12152011
Collected Date/Time: 12/15/2011 15:10
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:50 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:50 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:50 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:50 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:50 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 18:04 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:02 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:02 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:02 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:02 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:02 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 79-00-5 | |
| Trichloroethene | 100 | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 12/21/11 05:25 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:25 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:25 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:25 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:25 | WAT | 60-29-7 | |

Lab Sample ID: S51100.07 (continued)
Sample Tag: WMU5_SB2_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 12/21/11 05:25 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 05:25 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 12/21/11 05:25 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.08
Sample Tag: WMU5_SB3_12152011
Collected Date/Time: 12/15/2011 15:40
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 86 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:09 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:09 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:09 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:09 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:09 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 18:20 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:20 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:20 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:20 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:20 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:20 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | 470 | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 12/21/11 05:44 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 05:44 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 05:44 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 05:44 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 05:44 | WAT | 60-29-7 | |

Lab Sample ID: S51100.08 (continued)
Sample Tag: WMU5_SB3_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 05:44 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 12/21/11 05:44 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 12/21/11 05:44 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 6,800 | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.09
Sample Tag: WMU5_SB4_12152011
Collected Date/Time: 12/15/2011 15:25
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 95 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:12 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:12 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:12 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:12 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 14:12 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 18:36 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:38 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:38 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:38 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:38 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:38 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | 730 | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | | |
| o-Xylene | Not detected | ug/kg | 50 | 8260M | 12/21/11 06:04 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 5,000 | 8260M | 12/21/11 06:04 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 5,000 | 8260M | 12/21/11 06:04 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 5,000 | 8260M | 12/21/11 06:04 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 5,000 | 8260M | 12/21/11 06:04 | WAT | 60-29-7 | |

Lab Sample ID: S51100.09 (continued)
Sample Tag: WMU5_SB4_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 5,000 | 8260M | 12/21/11 06:04 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 50 | 8260B | 12/21/11 06:04 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 50 | 8260B | 12/21/11 06:04 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 44,000 | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.10
Sample Tag: WMU5_SB5_12152011
Collected Date/Time: 12/15/2011 15:15
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 12/20/11 23:06 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 85 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:28 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:28 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:28 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:28 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 12/22/11 15:28 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 12/22/11 18:52 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:57 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:57 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:57 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:57 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 3,000 | 8260M | 12/22/11 22:57 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 127-18-4 | |
| Toluene | 70 | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | 80 | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 75-69-4 | |
| p,m-Xylene | 80 | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 12/21/11 06:23 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 06:23 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 06:23 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 06:23 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 06:23 | WAT | 60-29-7 | |

Lab Sample ID: S51100.10 (continued)
Sample Tag: WMU5_SB5_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 12/21/11 06:23 | WAT | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 12/21/11 06:23 | WAT | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 12/21/11 06:23 | WAT | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 12/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S51100.11
Sample Tag: WMU6_SB1_12152011
Collected Date/Time: 12/15/2011 16:30
Matrix: Soil
COC Reference: BC121511.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 1 | 4oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3550B | 12/21/11 22:08 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 81 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **TCL Semi-Volatile Organics** | | | | | | | | |
| Acenaphthene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 83-32-9 | X |
| Acenaphthylene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 208-96-8 | X |
| Acetophenone | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 98-86-2 | X |
| Anthracene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 120-12-7 | X |
| Atrazine | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 1912-24-9 | X |
| 1,1'-Biphenyl | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 92-52-4 | X |
| 4-Bromophenyl phenyl ether | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 101-55-3 | X |
| di-n-Butyl phthalate | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 84-74-2 | X |
| Benzaldehyde | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 100-52-7 | X |
| Benzo(a)anthracene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 56-55-3 | X |
| Benzo(a)pyrene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 50-32-8 | X |
| Benzo(b)fluoranthene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 205-99-2 | X |
| Benzo(ghi)perylene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 191-24-2 | X |
| Benzo(k)fluoranthene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 207-08-9 | X |
| Butyl benzyl phthalate | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 85-68-7 | X |
| 2-Chloronaphthalene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 91-58-7 | X |
| 2-Chlorophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 95-57-8 | X |
| 4-Chloro-3-methylphenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 59-50-7 | X |
| 4-Chloroaniline | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 106-47-8 | X |
| 4-Chlorophenyl phenyl ether | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 7005-72-3 | X |
| Caprolactam | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 105-60-2 | X |
| Carbazole | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 86-74-8 | X |
| bis(2-Chloroethoxy)methane | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 111-91-1 | X |
| bis(2-Chloroethyl)ether | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 111-44-4 | X |
| bis(2-Chloroisopropyl)ether | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 108-60-1 | X |
| Chrysene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 218-01-9 | X |
| 2,4-Dichlorophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 120-83-2 | X |
| 2,4-Dimethylphenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 105-67-9 | X |
| 2,4-Dinitrophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 51-28-5 | X |
| 2,4-Dinitrotoluene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 121-14-2 | X |
| 2,6-Dinitrotoluene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 606-20-2 | X |
| 3,3'-Dichlorobenzidine | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 91-94-1 | X |
| 4,6-Dinitro-2-methylphenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 534-52-1 | X |
| Dibenzo(ah)anthracene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 53-70-3 | X |

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S51100.11 (continued)
Sample Tag: WMU6_SB1_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles (continued)*** | | | | | | | | |
| **TCL Semi-Volatile Organics (continued)** | | | | | | | | |
| Dibenzofuran | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 132-64-9 | X |
| Diethyl phthalate | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 84-66-2 | X |
| Dimethyl phthalate | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 131-11-3 | X |
| bis(2-Ethylhexyl)phthalate | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 117-81-7 | X |
| Fluoranthene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 206-44-0 | X |
| Fluorene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 86-73-7 | X |
| Hexachlorobenzene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 118-74-1 | X |
| Hexachlorobutadiene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 87-68-3 | X |
| Hexachlorocyclopentadiene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 77-47-4 | X |
| Hexachloroethane | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 67-72-1 | X |
| Indeno(1,2,3-cd)pyrene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 193-39-5 | X |
| Isophorone | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 78-59-1 | X |
| 2-Methylnaphthalene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 91-57-6 | X |
| 2-Methylphenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 95-48-7 | X |
| 3-, 4-Methylphenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 3/4-Cresol | X |
| 2-Nitroaniline | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 88-74-4 | X |
| 2-Nitrophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 88-75-5 | X |
| 3-Nitroaniline | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 99-09-2 | X |
| 4-Nitroaniline | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 100-01-6 | X |
| 4-Nitrophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 100-02-7 | X |
| N-Nitrosodi-n-propylamine | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 621-64-7 | X |
| N-Nitrosodiphenylamine | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 86-30-6 | X |
| Naphthalene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 91-20-3 | X |
| Nitrobenzene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 98-95-3 | X |
| di-n-Octyl phthalate | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 117-84-0 | X |
| Pentachlorophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 87-86-5 | X |
| Phenanthrene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 85-01-8 | X |
| Phenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 108-95-2 | X |
| Pyrene | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 129-00-0 | X |
| 2,4,5-Trichlorophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 95-95-4 | X |
| 2,4,6-Trichlorophenol | Not detected | ug/kg | 1,230 | 8270C | 12/23/11 12:30 | PL | 88-06-2 | X |
| ***Organics - Volatiles*** | | | | | | | | |
| **TCL Volatile Organics HighLevl 5035/8260** | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 100 | 5035/8260B | 12/21/11 14:51 | JGH | 76-13-1 | |
| Acetone | Not detected | ug/kg | 1,100 | 5035/8260B | 12/21/11 14:51 | JGH | 67-64-1 | |
| Carbon disulfide | Not detected | ug/kg | 400 | 5035/8260B | 12/21/11 14:51 | JGH | 75-15-0 | |
| Methyl Acetate | Not detected | ug/kg | 4,000 | 5035/8260B | 12/21/11 14:51 | JGH | 79-20-9 | |
| tert-Methyl butyl ether (MTBE) | Not detected | ug/kg | 400 | 5035/8260B | 12/21/11 14:51 | JGH | 1634-04-4 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 1,100 | 5035/8260B | 12/21/11 14:51 | JGH | 78-93-3 | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 75-71-8 | |
| Chloromethane | Not detected | ug/kg | 400 | 5035/8260B | 12/21/11 14:51 | JGH | 74-87-3 | |
| Vinyl chloride | Not detected | ug/kg | 100 | 5035/8260B | 12/21/11 14:51 | JGH | 75-01-4 | |
| Bromomethane | Not detected | ug/kg | 400 | 5035/8260B | 12/21/11 14:51 | JGH | 74-83-9 | |
| Chloroethane | Not detected | ug/kg | 400 | 5035/8260B | 12/21/11 14:51 | JGH | 75-00-3 | |
| Trichlorofluoromethane | Not detected | ug/kg | 100 | 5035/8260B | 12/21/11 14:51 | JGH | 75-69-4 | |
| 1,1-Dichloroethene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 75-35-4 | |
| Methylene chloride | Not detected | ug/kg | 400 | 5035/8260B | 12/21/11 14:51 | JGH | 75-09-2 | |

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S51100.11 (continued)
Sample Tag: WMU6_SB1_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **TCL Volatile Organics HighLevl 5035/8260 (continued)** | | | | | | | | |
| trans-1,2-Dichloroethene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 156-60-5 | |
| 1,1-Dichloroethane | 200 | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 75-34-3 | |
| cis-1,2-Dichloroethene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 156-59-2 | |
| Chloroform | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 67-66-3 | |
| 1,1,1-Trichloroethane | 90 | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 71-55-6 | |
| Cyclohexane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 110-82-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 4,000 | 5035/8260B | 12/21/11 14:51 | JGH | 108-10-1 | |
| 2-Hexanone | Not detected | ug/kg | 4,000 | 5035/8260B | 12/21/11 14:51 | JGH | 591-78-6 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 56-23-5 | |
| Benzene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 71-43-2 | |
| 1,2-Dichloroethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 107-06-2 | |
| Trichloroethene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 79-01-6 | |
| 1,2-Dichloropropane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 78-87-5 | |
| Bromodichloromethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 75-27-4 | |
| Methyl cyclohexane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 108-87-2 | |
| cis-1,3-Dichloropropene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 10061-01-5 | |
| Toluene | 400 | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 108-88-3 | |
| trans-1,3-Dichloropropene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 10061-02-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 79-00-5 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 127-18-4 | |
| Dibromochloromethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 124-48-1 | |
| 1,2-Dibromoethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 106-93-4 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 108-90-7 | |
| 1,1,2,2-Tetrachloroethane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 79-34-5 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 100-41-4 | |
| p,m-Xylene | 110 | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 95-47-6 | |
| Styrene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 100-42-5 | |
| Isopropylbenzene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 98-82-8 | |
| Bromoform | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 75-25-2 | |
| 1,3-Dichlorobenzene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 541-73-1 | |
| 1,4-Dichlorobenzene | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 106-46-7 | |
| 1,2-Dichlorobenzene | 180 | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 95-50-1 | |
| 1,2-Dibromo-3-chloropropane | Not detected | ug/kg | 70 | 5035/8260B | 12/21/11 14:51 | JGH | 96-12-8 | |
| 1,2,4-Trichlorobenzene | Not detected | ug/kg | 100 | 5035/8260B | 12/21/11 14:51 | JGH | 120-82-1 | |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC121511.1

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| **Address:** | **Fax:** |
| 10559 Citation Dr, Suite 100 | 810-229-8837 |
| **City State Zip** | **E-mail Address:** |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |
| **Project Name/Location (City, State):** | **Project #:** |
| Buick City/ Flint, MI | B0064410.2011.00900 |
| **Sampler's Printed Name:** | **Sampler's Signature:** |
| Megan Meckley | Megan Meckley |

| Preservative | E | F | E | E | F | F | E |
|---|---|---|---|---|---|---|---|
| Filtered (✓) | NA | NA | NA | NA | NA | NA | NA |
| # of Containers | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Container Information | 10 | 1 | 10 | 10 | 1 | 1 | 8 |

**PARAMETER ANALYSIS & METHOD**

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and Dichlorodifluoromethane | Methanol | TCLSVOCs, Total Solids | TCL VOCs | TCL VOCs, Fscan VOCs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51100.01 Tripblank_12152011 | 12/15/11 | 8:00 | | X | W | | | | | | 1 | | |
| .02 WMU4_SB1_12152011 | 12/15/11 | 1040 | | X | SO | 1 | 1 | 1 | | | | | |
| .03 WMU4_SB2_12152011 | 12/15/11 | 1135 | | X | SO | 1 | 1 | 1 | | | | | |
| .04 WMU4_SB3_12152011 | 12/15/11 | 1150 | | X | SO | 1 | 1 | 1 | | | | | |
| .05 WMU4_SB4_12152011 | 12/15/11 | 1215 | | X | SO | 1 | 1 | 1 | | | | | |
| .06 WMU5_SB1_12152011 | 12/15/11 | 1450 | | X | SO | 1 | 1 | 1 | | | | | |
| .07 WMU5_SB2_12152011 | 12/15/11 | 1510 | | X | SO | 1 | 1 | 1 | | | | | |
| .08 WMU5_SB3_12152011 | 12/15/11 | 1540 | | X | SO | 1 | 1 | 1 | | | | | |
| .09 WMU5_SB4_12152011 | 12/15/11 | 1525 | | X | SO | 1 | 1 | 1 | | | | | |
| .10 WMU5_SB5_12152011 | 12/15/11 | 1515 | | X | SO | 1 | 1 | 1 | | | | | |
| .11 WMU6_SB1_12152011 | 12/15/11 | 1630 | | X | SO | | | | 1 | 1 | | | |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge
SO = Soil, NL = NAPL / Oil, SW = Surface
Wipe
W = Water, T = Tissue

**REMARKS**

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal | Printed Name: Megan Meckley | Printed Name: | Printed Name: Paula Straw |
| ☑ Cooler packed with ice (✓) | ☐ Intact ☐ Not Intact | Signature: Megan Meckley | Signature: | Signature: [signature] |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 5.1 | Date/Time: 12/16/11 4:00 PM | Date/Time: | Date/Time: 12-16-11 1650 |

Fibertec
environmental
services

Tuesday, December 27, 2011

Fibertec Project Number: 47942
Project Identification: 51100 /
Submittal Date: 12/20/2011

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

Samples were received at 8.6 degrees Celsius.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.02** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **1** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-001** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **13** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-001** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **28000** | | µg/kg | 4400 | 1.0 | 12/22/11 | PS11L22E | 12/22/11 | S811L22A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.03** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **2** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-002** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **9.5** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-002** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **150000** | | µg/kg | 14000 | 5.0 | 12/22/11 | PS11L22E | 12/22/11 | S811L22A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.04** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **3** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:50** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-003** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **9.6** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-003** **Matrix: Soil/Solid** **Analyst:**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 12/20/11 | PS11L20D | 12/22/11 | SD11L21A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.05** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **4** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **12:15** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-004** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **12** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-004** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 12/22/11 | PS11L22E | 12/22/11 | S811L22A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.06** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **5** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:50** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-005** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.1** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-005** **Matrix: Soil/Solid** **Analyst:**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 12/20/11 | PS11L20D | 12/22/11 | SD11L21A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.07** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **6** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:10** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-006** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **13** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-006** **Matrix: Soil/Solid** **Analyst:**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 12/20/11 | PS11L20D | 12/22/11 | SD11L21A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.08** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **7** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-007** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **14** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-007** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **6800** | | µg/kg | 4400 | 1.0 | 12/22/11 | PS11L22E | 12/22/11 | S811L22A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.09** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **8** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:25** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-008** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **5.4** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-008** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **44000** | | µg/kg | 4400 | 1.0 | 12/22/11 | PS11L22E | 12/22/11 | S811L22A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51100.10** | Chain of Custody: | **65668** |
| Client Project Name: | **51100** | Sample No: | **9** | Collect Date: | **12/15/11** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:15** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 47942-009** **Matrix: Soil/Solid** **Analyst: CMS**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **14** | | % | 0.1 | 1.0 | 12/20/11 | MC111220 | 12/21/11 | MC111220 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 47942-009** **Matrix: Soil/Solid** **Analyst:**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 12/20/11 | PS11L20D | 12/22/11 | SD11L21A |

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Report ID: S49874.01(01)
Generated on 09/08/2011

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S49874.01
Project: B0064410.2011.00900/Bucik City/Flint, MI
Collected Date: 08/31/2011
Submitted Date/Time: 08/31/2011 15:15
Sampled by: D. Newcom
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (1 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S49874.01 | RACER-WMU4&5-ContainW(080311) | Liquid | 08/31/2011 12:30 |

# Analytical Laboratory Report

Lab Sample ID: S49874.01
Sample Tag: RACER-WMU4&5-ContainW(080311)
Collected Date/Time: 08/31/2011 12:30
Matrix: Liquid
COC Reference: 090111.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 4 | 1L Amber | None | Yes | 5.6 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Extraction, PCB | Completed | | | 3550B | 09/07/11 11:19 | ADB | | |
| Mercury Digestion | Completed | | | 7471A | 09/07/11 13:30 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 09/08/11 01:00 | SLR | | |
| TCLP Zero Headspace Ext. | <5.0% | | | 1311 | 09/06/11 16:50 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 09/07/11 20:27 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| pH after 3.5 ml HCl | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| % Solids | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| Sample Used g | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| Final Volume mL | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| TCLP Extraction Fluid | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| Final Extract pH | <0.5% | | | 1311 | 09/06/11 16:50 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Flash Point | Not detected | oF | 180 | ASTM D3278 | 09/08/11 13:44 | DJS | <140 | |
| pH | 8.10 | STD Units | 0.1 | 9045D | 09/08/11 14:00 | WAR | 12.5 | |
| Reactive Cyanide | Not detected | mg/kg | 0.02 | 335.4/4500-CN-E | 09/06/11 13:10 | JDP | | |
| Reactive Sulfide | Not detected | mg/kg | 0.08 | 4500-S2 D | 09/06/11 10:08 | JDP | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 09/08/11 15:06 | SLS | 5.0 | |
| Barium, TCLP | 0.08 | mg/L | 0.05 | 6020 | 09/08/11 15:06 | SLS | 100.0 | |
| Cadmium, TCLP | Not detected | mg/L | 0.005 | 6020 | 09/08/11 15:06 | SLS | 1.0 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 09/08/11 15:06 | SLS | 5.0 | |
| Lead, TCLP | Not detected | mg/L | 0.03 | 6020 | 09/08/11 15:06 | SLS | 5.0 | |
| Mercury, TCLP | Not detected | mg/L | 0.0005 | 7471A | 09/07/11 16:05 | JRT | 0.2 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 09/08/11 15:06 | SLS | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 09/08/11 15:06 | SLS | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB, TCLP** | | | | | | | | |
| PCB-1016 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB-1221 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB-1232 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB-1242 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB-1248 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB-1254 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB-1260 | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |
| PCB, Total | Not detected | ug/L | 0.1 | 608 | 09/07/11 14:46 | JANB | | |

# Analytical Laboratory Report

Lab Sample ID: S49874.01 (continued)
Sample Tag: RACER-WMU4&5-ContainW(080311)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 09/08/11 13:01 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 09/08/11 13:01 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 09/08/11 13:01 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 09/08/11 13:01 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 09/08/11 13:01 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 09/08/11 13:01 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 09/08/11 13:01 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 09/08/11 13:01 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 09/08/11 13:01 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 09/08/11 13:01 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 09/08/11 13:01 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 500 | |
| Carbon tetrachloride | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 500 | |
| Chlorobenzene | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 100,000 | |
| Chloroform | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 6,000 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 7,500 | |
| 1,2-Dichloroethane | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 500 | |
| 1,1-Dichloroethene | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 700 | |
| 2-Butanone (MEK) | Not detected | ug/L | 1,000 | 8260B | 09/07/11 22:11 | WAT | 200,000 | |
| Tetrachloroethene | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 700 | |
| Trichloroethene | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 500 | |
| Vinyl chloride | Not detected | ug/L | 100 | 8260B | 09/07/11 22:11 | WAT | 200 | |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: 090111.1

| Send Results To: | |
|---|---|
| Contact & Company Name: Mike Brennan ARCADIS | Telephone: 810-229-8823 |
| Address: 10559 Citation DR, Suite 100 | Fax: 810-229-8837 |
| City State Zip: Brighton, MI 48116 | E-mail Address: michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): Buick City/ Flint, MI | Project #: B0064410.2011.00900 |
| Sampler's Printed Name: D. Newcom | Sampler's Signature: |

49874 .01

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | | TCLP PCB's | TCLP Metals, VOC, SVOC | RCI | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | | E | E | E | | | | | | |
| Filtered (Y/N) | | | | | | | | | | | | | | | |
| # of Containers | | | | | | | 1 | 2 | 1 | | | | | | |
| Container Information | | | | | | | 2 | 2 | 2 | | | | | | |
| RACER-WMU4&5-ContainW(083111) | 8/31/11 | 1230 | x | | W | | x | x | x | | | | | | water collected from WMU 4&5 containment areas |

PARAMETER ANALYSIS & METHOD

KEYS

Preservation Key: A. $H_2SO_4$ B. HCL C. NaOH D. $HNO_3$ E. None F. G. H.

Container Information Key: 1. 40 ml. VOA 2. 1 L Amber 3. 125 ml. Plastic 4. 250 ml. Plastic 5. 500 ml. Plastic 6. 1 L Plastic 7. 2 oz. Glass 8. 4 oz. Glass 9. 8 oz. Glass 10. Other

Matrix Key: SE = Sediment A = Air SL = Sludge SO = Soil NL = NAPL / Oil SW = Surface

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

☑ **Special QA/QC Instructions (✓):** Level II and EDD

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: D. Newcom | Printed Name: Chris Gunther | Printed Name: ANDREW BALL |
| ☑ Cooler packed with ice (✓) | | Signature: [signature] | Signature: [signature] | Signature: Andrew Ball |
| Specify Turnaround Requirements: 5 day turnaround | Sample Receipt: | ARCADIS | Firm: Merit | Firm: MERIT |
| Fed-Ex Tracking #: 0 | Condition/Cooler Temp: 5.6 | Date/Time: 8/31/11 1400 | Date/Time: 8-31-11 1400 | Date/Time: 31 Aug 11 1400 1515 |

# Analytical Laboratory Report

Report ID: S50119.01(01)
Generated on 09/26/2011

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S50119.01
Project: B0064410.2011.00900 / Buick City / Flint MI
Collected Date: 09/21/2011
Submitted Date/Time: 09/21/2011 14:30
Sampled by: Unknown
P.O. #: B0064410.2011.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (1 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S50119.01 | WMU4&5-Containment Water (092111) | Water | 09/21/2011 10:45 |

# Analytical Laboratory Report

Lab Sample ID: S50119.01
Sample Tag: WMU4&5-Containment Water (092111)
Collected Date/Time: 09/21/2011 10:45
Matrix: Water
COC Reference: BC092111.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 3 | 1L Amber | None | Yes | 5.5 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.5 | IR |
| 2 | 40ml Glass | None | Yes | 5.5 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 09/21/11 20:09 | EMR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 09/23/11 14:45 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 09/23/11 14:45 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 09/23/11 14:45 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 09/23/11 14:45 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 09/23/11 14:45 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 09/22/11 20:46 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 09/22/11 18:21 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 141-78-6 | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 09/22/11 18:21 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 95-50-1 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 100-41-4 | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 127-18-4 | |
| Toluene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 75-69-4 | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 09/22/11 18:21 | WAT | 95-47-6 | |
| Acetone | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 78-93-3 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 75-15-0 | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 09/22/11 18:21 | WAT | 108-10-1 | |

# Analytical Laboratory Report

Lab Sample ID: S50119.01 (continued)
Sample Tag: WMU4&5-Containment Water (092111)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Halocarbons** | | | | | | | | |
| Bromodichloromethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-27-4 | |
| Bromoform | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-25-2 | |
| Bromomethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 74-83-9 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 108-90-7 | |
| Chloroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-00-3 | |
| Chloroform | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 67-66-3 | |
| Chloromethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 74-87-3 | |
| Dibromochloromethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 124-48-1 | |
| 1,2-Dibromo-3-chloropropane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 96-12-8 | |
| 1,2-Dibromoethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 106-93-4 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 95-50-1 | |
| 1,3-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 541-73-1 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 106-46-7 | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-71-8 | |
| 1,1-Dichloroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-34-3 | |
| 1,2-Dichloroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 107-06-2 | |
| 1,1-Dichloroethene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-35-4 | |
| cis-1,2-Dichloroethene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 156-59-2 | |
| trans-1,2-Dichloroethene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 156-60-5 | |
| 1,2-Dichloropropane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 78-87-5 | |
| cis-1,3-Dichloropropene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 10061-01-5 | |
| trans-1,3-Dichloropropene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 10061-02-6 | |
| Methylene chloride | Not detected | ug/L | 5 | 8260B | 09/23/11 14:45 | WAT | 75-09-2 | |
| 1,1,2,2-Tetrachloroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 79-34-5 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 127-18-4 | |
| 1,2,4-Trichlorobenzene | Not detected | ug/L | 5 | 8260B | 09/23/11 14:45 | WAT | 120-82-1 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 79-00-5 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-69-4 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 76-13-1 | |
| Vinyl chloride | Not detected | ug/L | 1 | 8260B | 09/23/11 14:45 | WAT | 75-01-4 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 09/22/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC092111.1

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| **Address:** | **Fax:** |
| 10559 Citation DR | 810-229-8837 |
| **City State Zip** | **E-mail Address:** |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |
| **Project Name/Location (City, State):** | **Project #:** |
| Buick City/ Flint, MI | B0064410.2011.00900 |
| **Sampler's Printed Name:** | **Sampler's Signature:** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | B | E | E | | | | | | | | | | |
| Filtered (Y) | | | | | | | | | | | | | |
| # of Containers | 2 | 3 | 2 | | | | | | | | | | |
| Container Information | 1 | 2 | 1 | | | | | | | | | | |
| **PARAMETER ANALYSIS & METHOD** | | | | | | | | | | | | | |
| | | VOCs: See attached Sheet For Select Analyte List | SVOCs: See attached Sheet For Select Analyte List | 8015: See attached Sheet For Select Analyte List | | | | | | | | | |

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | | VOCs | SVOCs | 8015 | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WMU4&5-ContainmentWater(092111) | 9/21/11 | 1045 | X | | W | | X | X | X | | | | | | Northend RCRA WMUs |

5019-01

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F.
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 4 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge
SO = Soil, NL = NAPL / Oil, SW = Surface

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal | Printed Name: Kenneth Windsand | Printed Name: Chris Gauthier | Printed Name: Paula Shaw |
| ☑ Cooler packed with ice (✓) | ☐ Intact ☐ Not Intact | Signature: Kenneth Windsand | Signature: [signature] | Signature: [signature] |
| Specify Turnaround Requirements: 3-Day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: | Condition/Cooler Temp: | Date/Time: 9/21/11 | Date/Time: 9-21-11 1200 | Date/Time: 9-21-11 1430 |

1. **Liquid Samples** (Bottles per sample=2 40mL VOAs HCl; 2 40mL VOAs non-preserved; 2 Liter Amber non-preserved; 1 4oz Clear Glass Jar)

- 18 sample sets for:

  - Standard VOC (USEPA Method 8260): **2-Ethoxyethanol, 2-Nitropropane**, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, Trichlorofluoromethane, and Xylenes.

  - F-Scan VOC (USEPA Method 8260): Cyclohexanone, Ethyl Acetate

  - USEPA Method 8015: Isobutanol, methanol, and n-butyl alcohol

  - F-Scan SVOC (USEPA Method 8270): Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

Fibertec
environmental
services

Monday, September 26, 2011

Fibertec Project Number: 46457
Project Identification: 50119 /
Submittal Date: 09/21/2011

Ms. Julie Teague
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Teague,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

**Analytical Laboratory Report**
**Laboratory Project Number: 46457**
**Laboratory Sample Number: 46457-001**

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **50119.01** | Chain of Custody: | **62577** |
| Client Project Name: | **50119** | Sample No: | **1** | Collect Date: | **09/21/11** |
| Client Project No: | **NA** | Sample Matrix: | **Ground Water** | Collect Time: | **10:45** |

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 46457-001** **Matrix: Ground Water** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/L | 400 | 1.0 | 09/22/11 | PS11I22B | 09/22/11 | S811I22A |

*1914 Holloway Drive* *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
*11766 E. Grand River* *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
*8660 S. Mackinaw Trail* *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Preliminary Report

Report ID: S50305.01(01)
Generated on 10/19/2011

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S50305.01-S50305.05
Project: B0064410.2011.00900 / Buick City / Flint MI
Collected Date: 10/07/2011
Submitted Date/Time: 10/10/2011 11:50
Sampled by: Tony Maffeo
P.O. #: MT1295A

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (5 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S50305.01 | WMU#5-SOLID | Soil | 10/07/2011 11:00 |
| S50305.02 | WMU#5-DECONWASH | Water | 10/07/2011 09:00 |
| S50305.03 | WMU#4-SOLID | Soil | 10/07/2011 12:50 |
| S50305.04 | WMU#4-TANK-DECONWASH | Water | 10/07/2011 15:10 |
| S50305.05 | WMU#4-TANKSC-DECONWASH | Water | 10/07/2011 14:45 |

# Analytical Laboratory Report

Preliminary Report

Lab Sample ID: S50305.01
Sample Tag: WMU#5-SOLID
Collected Date/Time: 10/07/2011 11:00
Matrix: Soil
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 32oz Glass | None | Yes | 5.1 | IR |
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 8oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3550B | 10/13/11 22:04 | EMR | | |
| Extraction, PCB | Completed | | | 3550B | 10/12/11 13:45 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 10/17/11 12:10 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 10/14/11 12:00 | PER | | |
| TCLP Zero Headspace Ext. | Completed | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 10/13/11 21:47 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 8.68 | | | 1311 | 10/12/11 16:20 | WAR | | |
| pH after 3.5 ml HCl | 4.46 | | | 1311 | 10/12/11 16:20 | WAR | | |
| % Solids | 100 | | | 1311 | 10/12/11 16:20 | WAR | | |
| Sample Used g | 100 | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Volume mL | 2,000 | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP Extraction Fluid | 1 | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Extract pH | 5.26 | | | 1311 | 10/12/11 16:20 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Reactive Cyanide | Not detected | mg/kg | 0.8 | 335.4/4500-CN-E | 10/13/11 13:12 | JDP | | |
| Reactive Sulfide | Not detected | mg/kg | 4 | 4500-S2 D | 10/13/11 09:40 | JDP | | |
| Total Solids | 79 | % | 1 | Std M 2540 B | 10/12/11 11:45 | DJS | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 10/14/11 15:31 | PER | 5.0 | |
| Barium, TCLP | 6.69 | mg/L | 0.05 | 6020 | 10/14/11 15:31 | PER | 100.0 | |
| Cadmium, TCLP | 0.019 | mg/L | 0.005 | 6020 | 10/14/11 15:31 | PER | 1.0 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:31 | PER | 5.0 | |
| Lead, TCLP | Not detected | mg/L | 0.03 | 6020 | 10/14/11 15:31 | PER | 5.0 | |
| Mercury, TCLP | Not detected | mg/L | 0.0002 | 7471A | 10/17/11 15:43 | JRT | 0.2 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:31 | PER | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 10/14/11 15:31 | PER | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB List** | | | | | | | | |
| PCB-1016 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |
| PCB-1242 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |
| PCB-1221 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |
| PCB-1232 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |
| PCB-1248 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |
| PCB-1254 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |
| PCB-1260 | Not detected | ug/kg | 330 | 8082A | 10/12/11 17:32 | JANB | | |

Lab Sample ID: S50305.01 (continued)
Sample Tag: WMU#5-SOLID

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:03 | PL | | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:03 | PL | | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:03 | PL | | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:03 | PL | | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:03 | PL | | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:18 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:18 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:18 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:18 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:18 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 10/14/11 19:18 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 10/14/11 19:18 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 10/14/11 19:18 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 10/14/11 19:18 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 10/14/11 19:18 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 10/14/11 19:18 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 10/14/11 19:38 | JGH | | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 80,000 | 8260M | 10/14/11 15:46 | WAT | | |
| Cyclohexanone | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| Ethyl Acetate | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| Isobutanol | Not detected | ug/kg | 80,000 | 8260M | 10/14/11 15:46 | WAT | | |
| 2-Nitropropane | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Carbon tetrachloride | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Chlorobenzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Ethylbenzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Methylene chloride | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Tetrachloroethene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Toluene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Trichloroethene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| p,m-Xylene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| o-Xylene | Not detected | ug/kg | 80 | 8260M | 10/14/11 15:46 | WAT | | |
| Acetone | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| 2-Butanone (MEK) | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| Carbon disulfide | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| Diethyl ether | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 15:46 | WAT | | |

Lab Sample ID: S50305.01 (continued)
Sample Tag: WMU#5-SOLID

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Carbon tetrachloride | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Chlorobenzene | Incomplete | ug/L | | 8260B | / / | | 100,000 | |
| Chloroform | Incomplete | ug/L | | 8260B | / / | | 6,000 | |
| 1,4-Dichlorobenzene | Incomplete | ug/L | | 8260B | / / | | 7,500 | |
| 1,2-Dichloroethane | Incomplete | ug/L | | 8260B | / / | | 500 | |
| 1,1-Dichloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| 2-Butanone (MEK) | Incomplete | ug/L | | 8260B | / / | | 200,000 | |
| Tetrachloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| Trichloroethene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Vinyl chloride | Incomplete | ug/L | | 8260B | / / | | 200 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 80 | 8260B | 10/14/11 15:46 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/kg | 80 | 8260B | 10/14/11 15:46 | WAT | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 80 | 8260B | 10/14/11 15:46 | WAT | | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/kg | 4.40 | 8015M | 10/13/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Preliminary Report

Lab Sample ID: S50305.02
Sample Tag: WMU#5-DECONWASH
Collected Date/Time: 10/07/2011 09:00
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 6 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 21:48 | EMR | | |
| Extraction, PCB | Completed | | | 3510C | 10/11/11 12:30 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 10/17/11 12:10 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 10/14/11 12:00 | PER | | |
| TCLP Zero Headspace Ext. | <5.0% | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 10/13/11 21:47 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| pH after 3.5 ml HCl | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| % Solids | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| Sample Used g | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Volume mL | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP Extraction Fluid | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Extract pH | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Flash Point | Not detected | oF | 180 | ASTM D3278 | 10/17/11 15:06 | DJS | <140 | |
| pH | Incomplete | STD Units | | 9045D | / / | | 12.5 | |
| Reactive Cyanide | Not detected | mg/kg | 1 | 335.4/4500-CN-E | 10/13/11 13:20 | JDP | | |
| Reactive Sulfide | Not detected | mg/kg | 10 | 4500-S2 D | 10/13/11 09:48 | JDP | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 10/14/11 15:33 | PER | 5.0 | |
| Barium, TCLP | 1.00 | mg/L | 0.05 | 6020 | 10/14/11 15:33 | PER | 100.0 | |
| Cadmium, TCLP | Not detected | mg/L | 0.005 | 6020 | 10/14/11 15:33 | PER | 1.0 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:33 | PER | 5.0 | |
| Lead, TCLP | Not detected | mg/L | 0.03 | 6020 | 10/14/11 15:33 | PER | 5.0 | |
| Mercury, TCLP | Not detected | mg/L | 0.0002 | 7471A | 10/17/11 15:45 | JRT | 0.2 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:33 | PER | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 10/14/11 15:33 | PER | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB** | | | | | | | | |
| PCB-1016 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| PCB-1221 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| PCB-1232 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| PCB-1242 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| PCB-1248 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| PCB-1254 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| PCB-1260 | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |

Lab Sample ID: S50305.02 (continued)
Sample Tag: WMU#5-DECONWASH

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - PCBs/Pesticides (continued)*** | | | | | | | | |
| **PCB (continued)** | | | | | | | | |
| PCB, Total | Not detected | ug/L | 0.1 | 608 | 10/12/11 18:03 | JANB | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 20:34 | PL | | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 20:34 | PL | 200,000 | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 20:34 | PL | 200,000 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 20:34 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 20:34 | PL | 5,000 | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:34 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:34 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:34 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:34 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:34 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 10/14/11 20:34 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 10/14/11 20:34 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 10/14/11 20:34 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 10/14/11 20:34 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 10/14/11 20:34 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 10/14/11 20:34 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 18:50 | JGH | | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 19:47 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 19:47 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | 500 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | 500 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | 100,000 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | 700 | |
| Toluene | 30 | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | 500 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| p,m-Xylene | 2 | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 19:47 | WAT | | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |

Lab Sample ID: S50305.02 (continued)
Sample Tag: WMU#5-DECONWASH

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | 200,000 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 19:47 | WAT | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Carbon tetrachloride | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Chlorobenzene | Incomplete | ug/L | | 8260B | / / | | 100,000 | |
| Chloroform | Incomplete | ug/L | | 8260B | / / | | 6,000 | |
| 1,4-Dichlorobenzene | Incomplete | ug/L | | 8260B | / / | | 7,500 | |
| 1,2-Dichloroethane | Incomplete | ug/L | | 8260B | / / | | 500 | |
| 1,1-Dichloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| 2-Butanone (MEK) | Incomplete | ug/L | | 8260B | / / | | 200,000 | |
| Tetrachloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| Trichloroethene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Vinyl chloride | Incomplete | ug/L | | 8260B | / / | | 200 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:47 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:47 | WAT | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 19:47 | WAT | | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Preliminary Report

Lab Sample ID: S50305.03
Sample Tag: WMU#4-SOLID
Collected Date/Time: 10/07/2011 12:50
Matrix: Soil
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 32oz Glass | None | Yes | 5.1 | IR |
| 1 | 40ml Glass | MeOH | Yes | 5.1 | IR |
| 2 | 8oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3550B | 10/13/11 22:04 | EMR | | |
| Extraction, PCB | Completed | | | 3550B | 10/12/11 13:45 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 10/17/11 12:10 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 10/14/11 12:00 | PER | | |
| TCLP Zero Headspace Ext. | Completed | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 10/13/11 21:47 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 7.78 | | | 1311 | 10/12/11 16:20 | WAR | | |
| pH after 3.5 ml HCl | 6.28 | | | 1311 | 10/12/11 16:20 | WAR | | |
| % Solids | 100 | | | 1311 | 10/12/11 16:20 | WAR | | |
| Sample Used g | 100 | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Volume mL | 2,000 | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP Extraction Fluid | 2 | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Extract pH | 4.63 | | | 1311 | 10/12/11 16:20 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Reactive Cyanide | Not detected | mg/kg | 0.8 | 335.4/4500-CN-E | 10/13/11 13:22 | JDP | | |
| Reactive Sulfide | Not detected | mg/kg | 4 | 4500-S2 D | 10/13/11 09:50 | JDP | | |
| Total Solids | 77 | % | 1 | Std M 2540 B | 10/12/11 11:45 | DJS | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 10/14/11 15:38 | PER | 5.0 | |
| Barium, TCLP | 3.15 | mg/L | 0.05 | 6020 | 10/14/11 15:38 | PER | 100.0 | |
| Cadmium, TCLP | 0.203 | mg/L | 0.005 | 6020 | 10/14/11 15:38 | PER | 1.0 | |
| Chromium, TCLP | 0.39 | mg/L | 0.05 | 6020 | 10/14/11 15:38 | PER | 5.0 | |
| Lead, TCLP | 0.20 | mg/L | 0.03 | 6020 | 10/14/11 15:38 | PER | 5.0 | |
| Mercury, TCLP | Not detected | mg/L | 0.0002 | 7471A | 10/17/11 15:50 | JRT | 0.2 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:38 | PER | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 10/14/11 15:38 | PER | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB List** | | | | | | | | |
| PCB-1016 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |
| PCB-1242 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |
| PCB-1221 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |
| PCB-1232 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |
| PCB-1248 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |
| PCB-1254 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |
| PCB-1260 | Not detected | ug/kg | 330 | 8082A | 10/17/11 15:50 | JANB | | |

Lab Sample ID: S50305.03 (continued)
Sample Tag: WMU#4-SOLID

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:22 | PL | | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:22 | PL | | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:22 | PL | | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:22 | PL | | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 10/15/11 00:22 | PL | | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:37 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:37 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:37 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:37 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 19:37 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 10/14/11 19:37 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 10/14/11 19:37 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 10/14/11 19:37 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 10/14/11 19:37 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 10/14/11 19:37 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 10/14/11 19:37 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 10/14/11 19:54 | JGH | | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 80,000 | 8260M | 10/14/11 16:04 | WAT | | |
| Cyclohexanone | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| Ethyl Acetate | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| Isobutanol | Not detected | ug/kg | 80,000 | 8260M | 10/14/11 16:04 | WAT | | |
| 2-Nitropropane | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Carbon tetrachloride | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Chlorobenzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Ethylbenzene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Methylene chloride | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Tetrachloroethene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Toluene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Trichloroethene | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| p,m-Xylene | 280 | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| o-Xylene | 130 | ug/kg | 80 | 8260M | 10/14/11 16:04 | WAT | | |
| Acetone | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| 2-Butanone (MEK) | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| Carbon disulfide | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| Diethyl ether | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 8,000 | 8260M | 10/14/11 16:04 | WAT | | |

Lab Sample ID: S50305.03 (continued)
Sample Tag: WMU#4-SOLID

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Carbon tetrachloride | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Chlorobenzene | Incomplete | ug/L | | 8260B | / / | | 100,000 | |
| Chloroform | Incomplete | ug/L | | 8260B | / / | | 6,000 | |
| 1,4-Dichlorobenzene | Incomplete | ug/L | | 8260B | / / | | 7,500 | |
| 1,2-Dichloroethane | Incomplete | ug/L | | 8260B | / / | | 500 | |
| 1,1-Dichloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| 2-Butanone (MEK) | Incomplete | ug/L | | 8260B | / / | | 200,000 | |
| Tetrachloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| Trichloroethene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Vinyl chloride | Incomplete | ug/L | | 8260B | / / | | 200 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 80 | 8260B | 10/14/11 16:04 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/kg | 80 | 8260B | 10/14/11 16:04 | WAT | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 80 | 8260B | 10/14/11 16:04 | WAT | | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/kg | 4.40 | 8015M | 10/13/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Preliminary Report

Lab Sample ID: S50305.04
Sample Tag: WMU#4-TANK-DECONWASH
Collected Date/Time: 10/07/2011 15:10
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 6 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 21:48 | EMR | | |
| Extraction, PCB | Completed | | | 3510C | 10/11/11 12:30 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 10/17/11 12:10 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 10/14/11 12:00 | PER | | |
| TCLP Zero Headspace Ext. | <5.0% | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 10/13/11 21:47 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| pH after 3.5 ml HCl | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| % Solids | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| Sample Used g | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Volume mL | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP Extraction Fluid | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| Final Extract pH | <0.5% | | | 1311 | 10/12/11 16:20 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Flash Point | Not detected | oF | 180 | ASTM D3278 | 10/17/11 15:06 | DJS | <140 | |
| pH | Incomplete | STD Units | | 9045D | / / | | 12.5 | |
| Reactive Cyanide | Not detected | mg/kg | 1 | 335.4/4500-CN-E | 10/13/11 13:24 | JDP | | |
| Reactive Sulfide | Not detected | mg/kg | 10 | 4500-S2 D | 10/13/11 09:52 | JDP | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 10/14/11 15:35 | PER | 5.0 | |
| Barium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:35 | PER | 100.0 | |
| Cadmium, TCLP | 0.024 | mg/L | 0.005 | 6020 | 10/14/11 15:35 | PER | 1.0 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:35 | PER | 5.0 | |
| Lead, TCLP | 0.08 | mg/L | 0.03 | 6020 | 10/14/11 15:35 | PER | 5.0 | |
| Mercury, TCLP | 0.0005 | mg/L | 0.0002 | 7471A | 10/17/11 15:48 | JRT | 0.2 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 10/14/11 15:35 | PER | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 10/14/11 15:35 | PER | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB** | | | | | | | | |
| PCB-1016 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| PCB-1221 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| PCB-1232 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| PCB-1242 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| PCB-1248 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| PCB-1254 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S50305.04 (continued)
Sample Tag: WMU#4-TANK-DECONWASH

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - PCBs/Pesticides (continued)*** | | | | | | | | |
| **PCB (continued)** | | | | | | | | |
| PCB-1260 | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| PCB, Total | Not detected | ug/L | 2 | 608 | 10/17/11 14:59 | JANB | | X |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 23:44 | PL | | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 23:44 | PL | 200,000 | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 23:44 | PL | 200,000 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 23:44 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 23:44 | PL | 5,000 | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 23:44 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 23:44 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 23:44 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 23:44 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 23:44 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 10/14/11 23:44 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 10/14/11 23:44 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 10/14/11 23:44 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 10/14/11 23:44 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 10/14/11 23:44 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 10/14/11 23:44 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 19:06 | JGH | | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 20:06 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 20:06 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | 500 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | 500 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | 100,000 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | 700 | |
| Toluene | 25 | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | 500 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| p,m-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S50305.04 (continued)
Sample Tag: WMU#4-TANK-DECONWASH

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:06 | WAT | | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | 200,000 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 20:06 | WAT | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Carbon tetrachloride | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Chlorobenzene | Incomplete | ug/L | | 8260B | / / | | 100,000 | |
| Chloroform | Incomplete | ug/L | | 8260B | / / | | 6,000 | |
| 1,4-Dichlorobenzene | Incomplete | ug/L | | 8260B | / / | | 7,500 | |
| 1,2-Dichloroethane | Incomplete | ug/L | | 8260B | / / | | 500 | |
| 1,1-Dichloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| 2-Butanone (MEK) | Incomplete | ug/L | | 8260B | / / | | 200,000 | |
| Tetrachloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| Trichloroethene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Vinyl chloride | Incomplete | ug/L | | 8260B | / / | | 200 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 20:06 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 20:06 | WAT | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 20:06 | WAT | | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

Lab Sample ID: S50305.05
Sample Tag: WMU#4-TANKSC-DECONWASH
Collected Date/Time: 10/07/2011 14:45
Matrix: Water
COC Reference: BC101011.0

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 6 | 1L Amber | None | Yes | 5.1 | IR |
| 2 | 40ml Glass | HCL | Yes | 5.1 | IR |
| 2 | 40ml Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| BNA Extraction | Completed | | | 3510C | 10/13/11 23:30 | EMR | | |
| Extraction, PCB | Completed | | | 3510C | 10/11/11 12:30 | CCM | | |
| Mercury Digestion | Incomplete | | | 7471A | / / | | | |
| Metal Digestion | Incomplete | | | 3015A | / / | | | |
| TCLP Zero Headspace Ext. | <5.0% | | | 1311 | 10/12/11 16:20 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 10/13/11 23:30 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 8.51 | | | 1311 | 10/17/11 15:00 | WAR | | |
| pH after 3.5 ml HCl | 5.46 | | | 1311 | 10/17/11 15:00 | WAR | | |
| % Solids | 4 | | | 1311 | 10/17/11 15:00 | WAR | | |
| Sample Used g | 12 | | | 1311 | 10/17/11 15:00 | WAR | | |
| Final Volume mL | 528 | | | 1311 | 10/17/11 15:00 | WAR | | |
| TCLP Extraction Fluid | 2 | | | 1311 | 10/17/11 15:00 | WAR | | |
| Final Extract pH | 5.01 | | | 1311 | 10/17/11 15:00 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Flash Point | Not detected | oF | 180 | ASTM D3278 | 10/17/11 15:06 | DJS | <140 | |
| pH | Incomplete | STD Units | | 9045D | / / | | 12.5 | |
| Reactive Cyanide | Not detected | mg/kg | 1 | 335.4/4500-CN-E | 10/13/11 13:26 | JDP | | |
| Reactive Sulfide | Not detected | mg/kg | 10 | 4500-S2 D | 10/13/11 09:54 | JDP | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Incomplete | mg/L | | 6020 | / / | | 5.0 | |
| Barium, TCLP | Incomplete | mg/L | | 6020 | / / | | 100.0 | |
| Cadmium, TCLP | Incomplete | mg/L | | 6020 | / / | | 1.0 | |
| Chromium, TCLP | Incomplete | mg/L | | 6020 | / / | | 5.0 | |
| Lead, TCLP | Incomplete | mg/L | | 6020 | / / | | 5.0 | |
| Mercury, TCLP | Incomplete | mg/L | | 7471A | / / | | 0.2 | |
| Selenium, TCLP | Incomplete | mg/L | | 6020 | / / | | 1.0 | |
| Silver, TCLP | Incomplete | mg/L | | 6020 | / / | | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB** | | | | | | | | |
| PCB-1016 | Not detected | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| PCB-1221 | Not detected | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| PCB-1232 | Not detected | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| PCB-1242 | Not detected | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| PCB-1248 | Not detected | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| PCB-1254 | Not detected | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| PCB-1260 | 0.2 | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |

Lab Sample ID: S50305.05 (continued)
Sample Tag: WMU#4-TANKSC-DECONWASH

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - PCBs/Pesticides (continued)*** | | | | | | | | |
| **PCB (continued)** | | | | | | | | |
| PCB, Total | 0.2 | ug/L | 0.1 | 608 | 10/17/11 15:26 | JANB | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/L | 300 | 8270C | 10/14/11 20:53 | PL | | |
| p,m-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 20:53 | PL | 200,000 | |
| o-Cresol | Not detected | ug/L | 300 | 8270C | 10/14/11 20:53 | PL | 200,000 | |
| Nitrobenzene | Not detected | ug/L | 300 | 8270C | 10/14/11 20:53 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 300 | 8270C | 10/14/11 20:53 | PL | 5,000 | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:53 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:53 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:53 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:53 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 10/14/11 20:53 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 10/14/11 20:53 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 10/14/11 20:53 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 10/14/11 20:53 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 10/14/11 20:53 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 10/14/11 20:53 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 10/14/11 20:53 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/L | 2,000 | 8260M | 10/14/11 19:22 | JGH | | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 20:24 | WAT | | |
| Cyclohexanone | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |
| Ethyl Acetate | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |
| Isobutanol | Not detected | ug/L | 1,000 | 8260M | 10/13/11 20:24 | WAT | | |
| 2-Nitropropane | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | 500 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | 500 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | 100,000 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| Ethylbenzene | 2 | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| Methylene chloride | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | 700 | |
| Toluene | 11 | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| Trichloroethene | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | 500 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| p,m-Xylene | 5 | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| o-Xylene | 1 | ug/L | 1 | 8260M | 10/13/11 20:24 | WAT | | |
| Acetone | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |

Lab Sample ID: S50305.05 (continued)
Sample Tag: WMU#4-TANKSC-DECONWASH

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 2-Butanone (MEK) | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | 200,000 | |
| Carbon disulfide | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |
| Diethyl ether | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 100 | 8260M | 10/13/11 20:24 | WAT | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Carbon tetrachloride | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Chlorobenzene | Incomplete | ug/L | | 8260B | / / | | 100,000 | |
| Chloroform | Incomplete | ug/L | | 8260B | / / | | 6,000 | |
| 1,4-Dichlorobenzene | Incomplete | ug/L | | 8260B | / / | | 7,500 | |
| 1,2-Dichloroethane | Incomplete | ug/L | | 8260B | / / | | 500 | |
| 1,1-Dichloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| 2-Butanone (MEK) | Incomplete | ug/L | | 8260B | / / | | 200,000 | |
| Tetrachloroethene | Incomplete | ug/L | | 8260B | / / | | 700 | |
| Trichloroethene | Incomplete | ug/L | | 8260B | / / | | 500 | |
| Vinyl chloride | Incomplete | ug/L | | 8260B | / / | | 200 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 20:24 | WAT | | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 10/13/11 20:24 | WAT | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/L | 1 | 8260B | 10/13/11 20:24 | WAT | | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | mg/L | 0.400 | 8015M | 10/14/11 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC101011.02

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| **Address:** | **Fax:** |
| 10559 Citation Dr, Suite 100 | 810-229-8837 |
| **City State Zip** | **E-mail Address:** |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |
| **Project Name/Location (City, State):** | **Project #:** |
| Buick City/ Flint, MI | B0064410.2011.00900 |
| **Sampler's Printed Name:** | **Sampler's Signature:** |
| Tony Maffeo | [signature] |

**PARAMETER ANALYSIS & METHOD**

| Preservative | B | E | E | E | E | E | F |
|---|---|---|---|---|---|---|---|
| Filtered (Y) | NA | NA | NA | NA | NA | NA | NA |
| # of Containers | 2 | 2 | 2 | 4 | 1 | 2 | 1 |
| Container Information | 1 | 1 | 2 | 2 | 8 | 10 | 1 |

| Sample ID | Collection Date | Collection Time | Type Comp. | Type Grab | Matrix | See attached Sheet For "Buick City F-List Analyte List" | See attached Sheet For "Buick City F-List Analyte List" | See attached Sheet For "Buick City F-List Analyte List" | Reactivity, TCLP VOCs, TCLP SVOCs, TCLP Metals, PCB's | Reactivity, TCLP VOCs, TCLP SVOCs, TCLP Metals, PCB's | See attached Sheet For "Buick City F-List Analyte List" | See attached Sheet For "Buick City F-List Analyte List" | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50305.01 WMU#5-SOLID | 10/7/11 | 1100 | X | | SO | | | | | X | X | X | |
| .02 WMU#5-DECONWASH | 10/7/11 | 0900 | X | | W | X | X | X | X | | | | |
| .03 WMU#4-SOLID | 10/7/11 | 1250 | X | | SO | | | | | X | X | X | |
| .04 WMU#4-TANK-DECONWASH | 10/7/11 | 1510 | X | | W | X | X | X | X | | | | |
| .05 WMU#4-TANKSC-DECONWASH | 10/7/11 | 1445 | X | | W | X | X | X | X | | | | |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge, SO = Soil, NL = NAPL / Oil, SW = Surface Wipe, W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: | Printed Name: Tony Maffeo | Printed Name: Jim Gleos | Printed Name: Paula Shaw |
| ☑ Cooler packed with ice (✓) | ☐ Intact ☐ Not Intact | Signature: [signature] | Signature: [signature] | Signature: [signature] |
| Specify Turnaround Requirements: 5-Day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: | Date/Time: 10-10-11 10:45 | Date/Time: 10-10-11 1045 | Date/Time: 10-10-11 1150 |

## BUICK CITY F-LIST SELECT ANALYTE LIST

**Select VOCs (USEPA Method 8260)**: 2-Ethoxyethanol, 2-Nitropropane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, Trichlorofluoromethane, and Xylenes.

**Select F-Scan VOCs (USEPA Method 8260)**: Cyclohexanone and Ethyl Acetate.

**Select USEPA Method 8015:** Isobutanol, methanol, and n-butyl alcohol.

**Select F-Scan SVOCs (USEPA Method 8270)**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine.

# Analytical Laboratory Report

Report ID: S51101.01(01)
Generated on 01/04/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51101.01
Project: B0064410.2011.00900 / Buick City / Flint MI
Collected Date: 12/15/2011
Submitted Date/Time: 12/16/2011 16:50
Sampled by: Megan Meckley
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (1 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51101.01 | IDW_12152011 | Soil | 12/15/2011 16:40 |

# Analytical Laboratory Report

Lab Sample ID: S51101.01
Sample Tag: IDW_12152011
Collected Date/Time: 12/15/2011 16:40
Matrix: Soil
COC Reference: BC121511.2

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 32oz Glass | None | Yes | 5.1 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Extraction, PCB | Completed | | | 3550B | 12/20/11 15:02 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 12/29/11 10:05 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 12/29/11 01:00 | SLR | | |
| TCLP Zero Headspace Ext. | Completed | | | 1311 | 12/27/11 12:00 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 12/28/11 15:48 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 9.62 | | | 1311 | 12/27/11 17:00 | WAR | | |
| pH after 3.5 ml HCl | 1.96 | | | 1311 | 12/27/11 17:00 | WAR | | |
| % Solids | 100 | | | 1311 | 12/27/11 17:00 | WAR | | |
| Sample Used g | 100 | | | 1311 | 12/27/11 17:00 | WAR | | |
| Final Volume mL | 2,000 | | | 1311 | 12/27/11 17:00 | WAR | | |
| TCLP Extraction Fluid | 1 | | | 1311 | 12/27/11 17:00 | WAR | | |
| Final Extract pH | 5.98 | | | 1311 | 12/27/11 17:00 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 12/19/11 11:00 | DJS | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 12/29/11 13:40 | SLS | 5.0 | |
| Barium, TCLP | 1.63 | mg/L | 0.05 | 6020 | 12/29/11 13:40 | SLS | 100.0 | |
| Cadmium, TCLP | 0.009 | mg/L | 0.005 | 6020 | 12/29/11 13:40 | SLS | 1.0 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 12/29/11 13:40 | SLS | 5.0 | |
| Lead, TCLP | 0.07 | mg/L | 0.03 | 6020 | 12/29/11 13:40 | SLS | 5.0 | |
| Mercury, TCLP | Not detected | mg/L | 0.0002 | 7471A | 12/29/11 14:59 | JRT | 0.2 | |
| Selenium, TCLP | 0.07 | mg/L | 0.05 | 6020 | 12/29/11 13:40 | SLS | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 12/29/11 13:40 | SLS | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB List** | | | | | | | | |
| PCB-1016 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| PCB-1242 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| PCB-1221 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| PCB-1232 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| PCB-1248 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| PCB-1254 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| PCB-1260 | Not detected | ug/kg | 330 | 8082A | 12/21/11 15:03 | JANB | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 01/03/12 18:21 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 01/03/12 18:21 | PL | 200,000 | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 01/03/12 18:21 | PL | 100,000 | |

# Analytical Laboratory Report

Lab Sample ID: S51101.01 (continued)
Sample Tag: IDW_12152011

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles (continued)*** | | | | | | | | |
| **TCLP Semi Volatiles (continued)** | | | | | | | | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 01/03/12 18:21 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 01/03/12 18:21 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 01/03/12 18:21 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 01/03/12 18:21 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 01/03/12 18:21 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 01/03/12 18:21 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 01/03/12 18:21 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 01/03/12 18:21 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 500 | |
| Carbon tetrachloride | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 500 | |
| Chlorobenzene | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 100,000 | |
| Chloroform | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 6,000 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 7,500 | |
| 1,2-Dichloroethane | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 500 | |
| 1,1-Dichloroethene | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 700 | |
| 2-Butanone (MEK) | Not detected | ug/L | 1,000 | 8260B | 12/29/11 21:20 | WAT | 200,000 | |
| Tetrachloroethene | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 700 | |
| Trichloroethene | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 500 | |
| Vinyl chloride | Not detected | ug/L | 100 | 8260B | 12/29/11 21:20 | WAT | 200 | |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC121511.2

**Send Results To:**

| | |
|---|---|
| Contact & Company Name: Mike Brennan ARCADIS | Telephone: 248-994-2276 |
| Address: 10559 Citation Dr, Suite 100 | Fax: 810-229-8837 |
| City State Zip: Brighton, MI 48116 | E-mail Address: michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): Buick City/ Flint, MI | Project #: B0064410.2011.00900 |
| Sampler's Printed Name: Megan Meckley | Sampler's Signature: Megan Meckley |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | E | | | | | | | | | | | | |
| Filtered (✓) | NA | | | | | | | | | | | | |
| # of Containers | 1 | | | | | | | | | | | | |
| Container Information | 8 | | | | | | | | | | | | |

**PARAMETER ANALYSIS & METHOD**

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | | TCLP VOCs/SVOCs/Metals, PCBs, total solids | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IDW_12152011 | 12/15/11 | 1640 | X | | SO | | X | | | | | | | | |

51101.01

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge
SO = Soil, NL = NAPL / Oil, SW = Surface
Wipe
W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal | Printed Name: Megan Meckley | Printed Name: | Printed Name: Paula Shaw |
| ☑ Cooler packed with ice (✓) | ☐ Intact ☐ Not Intact | Signature: Megan Meckley | Signature: | Signature: [signature] |
| Specify Turnaround Requirements: Standard TAT | Sample Receipt: | ARCADIS | Firm: | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 5.1 | Date/Time: 12/16/11 4:00pM | Date/Time: | Date/Time: 12-16-11 1650 |

# Analytical Laboratory Report

Revised Report

Report ID: S51446.01(02)
Generated on 03/23/2012
Replaces report S51446.01(01) generated on 02/14/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51446.01-S51446.02
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/27/2012
Submitted Date/Time: 01/30/2012 08:25
Sampled by: Megan Meckley
P.O. #: PO126110

Matrix for sample .01 changed to match COC.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#L11-184), WBENC (#2005110032)
Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814), NELAC FL (#E871045)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (2 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51446.01 | IDW_01272012 | Soil | 01/27/2012 17:25 |
| S51446.02 | Tripblank_01272012 | Methanol | 01/27/2012 17:00 |

# Analytical Laboratory Report

Revised Report

Lab Sample ID: S51446.01
Sample Tag: IDW_01272012
Collected Date/Time: 01/27/2012 17:25
Matrix: Soil
COC Reference: BCO12712.2

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 1L Amber | None | Yes | 10.0 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Extraction, PCB | Completed | | | 3550B | 01/30/12 15:48 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 02/10/12 11:15 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 02/13/12 11:00 | PER | | |
| TCLP Zero Headspace Ext. | Completed | | | 1311 | 02/07/12 15:30 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 02/09/12 20:34 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 10.83 | | | 1311 | 02/08/12 15:30 | WAR | | |
| pH after 3.5 ml HCl | 5.20 | | | 1311 | 02/08/12 15:30 | WAR | | |
| % Solids | 100 | | | 1311 | 02/08/12 15:30 | WAR | | |
| Sample Used g | 100 | | | 1311 | 02/08/12 15:30 | WAR | | |
| Final Volume mL | 2,000 | | | 1311 | 02/08/12 15:30 | WAR | | |
| TCLP Extraction Fluid | 2 | | | 1311 | 02/08/12 15:30 | WAR | | |
| Final Extract pH | 5.19 | | | 1311 | 02/08/12 15:30 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 02/03/12 14:01 | PL | | |
| Total Solids | 65 | % | 1 | Std M 2540 B | 02/01/12 14:00 | WAR | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 02/13/12 14:16 | PER | 7440-38-2 | |
| Barium, TCLP | 0.50 | mg/L | 0.05 | 6020 | 02/13/12 14:16 | PER | 7440-39-3 | |
| Cadmium, TCLP | Not detected | mg/L | 0.005 | 6020 | 02/13/12 14:16 | PER | 7440-43-9 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 02/13/12 14:16 | PER | 7440-47-3 | |
| Lead, TCLP | 0.06 | mg/L | 0.03 | 6020 | 02/13/12 14:16 | PER | 7439-92-1 | |
| Mercury, TCLP | Not detected | mg/L | 0.0002 | 7471A | 02/10/12 15:55 | JRT | 7439-97-6 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 02/13/12 14:16 | PER | 7782-49-2 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 02/13/12 14:16 | PER | 7440-22-4 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB List** | | | | | | | | |
| PCB-1016 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 12674-11-2 | |
| PCB-1242 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 53469-21-9 | |
| PCB-1221 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 11104-28-2 | |
| PCB-1232 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 11141-16-5 | |
| PCB-1248 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 12672-29-6 | |
| PCB-1254 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 11097-69-1 | |
| PCB-1260 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | 11096-82-5 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 3/4-Cresol | |

Lab Sample ID: S51446.01 (continued)
Sample Tag: IDW_01272012

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles (continued)*** | | | | | | | | |
| **TCLP Semi Volatiles (continued)** | | | | | | | | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 87-86-5 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 95-95-4 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 88-06-2 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 02/10/12 13:38 | PL | 121-14-2 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 02/10/12 13:38 | PL | 118-74-1 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 87-68-3 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 67-72-1 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 56-23-5 | |
| Chlorobenzene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 108-90-7 | |
| Chloroform | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 67-66-3 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 106-46-7 | |
| 1,2-Dichloroethane | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 107-06-2 | |
| 1,1-Dichloroethene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 75-35-4 | |
| 2-Butanone (MEK) | Not detected | ug/L | 1,000 | 8260B | 02/10/12 16:52 | WAT | 78-93-3 | |
| Tetrachloroethene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 127-18-4 | |
| Trichloroethene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 79-01-6 | |
| Vinyl chloride | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 75-01-4 | |

# Analytical Laboratory Report

Revised Report

Lab Sample ID: S51446.02
Sample Tag: Tripblank_01272012
Collected Date/Time: 01/27/2012 17:00
Matrix: Methanol
COC Reference: BCO12712.2

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 10.0 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| No Analyses | Completed | | | | 01/31/12 08:45 | PCS | | |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012712.2

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| **Address:** | **Fax:** |
| 10559 Citation Dr, Suite 100 | 810-229-8837 |
| **City State Zip** | **E-mail Address:** |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |

| Project Name/Location (City, State): | Project #: |
|---|---|
| Buick City/ Flint, MI | B0064410.2012.00900 |
| **Sampler's Printed Name:** | **Sampler's Signature:** |
| Megan Meckley | Megan Meckley |

| Preservative | E | E | F |
|---|---|---|---|
| Filtered (✓) | NA | NA | NA |
| # of Containers | 1 | 6 | 1 |
| Container Information | 8 | 2 | 1 |

**PARAMETER ANALYSIS & METHOD**

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | TCLP VOCs/SVOCs/Metals, PCBs, total solids, ignitability | TCLP VOCs/SVOCs/ Metals/ PCBs, pH, reactivity, ignitability | Methanol |
|---|---|---|---|---|---|---|---|---|
| 51446.01 IDW-01272012 | 1-27-12 | 7:25 | X | | SO | X | | |
| .02 TRIPBLANK-01272012 | 1-27-12 | 17:00 | | X | W | | | |
| | | | | | | | | X |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge, SO = Soil, NL = NAPL / Oil, SW = Surface, Wipe, W = Water, T = Tissue

**REMARKS**

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS). **Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal | Printed Name: Megan Meckley | Printed Name: Merit Drop Box | Printed Name: Andrew Bell |
| ☑ Cooler packed with ice (✓) NO | ☐ Intact ☐ Not Intact | Signature: Megan Meckley | Signature: | Signature: Andrew Bell |
| Specify Turnaround Requirements: Standard TAT | Sample Receipt: | ARCADIS | Firm: | Firm: MERIT |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 10.0 | Date/Time: 1-27-12 - 1845 | Date/Time: | Date/Time: 30JAN12 0825 |



827101V
DATE TIME PRESERVATIVE CLIENT
...go, IL • Richmond, VA
...m (800) 233-8425

**Appendix E**

Manifests

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID 005 356 712
2. Page 1 of: 1
3. Emergency Response Phone: (248) 225-3277
4. Manifest Tracking Number: 001927744 JJK

5. Generator's Name and Mailing Address: RACER TRUST / NAO FLINT OPERA
2930 ECORSE RD
YPSILANTI, MI 48198
Generator's Phone: (248) 225-3277

Generator's Site Address (if different than mailing address):
902 E. LEITH ST
FLINT, MI 48550

6. Transporter 1 Company Name
U.S. EPA ID Number

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

U.S. EPA ID Number: MID 000 724 831

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | NA3077, Hazardous waste, solid, n.o.s. (xylene), 9, PGIII, ERG #171 | 002 | DM | 01000 | P | D003 | F005 | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
K112159MDI / Solid Haz Non-PCB - WMU#4
Partial rejection from line 1 of manifest 008257945JJK due to free liquids - ok per Tony Maffeo @ Arcadis

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: John Bobowik
Signature
Month / Day / Year

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name — Signature — Month / Day / Year
Transporter 2 Printed/Typed Name — Signature — Month / Day / Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month / Day / Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H111 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: MICHAEL R RODE
Signature
Month / Day / Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 004038057 FLE

5. Generator's Name and Mailing Address
RACER Trust
401 S. Old Woodward
Birmingham, MI 48009 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
RACER Trust
902 E. Leith St
Flint, MI 48550-4512

6. Transporter 1 Company Name: Young's Environmental Cleanup Inc.
U.S. EPA ID Number: MID106869506

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Advanced Resource Recovery
27140 Princeton Avenue
Inkster, MI 48141 313-724-8600
Facility's Phone:
U.S. EPA ID Number: MID057002802

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. Other waste (water) | 001 | TT | 10,500 | G | ~~D29L~~ |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
9b.1. Non-Hazardous Water
*If spilled, dike area, contain in drums contact Chemtrec
5483-4

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. Nealcom Agent for Racer
Signature: [signature]
Month 10 Day 03 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: William Billings
Signature: William Billings
Month 10 Day 3 Year 11
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sarah deBruin
Signature: Sarah deBruin
Month 10 Day 3 Year 11

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 004038058 FLE

5. Generator's Name and Mailing Address
RACER Trust
401 S. Old Woodward
Birmingham, MI 48009 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
RACER Trust
902 E. Leith St
Flint, MI 48550-4512

6. Transporter 1 Company Name: Young's Environmental Cleanup Inc.
U.S. EPA ID Number: MID106869508

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Advanced Resource Recovery
27140 Princeton Avenue
Inkster, MI 48141 313-724-8600
Facility's Phone:
U.S. EPA ID Number: MID057002802

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. Other waste (water) | 001 | TT | 4900 | G | 028L |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
9b.1. Non-Hazardous Water
*If spilled, dike area, contain in drums contact Chemtrec
#5483-4

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. Newman AGENT FOR RACER
Signature: D Newman
Month 10 Day 03 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Roger Gabriel
Signature: Roger Gabriel
Month 10 Day 03 Year 11
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sarah deBruin
Signature: Sarah deBruin
Month 10 Day 03 Year 11

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of: 1
3. Emergency Response Phone: 313-486-2908
4. Manifest Tracking Number: 005280338 FLE

5. Generator's Name and Mailing Address
Racer trust/Arcadis NAO Flint Attn: Beth Nanzer
28550 Cabot Drive
Novi, MI 48377 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
Racer Trust NAO Flint Ops Attn: Beth Nanzer
902 E. Leith
Flint, MI 48550 313-486-2908

6. Transporter 1 Company Name: U.S. Industrial Technologies
U.S. EPA ID Number: MIK755944491

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
U.S. Industrial Technologies, Inc.
13075 Newburgh Road
Livonia, MI 48150 734-462-4100
Facility's Phone:
U.S. EPA ID Number: MIK755944491

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| | 1. Non RCRA, Non DOT Regulated Material | 04 | DM | 220 | G | NONE | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1) # RTFN-OT-0222-01 Solid Non Haz, Non PCB - WMU IDW

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: B. Nanzer for Racer
Signature:
Month 3 Day 21 Year 12

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Todd Thomas
Signature:
Month 3 Day 21 Year 12
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

008257943JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID 005 356 712
2. Page 1 of 1
3. Emergency Response Phone: (248) 225-3277
4. Manifest Tracking Number: 008257943 JJK

5. Generator's Name and Mailing Address: RACER TRUST / NAO FLINT OPERA
2930 ECORSE RD
YPSILANTI, MI 48198
Generator's Phone: (248) 225-3277

Generator's Site Address (if different than mailing address):
902 E. LEITH ST
FLINT, MI 48550

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES
U.S. EPA ID Number: MIO 000 263 871

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ DETROIT, INC.
1923 FREDERICK
DETROIT, MI 48211
Facility's Phone: (313) 347-1300
U.S. EPA ID Number: MID 980 991 566

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. NA3082, Hazardous waste, liquid, n.o.s. (toluene, xylene), 9, PGIII, ERG #171 | 038 | DM | 2090 | G | F005 F003 |
| | 2. NON HAZARDOUS NON REGULATED LIQUID WASTE | 002 | DM | 0110 | G | U239 |
| | 3. NON HAZARDOUS SOLID WASTE, NOT DOT NOT RCRA REGULATED | 011 | DM | 04000 | P | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. K117171DET / Liquid Haz Non-PCB - WMU#4&5 2. K117170DET / Liquid Nonhaz Non-PCB - WMU#5 - Totes 3. K117172DET / Solid Nonhaz Non-PCB - WMU #5

DRUM HAS EXG BOOK #

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. NEWCOM (AGENT FOR RACER) Signature: [signature] Month 11 Day 14 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Raymond Root Signature: [signature] Month 11 Day 14 Year 11
Transporter 2 Printed/Typed Name: Signature: Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. LIW 3. NONE 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tammy J. Ihrke Signature: [signature] Month 11 Day 14 Year 11

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

008257945JJK

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID 005 356 712
2. Page 1 of 1
3. Emergency Response Phone: (248) 225-3277
4. Manifest Tracking Number: 008257945 JJK

5. Generator's Name and Mailing Address: RACER TRUST / NAO FLINT OPERA
2930 ECORSE RD
YPSILANTI, MI 48198
Generator's Phone: (248) 225-3277

Generator's Site Address (if different than mailing address): 902 E. LEITH ST FLINT, MI 48550

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MID 000 263 871
7. Transporter 2 Company Name: EQ Industrial Services — U.S. EPA ID Number: MID000 263 871
8. Designated Facility Name and Site Address: WAYNE DISPOSAL, INC SITE 2 LANDFILL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 048 090 633

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. NA3077, Hazardous waste, solid, n.o.s. (xylene), 9, PGIII, ERG #171 | 004 | DM | 1000 2000 | P | D003 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. K117178WDI / Solid Haz Non-PCB - WMUM
DRIVER HAS ERG BOOK RSN

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. NEWCOMB (AGENT FOR RACER) — Signature: [signature] — Month 11 Day 14 Year 11

**INTL**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Raymond Root — Signature: [signature] — Month 11 Day 14 Year 11
Transporter 2 Printed/Typed Name: Ryan Rushner — Signature: [signature] — Month 11 Day 14 Year 11

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☒ Partial Rejection ☐ Full Rejection
ok to change manifest per Tony Maffeo @ Arcadis 11-17-11 JB
Manifest Reference Number: ~~001927744JJK~~
U.S. EPA ID Number
18b. Alternate Facility (or Generator)
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tonya Cowgill — Signature: [signature] — Month 11 Day 17 Year 11

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 004038057 FLE

5. Generator's Name and Mailing Address
RACER Trust
401 S. Old Woodward
Birmingham, MI 48009 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
RACER Trust
902 E. Leith St
Flint, MI 48550-4512

6. Transporter 1 Company Name: Young's Environmental Cleanup Inc.
U.S. EPA ID Number: MID106869506

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Advanced Resource Recovery
27140 Princeton Avenue
Inkster, MI 48141 313-724-8600
Facility's Phone:
U.S. EPA ID Number: MID057002802

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. Other waste (water) | 001 | TT | 10,500 | G | ~~D29L~~ |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
9b.1. Non-Hazardous Water
*If spilled, dike area, contain in drums contact Chemtrec
5483-4

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. Nealcom Agent for Racer
Signature: [signature]
Month 10 Day 03 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: William Billings
Signature: William Billings
Month 10 Day 3 Year 11
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sarah deBruin
Signature: Sarah deBruin
Month 10 Day 3 Year 11

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 004038058 FLE

5. Generator's Name and Mailing Address
RACER Trust
401 S. Old Woodward
Birmingham, MI 48009 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
RACER Trust
902 E. Leith St
Flint, MI 48550-4512

6. Transporter 1 Company Name: Young's Environmental Cleanup Inc.
U.S. EPA ID Number: MID106869508

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Advanced Resource Recovery
27140 Princeton Avenue
Inkster, MI 48141 313-724-8600
Facility's Phone:
U.S. EPA ID Number: MID057002802

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| | 1. Other waste (water) | 001 | TT | 4900 | G | 028L |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
9b.1. Non-Hazardous Water
*If spilled, dike area, contain in drums contact Chemtrec
#5483-4

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. Newman AGENT FOR RACER
Signature: D Newman
Month 10 Day 03 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Roger Gabriel
Signature: Roger Gabriel
Month 10 Day 03 Year 11
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sarah deBruin
Signature: Sarah deBruin
Month 10 Day 03 Year 11

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of: 1
3. Emergency Response Phone: 313-486-2908
4. Manifest Tracking Number: 005280338 FLE

5. Generator's Name and Mailing Address
Racer trust/Arcadis NAO Flint Attn: Beth Nanzer
28550 Cabot Drive
Novi, MI 48377 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
Racer Trust NAO Flint Ops Attn: Beth Nanzer
902 E. Leith
Flint, MI 48550 313-486-2908

6. Transporter 1 Company Name: U.S. Industrial Technologies
U.S. EPA ID Number: MIK755944491

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
U.S. Industrial Technologies, Inc.
13075 Newburgh Road
Livonia, MI 48150 734-462-4100
Facility's Phone:
U.S. EPA ID Number: MIK755944491

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| | 1. Non RCRA, Non DOT Regulated Material | 04 | DM | 220 | G | NONE | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1) # RTFN-OT-0222-01 Solid Non Haz, Non PCB - WMU IDW

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: B. Nanzer for Racer
Signature:
Month 3 Day 21 Year 12

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Todd Thomas
Signature:
Month 3 Day 21 Year 12
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

008257943JJK

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID 005 356 712
2. Page 1 of 1
3. Emergency Response Phone: (248) 225-3277
4. Manifest Tracking Number: 008257943 JJK

5. Generator's Name and Mailing Address: RACER TRUST / NAO FLINT OPERA
2930 ECORSE RD
YPSILANTI, MI 48198
Generator's Phone: (248) 225-3277

Generator's Site Address (if different than mailing address):
902 E. LEITH ST
FLINT, MI 48550

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES
U.S. EPA ID Number: MIO 000 263 871

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ DETROIT, INC.
1923 FREDERICK
DETROIT, MI 48211
Facility's Phone: (313) 347-1300
U.S. EPA ID Number: MID 980 991 566

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. NA3082, Hazardous waste, liquid, n.o.s. (toluene, xylene), 9, PGIII, ERG #171 | 038 | DM | 2090 | G | F005 F003 |
| | 2. NON HAZARDOUS NON REGULATED LIQUID WASTE | 002 | DM | 0110 | G | U239 |
| | 3. NON HAZARDOUS SOLID WASTE, NOT DOT NOT RCRA REGULATED | 011 | DM | 04000 | P | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. K117171DET / Liquid Haz Non-PCB - WMU#4&5 2. K117170DET / Liquid Nonhaz Non-PCB - WMU#5 - Totes 3. K117172DET / Solid Nonhaz Non-PCB - WMU #5

DRUM HAS EXG BOOK #

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. NEWCOM (AGENT FOR RACER) Signature: [signature] Month 11 Day 14 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Raymond Root Signature: [signature] Month 11 Day 14 Year 11
Transporter 2 Printed/Typed Name: Signature: Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. LIW 3. NONE 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tammy J. Ihrke Signature: [signature] Month 11 Day 14 Year 11

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**

008257945JJK

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID 005 356 712
2. Page 1 of 1
3. Emergency Response Phone: (248) 225-3277
4. Manifest Tracking Number: 008257945 JJK

5. Generator's Name and Mailing Address: RACER TRUST / NAO FLINT OPERA
2930 ECORSE RD
YPSILANTI, MI 48198
Generator's Phone: (248) 225-3277

Generator's Site Address (if different than mailing address): 902 E. LEITH ST FLINT, MI 48550

6. Transporter 1 Company Name: EQ INDUSTRIAL SERVICES — U.S. EPA ID Number: MID 000 263 871
7. Transporter 2 Company Name: EQ Industrial Services — U.S. EPA ID Number: MID000 263 871
8. Designated Facility Name and Site Address: WAYNE DISPOSAL, INC SITE 2 LANDFILL
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 048 090 633

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. NA3077, Hazardous waste, solid, n.o.s. (xylene), 9, PGIII, ERG #171 | 004 | DM | 1000 2000 | P | D003 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
1. K117178WDI / Solid Haz Non-PCB - WMUM
DRIVER HAS ERG BOOK RSN

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: D. NEWCOMB (AGENT FOR RACER) — Signature: [signature] — Month 11 Day 14 Year 11

**INTL**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

**TRANSPORTER**
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Raymond Root — Signature: [signature] — Month 11 Day 14 Year 11
Transporter 2 Printed/Typed Name: Ryan Rushner — Signature: [signature] — Month 11 Day 14 Year 11

**DESIGNATED FACILITY**
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☒ Partial Rejection ☐ Full Rejection
ok to change manifest per Tony Maffeo @ Arcadis 11-17-11 JB
Manifest Reference Number: ~~001927744JJK~~
U.S. EPA ID Number
18b. Alternate Facility (or Generator)
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Tonya Cowgill — Signature: [signature] — Month 11 Day 17 Year 11

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

## Appendix F

Project Analyte List (PAL) VOCs and PAL SVOCs (BBL, 2001)

**TABLE 2**

**PROJECT ANALYTE LIST (PAL) AND TCLP CONSTITUENTS**

**MODIFIED TCL ANALYTES**

SEMIVOLATILE COMPOUNDS BY 8270C

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Acenaphthene | 83-32-9 | 3,3'-Dichlorobenzidine | 91-94-1 |
| Acenaphthylene | 208-96-8 | 2,4-Dichlorophenol | 120-83-2 |
| Acetophenone | 98-86-2 | Diethyl phthalate | 84-66-2 |
| Anthracene | 120-12-7 | Dimethyl phthalate | 131-11-3 |
| Atrazine | 1912-24-9 | 2,4-Dimethylphenol | 105-67-9 |
| Benzaldehyde | 100-52-7 | 4,6-Dinitro-2-methylphenol | 534-52-1 |
| Benzo(a)anthracene | 56-55-3 | 2,4-Dinitrophenol | 51-28-5 |
| Benzo(a)pyrene | 50-32-8 | 2,4-Dinitrotoluene | 121-14-2 |
| Benzo(b)fluoranthene | 205-99-2 | 2,6-Dinitrotoluene | 606-20-2 |
| Benzo(g,h,i)perylene | 191-24-2 | Fluoranthene | 206-44-0 |
| Benzo(k)fluoranthene | 207-08-9 | Fluorene | 86-73-7 |
| 1,1'-Biphenyl | 92-52-4 | Hexachlorobenzene | 118-74-1 |
| bis(2-chloroethoxy)methane | 111-91-1 | Hexachlorobutadiene | 87-68-3 |
| bis(2-chloroethyl)ether | 111-44-4 | Hexachlorocyclopentadiene | 77-47-4 |
| bis(2-chloroisopropyl)ether | 108-60-1 | Hexachloroethane | 67-72-1 |
| bis(2-ethylhexyl)phthalate | 117-81-7 | Indeno(1,2,3-cd)pyrene | 193-39-5 |
| 4-Bromophenyl phenylether | 101-55-3 | Isophorone | 78-59-1 |
| Butyl benzyl phthalate | 85-68-7 | 2-Methylnaphthalene | 91-57-6 |
| Caprolactam | 105-60-2 | Naphthalene | 91-20-3 |
| Carbazole | 86-74-8 | 2-Nitroaniline | 88-74-4 |
| 4-Chloro-3-methylphenol | 59-50-7 | 3-Nitroaniline | 99-09-2 |
| 4-Chloroaniline | 106-47-8 | 4-Nitroaniline | 100-01-6 |
| 2-Chloronaphthalene | 91-58-7 | Nitrobenzene | 98-95-3 |
| 2-Chlorophenol | 95-57-8 | 2-Nitrophenol | 88-75-5 |
| 4-Chlorophenyl-phenylether | 7005-72-3 | 4-Nitrophenol | 100-02-7 |
| 2,2'-oxybis(1-Chloropropane) | 108-60-1 | N-Nitrosodi-n-propylamine | 621-64-7 |
| Chrysene | 218-01-9 | N-Nitrosodiphenylamine | 86-30-6 |
| 2-Methylphenol (o-Cresol) | 95-48-7 | Pentachlorophenol | 87-86-5 |
| 4-Methylphenol (p-Cresol) | 106-44-5 | Phenanthrene | 85-01-8 |
| Di-n-butylphthalate | 84-74-2 | Phenol | 108-95-2 |
| Di-n-octylphthalate | 117-84-0 | Pyrene | 129-00-0 |
| Dibenz(a,h)anthracene | 53-70-3 | 2,4,5-Trichlorophenol | 95-95-4 |
| Dibenzofuran | 132-64-9 | 2,4,6-Trichlorophenol | 88-06-2 |

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Acetone | 67-64-1 | trans-1,2-Dichloroethene | 156-60-5 |
| Benzene | 71-43-2 | 1,2-Dichloropropane | 78-87-5 |
| Bromodichloromethane | 75-27-4 | cis-1,3-Dichloropropene | 10061-01-5 |
| Bromoform | 75-25-2 | trans-1,3-Dichloropropene | 10061-02-6 |
| Bromomethane | 74-83-9 | Ethylbenzene | 100-41-4 |
| 2-Butanone | 78-93-3 | 2-Hexanone | 591-78-6 |
| Carbon Disulfide | 75-15-0 | Isopropylbenzene | 98-82-8 |
| Carbon Tetrachloride | 56-23-5 | Methyl Acetate | 79-20-9 |
| Chlorobenzene | 108-90-7 | Methyl Cyclohexane | 108-87-2 |
| Chloroethane | 75-00-3 | 4-Methyl-2-pentanone | 108-10-1 |
| Chloroform | 67-66-3 | Methylene Chloride | 75-09-2 |
| Chloromethane | 74-87-3 | Methyl tert-Butyl Ether | 1634-04-4 |
| Cyclohexane | 110-82-7 | Styrene | 100-42-5 |
| Dibromochloromethane | 124-48-1 | 1,1,2,2-Tetrachloroethane | 79-34-5 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | Tetrachloroethene | 127-18-4 |
| 1,2-Dibromoethane | 106-93-4 | Toluene | 108-88-3 |
| 1,2-Dichlorobenzene | 95-50-1 | 1,2,4-Trichlorobenzene | 120-82-1 |
| 1,3-Dichlorobenzene | 541-73-1 | 1,1,1-Trichloroethane | 71-55-6 |
| 1,4-Dichlorobenzene | 106-46-7 | 1,1,2-Trichloroethane | 79-00-5 |
| Dichlorodifluoromethane | 75-71-8 | Trichloroethene | 79-01-6 |
| 1,1-Dichloroethane | 75-34-3 | Trichlorofluoromethane | 75-69-4 |
| 1,2-Dichloroethane | 107-06-2 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 |
| 1,1-Dichloroethene | 75-35-4 | Vinyl Chloride | 75-01-4 |
| cis-1,2-Dichloroethene | 156-59-2 | Xylenes (total) | 1330-20-7 |

## TABLE 2

## PROJECT ANALYTE LIST (PAL) AND TCLP CONSTITUENTS

### MODIFIED TCL ANALYTES

AROCLORS BY 8082

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Aroclor-1016 | 12674-11-2 | Aroclor-1248 | 12672-29-6 |
| Aroclor-1221 | 11104-28-2 | Aroclor-1254 | 11097-69-1 |
| Aroclor-1232 | 11141-16-5 | Aroclor-1260 | 11096-82-5 |
| Aroclor-1242 | 53469-21-9 | | |

### MODIFIED TAL LIST (TOXIC TAL ANALYTES PLUS ADDITIONAL CONSTITUENTS)

INORGANICS BY 6010B/7000A

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Antimony | 7440-36-0 | Lead | 7439-92-1 |
| Arsenic | 7440-38-2 | Manganese | 7439-96-5 |
| Barium | 7440-39-3 | Mercury | 7439-97-6 |
| Beryllium | 7440-41-7 | Nickel | 7440-02-0 |
| Cadmium | 7440-43-9 | Selenium | 7782-49-2 |
| Chromium | 7440-47-3 | Silver | 7440-22-4 |
| Cobalt | 7440-48-4 | Thallium | 7440-28-0 |
| Copper | 7440-50-8 | Vanadium | 7440-62-2 |
| Cyanide | 7440-50-7 | Zinc | 7440-66-6 |

### TCLP ANALYTES

SEMIVOLATILE COMPOUNDS BY 8270C - 1311 (TCLP)

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Antimony | 7440-36-0 | 4-Methylphenol (p-Cresol) | 106-44-5 |
| 2,4-Dinitrotoluene | 121-14-2 | Nitrobenzene | 98-95-3 |
| Hexachlorobenzene | 118-74-1 | Pentachlorophenol | 87-86-5 |
| Hexachlorobutadiene | 87-68-3 | Pyridine | 110-86-1 |
| Hexachloroethane | 67-72-1 | 2,4,5-Trichlorophenol | 95-95-4 |
| 2-Methylphenol (o-Cresol) | 95-48-7 | 2,4,6-Trichlorophenol | 88-06-2 |
| 3-Methylphenol (m-Cresol) | 108-39-4 | | |

VOLATILE COMPOUNDS BY 8260B - 1311 (TCLP)

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Benzene | 71-43-2 | 1,1-Dichloroethene | 75-35-4 |
| Carbon Tetrachloride | 56-23-5 | 2-Butanone | 78-93-3 |
| Chlorobenzene | 108-90-7 | Tetrachloroethene | 127-18-4 |
| Chloroform | 67-66-3 | Trichloroethene | 79-01-6 |
| 1,4-Dichlorobenzene | 106-46-7 | Vinyl Chloride | 75-01-4 |
| 1,2-Dichloroethane | 107-06-2 | | |

AROCLORS BY 8082 - 1311 (TCLP)

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Aroclor-1016 | 12674-11-2 | Aroclor-1248 | 12672-29-6 |
| Aroclor-1221 | 11104-28-2 | Aroclor-1254 | 11097-69-1 |
| Aroclor-1232 | 11141-16-5 | Aroclor-1260 | 11096-82-5 |
| Aroclor-1242 | 53469-21-9 | | |

INORGANICS BY 6010B/7000A, 9010B, 9030B - TCLP

| Analyte | CAS No. | Analyte | CAS No. |
|---|---|---|---|
| Arsenic | 7440-38-2 | Lead | 7439-92-1 |
| Barium | 7440-39-3 | Mercury | 7439-97-6 |
| Cadmium | 7440-43-9 | Selenium | 7782-49-2 |
| Chromium | 7440-47-3 | Silver | 7440-22-4 |

Notes:

1) This list summarizes the compounds by fraction which are analyzed in accordance with the Superfund Target Compound List (TCL) for volatile and semivolatile organics, and Superfund toxic Target Analyte List (toxic TAL) for inorganics. Additional compounds have been added to this list based on prior Site analytical data.

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 20, 2011

Mr. Grant Trigger
Cleanup Manager
RACER Trust
401 South Old Woodward Avenue, Suite 370
Birmingham, Michigan 48009

Dear Mr. Trigger:

SUBJECT: Acceptance of Certification of Closure for Factory 36 RCRA WMU #1, Container Storage Area (Closure Certification); RACER Trust, Former General Motors Corporation North American Operations Facility; MID 005 356 712

The Department of Environmental Quality (DEQ), Resource Management Division (RMD), has reviewed the June 13, 2011, Closure Certification for the Factory 36 WMU #1, which was submitted on your behalf by ARCADIS. Based on our review the RMD has determined that closure of this container storage area (WMU #1) at the facility is complete pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the administrative rules promulgated thereto.

In accordance with R 299.9703(5), this acceptance of the closure constitutes a release from the requirement to maintain financial assurance for closure of the Factory 36 WMU #1. This acceptance of closure does not constitute a release from any corrective action responsibilities that RACER Trust may have under Part 111 or the federal Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984.

Should you require further information, please contact Mr. Pete Quackenbush, Hazardous Waste Section, RMD, at 517-373-7397; quackenbushp@michigan.gov; or DEQ, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Liane J. Shekter Smith, P.E., Chief
Resource Management Division
517-373-9523

cc: Mr. Chris Peters, ARCADIS
Mr. Dave Favero, RACER Trust
Mr. Chris Black, Environmental Protection Agency, Region 5
Mr. Peter Quackenbush, DEQ
Mr. Dale Bridgford, DEQ
HWS-C&E File

RECEIVED JAN 1 7 2013

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

January 15, 2013

Mr. Grant Trigger
Cleanup Manager
RACER Trust
2930 Ecorse Road
Ypsilanti, Michigan 48198

Dear Mr. Trigger:

SUBJECT: Acceptance of Northend and Southend Certification of Closure Response Activities at RCRA Waste Management Units (WMUs) (Certifications); RACER Trust, Former General Motors Corporation North American Operations Facility; MID 005 356 712

The Michigan Department of Environmental Quality (MDEQ), Office of Waste Management and Radiological Protection (OWMRP), has reviewed the April 2, 2012, Certifications for WMUs 2, 4, 5, 6, 7, 8, and 10 that were submitted on your behalf by ARCADIS. Based on our review the OWMRP has determined that the closures of all the WMUs are complete pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the administrative rules promulgated thereto, MAC R 299.9101, *et. seq.*

Clean closure was accomplished for WMUs 6 and 8. However, there is residual contamination associated with WMUs 2, 4, 5, 7, and 10. WMUs 7 and 10 will be addressed through incorporation into the site-wide corrective action being conducted pursuant to the Corrective Action Consent Order (No. R8H-5-00-02) with the U.S Environmental Protection Agency (U.S. EPA) and by placing restrictive covenants for each unit on groundwater usage and soil relocation. WMUs 2, 4, and 5 will be addressed by placing restrictive covenants for each unit on groundwater usage and soil relocation.

In addition, the MDEQ previously agreed in a July 27, 2009, letter that Building 23 Container Storage was clean closed and that Factory 10, Building 20, will be addressed through incorporation into the site-wide corrective action being conducted pursuant to the Corrective Action Consent Agreement with the U.S. EPA and by placing restrictive covenants for each unit on groundwater usage and soil relocation.

In accordance with R 299.9703(5), this acceptance of the closure constitutes a release from the requirement to maintain financial assurance for closure of WMUs 2, 4, 5, 6, 7, 8, and 10, along with Building 23 and Factory 10, Building 20. This acceptance of closure does not constitute a release from any corrective action responsibilities that RACER Trust may have under Part 111 or the federal Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984.

Please note that if there are any property ownership transactions planned, that the required notifications pursuant to R 299.9522 and R 299.9525 along with paragraph 64 of the RACER Trust settlement must be made to the OWMRP and U.S. EPA, as appropriate.

If you have any questions or comments, please contact Mr. Peter Quackenbush, Hazardous Waste Section, OWMRP, at 517 373 7397; quackenbushp@michigan.gov; or you may contact us at MDEQ, OWMRP, P.O. Box 30241, Lansing, Michigan 48909 7741.

Sincerely,

Elizabeth M. Browne

Elizabeth M. Browne, Chief
Office of Waste Management and Radiological Protection
517-373-9523

cc: Mr. Chris Peters, ARCADIS
Mr. Mike Brennan, ARCADIS
Mr. Dave Favero, RACER Trust
Mr. Chris Black, Environmental Protection Agency, Region 5
Mr. William Yocum, MDEQ
Mr. Daniel Dailey, MDEQ
Mr. Peter Quackenbush, MDEQ
Mr. Dale Bridgford, MDEQ
HWS-C&E File

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837
**www.arcadis-us.com**

Mr. Peter Quackenbush
Waste Management Division
525 Allegan St., Atrium-North
Lansing, MI 48933

Subject:
Transmittal of *Southend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units for the Former General Motors Corporation North American Operations Facility (Otherwise known as Buick City)*

ENVIRONMENT

Date:
April 2, 2012

Contact:
Micki M. Maki

Phone:
248-994-2271

Email:
Micki.maki@Arcadis-us.com

Our ref:
B0064410.2012

Dear Mr. Quackenbush:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this *Southend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units for the Former General Motors Corporation North American Operations Facility (Otherwise known as Buick City)* (Certification Report). This Closure Report was prepared to document and summarize closure activities associated with Waste Management Units (WMUs) #7, #8, and #10 located at the Southend of the Buick City Site.

Based on an evaluation of the analytical data collected to date and discussions with the MDEQ the following requests for determination are made:

For WMU #7 - Building 41A, Assembly Plant Waste Storage Tank Area, it is requested that this WMU be deferred to corrective action due to the presence of sheen identified in the soil borings and the proximity of this WMU to known LNAPL plumes.

For WMU #8 - Building 02, Container Storage Area, it is requested that this WMU be clean closed.

For WMU #10 - Factory 86, Building 04, Assembly Plant Waste Storage Tanks, it is requested that this WMU be deferred to be addressed as part of the Site RCRA Corrective Action activities. In addition a restrictive covenant will be filed for this WMU documenting the potential for listed hazardous waste to be present beneath the WMU.

Sincerely,

ARCADIS G&M of Michigan, LLC

Micki M. Maki
Project Manger

Copies:
Grant Trigger (RACER Trust) – Via Email
Dave Favero (RACER Trust) – Via Email
Chris Black (USEPA) – Via Email
Chris Peters (ARCADIS) – Via Email

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# Revitalizing Auto Communities Environmental Response (RACER) Trust

# Southend: Certification of Closure for Closure Response Activities at RCRA Waste Management Units

Former General Motors Corporation
North American Operations Facility
(Otherwise known as Buick City)

Flint, Michigan

April 2, 2012

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# 1. Introduction

## 1.1 Overview

This Certification of Closure (Certification) has been prepared on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust by ARCADIS. This Certification is for the closure activities completed at the Resource Conservation and Recovery Act of 1976 (RCRA) Waste Management Units (WMU) located at Building 41A, Building 02, Building 23, and Factory 86 of the former General Motors Corporation (GMC) North American Operation (NAO) Flint Operations Site located at 902 East Leith Street in Flint, Michigan (the Site) (Figure 1 and Figure 2). On March 31, 2011, ownership of the site was transferred from Motors Liquidation Company (MLC) to RACER Properties LLC and responsibility for environmental remediation of the Site was transferred to RACER Trust. The United States Environmental Protection Agency (USEPA) ID No. for the Site is MID 005356712.

Specifically, this work plan covers the following WMUs, all of which are located in the Southend (the portion of the RACER property south of Leith Street) of the Site (Figure 2):

- Building 41A, Assembly Plant Waste Storage Tank Area (WMU #7)
- Building 02, Container Storage Area (WMU #8)
- Factory 86, Building 04, Assembly Plant Waste Storage Tanks (WMU #10)

## 1.2 Background

The Site is located at 902 East Leith Street in Flint, Michigan, and consists of approximately 450 acres of land. The portion of the Site located North of Leith Street is commonly referred to as the Northend, while the portion of the Site located South of Leith Street is referred to as the Southend. The Site is generally bounded to the north by Stewart Avenue and Pierson Road, to the south by Harriet Street, to the east by James P. Cole Boulevard, and CSX Railroad, and to the west by Industrial Avenue and North Street. The Site has been used since the early 1900s for automobile manufacturing, including various manufacturing processes including: ferrous and non-ferrous metal machining, plastic injection molding, metal forging and foundry, painting and finishing, vehicle assembly, and products testing.

The Site has been used since the early 1900s for various manufacturing processes including: ferrous and non-ferrous metal machining, plastic injection molding, metal forging and foundry, painting and finishing, vehicle assembly, and products testing. In the Southend of the Site, operations have ceased and the buildings have been demolished, with the exception of the administration building.

In April 2007, a *RCRA Waste Management Unit Closure Status Report* (Closure Status Report) was submitted to the Michigan Department of Environmental Quality (MDEQ) – Waste and Hazardous Materials Division (WHMD) summarizing 10 WMU areas and the proposed activities / information required for closure (ARCADIS BBL, 2007). In July 2009, the MDEQ – WHMD issued a response to the Closure Status Report detailing guidance on the activities needed to obtain closure of the 10 WMU areas (MDEQ, 2009).

In January 2010, a conference call between the Michigan Department of Natural Resources and the Environment (MDNRE) – WHMD (MDEQ was referred to as MDNRE between January 17, 2010 and March 13, 2011) and ARCADIS was held to discuss and clarify the July 2009 MDEQ-WHMD letter. During this call it was decided that WMUs located in the Northend and Southend would be addressed under separate work plans. In April 2010, it was decided that because of the schedule for demolition of Factory 36, the closure of WMU #1 needed to be accelerated and a separate work plan would be prepared for this activity. Therefore, three separate work plans were planned to be submitted for the Site's WMU areas (Factory 36, Northend, and Southend). The Southend work plan was approved by the MDEQ on October 7, 2011 (Appendix A).

## 2. WMU Closure Activities

Closure field work activities discussed below were performed between November 16, 2011 and January 27, 2012. Prior to beginning field work at each WMU area, the location of the WMU was staked by BMJ Surveying (BMJ). All sample locations were also surveyed by BMJ and the locations are presented on Figures 3 through 5. Also, a Ground Penetrating Radar (GPR) survey was completed on December 7, 2011 at each WMU area to provide subsurface information. A photo log documenting field activities is presented in Appendix B.

### 2.1 WMU #7 Closure Activities

Historically, the Building 41A, Assembly Plant Waste Storage Tank Area (WMU #7) contained four steel underground storage tanks (USTs) used to contain hazardous waste (tanks 73 and 74) and other waste (tanks 71 and 72). Tank 71 was a 10,000-gallon UST that stored transmission oil, tank 72 was a 16,000-gallon UST that stored waste solvents, tank 73 was a 10,000-gallon UST that stored hazardous chlorinated solvents (F003 and F005), and tank 74 was a 12,000-gallon UST that stored hazardous paint sludge (F003 and F005). These tanks were aligned end to end, and had a cement vault above the walkway which housed the associated piping system. Tank 71 was documented to be closed in place in January 1987, and tanks 72, 73, and 74 were documented to be removed also in January 1987.

#### 2.1.1 WMU Area Inspection

The WMU #7 area consists of a concrete area with former Division Street to the west, a gravel berm to the north and railroad tracks to the east. Cracking was observed in the concrete in the eastern and western portions of the WMU area. Staining was observed in the center of the WMU area. Soil boring locations were chosen during the initial inspection on November 16, 2011 in these areas of cracking and staining. Photographs of WMU #7 can be found in the Photo Log in Appendix B.

#### 2.1.2 Soil Sampling and Analytical Results

Three soil samples were collected based on the area of WMU #7 (approximately 588 square feet). All of the soil boring locations (WMU7_SB1 through WMU7_SB3) were placed in areas of observed cracking or staining. A Rotosonic drill rig was used to core through the surface concrete and complete the boring after the initial 0 to 5 feet below ground surface (bgs) was hand cleared. The surface concrete was approximately 1

foot thick. Based on historic data, a subsurface concrete pad was located below WMU #7 at approximately 13 feet bgs. During the soil boring completion, there was no evidence of a subsurface concrete pad. Therefore, all three soil borings were advanced to 16 feet bgs, below where the subsurface concrete pad was estimated to be located. Samples were collected below the groundwater table beneath potential fill materials (i.e., sand or gravel) in what was assumed to be native soil (i.e., dry to moist silty clay). Soil was continuously logged and photoionization detector (PID) measurements were recorded. Soil boring logs are presented in Appendix C. Sheen and staining was noted at all three boring locations. PID readings ranged from 0 to 12 parts per million (ppm). The soil sample locations were surveyed and are presented on Figure 3.

The soil samples were submitted to Merit Laboratories for analysis of the following F-listed waste analytical methods and constituents:

- **USEPA Method 8015**: 2-Ethoxyethanol, 2-Nitropropane, Isobutanol, Methanol, and n-Butyl Alcohol

- **USEPA Method 8260**: 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylene

- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The soil sample laboratory analytical results are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B (Act 307) criteria and the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, Part 201 generic cleanup (Part 201) criteria. The samples collected from WMU7_SB1 (15.5-16'), WMU7_SB2 (14.5-15'), and WMU7_SB3 (15.5-16') do not exceed Act 307 or Part 201 criteria.

However, a known release was reported from the USTs located at this WMU when they were removed in 1987 and a sheen was observed in all three soil borings completed at this WMU. It is unknown whether the historic release is associated with the product storage tank or hazardous waste storage tanks, Also, please note that

WMU #7 is located between LNAPL plumes AOI 02-B and AOI 40-A, B and 16-C. Due to the presence of sheen identified in the soil borings and the proximity of this WMU to known LNAPL plumes, response actions regarding this WMU are requested to be deferred to the ongoing RCRA Corrective Action activities on Site.

### 2.2 WMU #8 Closure Activities

Historically, the Building 02, Container Storage Area (WMU #8) stored methylene chloride (F001) and ignitable (D001) wastes from 1980 to 1984 in steel drums on pallets. The 15-foot by 30-foot storage area consisted of a concrete paved area along the north wall of Building 02. The storage area had a maximum capacity for 160 drums of waste materials.

#### 2.2.1 WMU Area Inspection

On November 16, 2011, a visual inspection of the WMU #8 area was completed. The WMU is approximately 1,860 square feet and consists of a concrete area with railroad tracks to the east. No waste drums or demolition debris or visible staining was observed in the area; however, cracking was observed. Soil boring locations were chosen based on the observed cracking in the concrete. Photographs of WMU #8 are presented on the Photo Log in Appendix B.

#### 2.2.2 Soil Sampling and Analytical Results

Five soil samples were collected based on the area of WMU #8 (approximately 1,860 square feet). All of the soil boring locations (WMU8_SB1 through WMU8_SB5) were placed in areas of observed cracking. A Rotosonic drill rig was used to core through the surficial concrete, which ranged in thickness from 10 to 24 inches. Once the surficial concrete was cored, the borings were completed using a stainless steel hand auger. However, at two locations (WMU8_SB3 and WMU8_SB5), subsurface concrete or concrete debris was encountered beneath the surficial concrete at approximately 1.5 to 2.5 feet bgs and was approximately 1 to 2.5 feet thick. At these locations, the Rotosonic drill rig was used to core through the subsurface slab to allow for hand augering to continue to the sampling depth (4 to 5 feet bgs). Soil was continuously logged and PID measurements were recorded. The soil boring logs are presented in Appendix C. No elevated (i.e., greater than 5 ppm) PID readings were measured. The soil sample locations were surveyed and presented on Figure 4.

Soil samples were submitted to Merit Laboratories for analysis of the following F-listed waste analytical methods and constituents:

- **USEPA Method 8015**: 2-Ethoxyethanol, 2-Nitropropane, Isobutanol, Methanol, and n-Butyl Alcohol

- **USEPA Method 8260**: 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylene

- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine

The soil sample laboratory analytical results are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B (Act 307) criteria and Part 201 criteria. The samples collected from WMU8_SB1 (2-2.8'), WMU8_SB2 (1.5-2'), WMU8_SB3 (3.5-4'), WMU8_SB4 (1.2-1.7'), and WMU8_SB5 (4.2-5') do not exceed Act 307/Part 201 criteria. Clean closure is requested for WMU#8.

### 2.3 WMU #10 Closure Activities

Historically, Factory 86, Building 04, Assembly Plant Waste Storage Tanks (WMU #10) contained four 12,000-gallon USTs in 1946 at the south end of the now demolished Factory 86, Building 04. The tanks were used for painting-related activities. Three tanks were used to store hazardous waste and one stored nonhazardous waste: tank #1 contained waste Flo-coat primer, tank #2 contained Flo-coat primer (D001 and D008), tank #3 was used to store non-hazardous lubricating oil, and tank #4 contained waste paint thinner (F003 and F005). The tanks were situated perpendicular to the south wall of Building 04 on an 18-inch concrete pad. A concrete basement-type enclosure was built around the tanks. A floor sump and pump discharged collected water to the process wastewater sewer system. The underground enclosure area could be accessed by a stairway inside Building 04.

Tank removal activities began in April 1984 and included excavation and removal of approximately 3,000 cubic yards of soil and debris, decontamination of the tanks/concrete, and soil/concrete sampling. The final limits of the excavation extended approximately 10 feet south and west and 14 feet east of the concrete pad edges. During closure activities, oily water was observed seeping into the excavated area at about 10 to 15 feet bgs. A subsurface collection line and sump manhole was installed around the perimeter of the tank area to collect the oil and remove it. After two years of operation only small quantities of oil were being collected by this system; therefore due to limited recovery rates its operation was discontinued. Closure activities were completed in September 1985 and a partial closure report was submitted to the USEPA and MDNR in October 1985. A full closure report was submitted in 1988, after additional information was requested by the MDNR and USEPA. However, as noted in the July 2009 MDEQ-WHMD response letter, the previously provided soil data was not sufficient to confirm that the closure was completed. Therefore, the MDEQ required additional soil and concrete sampling was required to achieve closure.

### 2.3.1 WMU Area Inspection

A visual inspection of the WMU #10 area was completed on November 16, 2011. The WMU is approximately 2,704 square feet and consists of a concrete building pad. A raised gravel berm, approximately 3 feet bgs higher than the surface concrete pad was located on the north side of the WMU. There was cracking and minor rust colored staining observed at during the inspection. Soil boring locations were chosen based on the observed cracking in the concrete. Photographs of WMU #10 are located in the the Photo Log in Appendix B.

### 2.3.2 Sampling and Analytical Results

Six borings were completed based on the area of the WMU (approximately 2,704 square feet). Two samples (soil and/or concrete) were collected at each boring location. A Rotosonic drill rig was used to core through the surficial concrete, which was approximately 12 inches thick. Once the surficial concrete was cored, the borings were hand cleared to 5 feet bgs and then completed using the Rotosonic drill rig to depths ranging from 18 to 22 feet bgs. Soil was continuously logged and PID measurements were recorded. The soil boring logs are presented in Appendix C. PID readings ranged from 0.3 to a maximum of 587 ppm which was measured at WMU10_SB5. The sample locations were surveyed and presented on Figure 5.

Subsurface concrete was encountered and sampled at four of the six soil boring locations; the two western most borings (WMU10_SB1 and WMU10_SB6) did not encounter the subsurface concrete pad, so a concrete sample was not collected. At all of the boring locations, soil samples were collected below the groundwater beneath potential fill materials (i.e., sand or gravel) in what was thought to be native soil (i.e., dry to moist silty clay or sand).

Two locations (WMU10_SB4 and WMU10_SB5) were observed to have a sheen visible in the saturated zones of the soil core. To investigate the potential presence of free phase product, a temporary observation well was installed at these locations. The wells were gauged approximately 3 to 4.5 hours after they were set. Measurable free product was not measured in the wells and both temporary wells were abandoned.

Soil and concrete samples were submitted for analysis to Merit Laboratories for characteristic (D001and D008) and for the following F-listed waste analytical methods and constituents:

Characteristic (D-listed) Waste Analyses

- **USEPA Method 1010**:Ignitability (D001)
- **USEPA Method 6010 or 6020**:Lead (D008)

F-Listed Waste Analyses

- **USEPA Method 8015**: 2-Ethoxyethanol, 2-Nitropropane, Isobutanol, Methanol, and n-Butyl Alcohol
- **USEPA Method 8260**: 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Acetone, Benzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorinated Fluorocarbons (dichlorodifluoromethane and trichlorofluoromethane), Cyclohexanone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methylene Chloride, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, ortho-Dichlorobenzene, Tetrachloroethylene, Toluene, Trichloroethylene, and Xylene
- **USEPA Method 8270**: Cresols, Cresylic Acid, Nitrobenzene, and Pyridine.

Due to an observed sheen and known releases in that area of WMU #10, one sample [WMU10_SB5 (18.5-19')] was also submitted for Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) to aid in identifying the possible source(s) of the sheen.

*2.3.2.1 Soil Sample Analytical Results*

The laboratory analytical results are presented in Appendix D. The analytical data were compared to MDEQ Act 307 Type B criteria and Part 201 criteria. A summary of the exceedances is provided below:

- Soil samples - WMU10_SB1 (17.2-17.7'), WMU10_SB1A (16-16.5), WMU10_SB2 (16-16.5'), WMU10_SB3 (15.5-16'), WMU10_SB4A (17-17.5'), WMU10_SB5 (18.5-19'), WMU10_SB6 (11.5-12'), and WMU10_SB6A (17.5-18').
    - Detected lead at concentrations ranging from 2,500 to 13,200 ug/kg, which exceed the Act 307 20 x Drinking Water criterion of 80 ug/kg and the Act 307 20 x GSI criterion of 130 ug/kg criterion; however, these detections do not exceed the MDEQ Part 201 statewide default background level of 21,000 ug/kg.
- Soil Samples - WMU10_SB6 (11.5-12') and WMU10_SB6A (17.5-18')
    - Detected methanol at concentrations of 99,000 and 110,000 ug/kg which exceed the Act 307 20 x Drinking Water criterion of 70,000 ug/kg criterion and the Part 201 Residential Drinking Water Protection (RDWP) criterion of 74,000 ug/kg.
- Sample - WMU10_SB5 (18.5-19')
    - Detected ethylbenzene at a concentration of 11,000 ug/kg which exceeds the Act 307 20 x Drinking Water criterion of 1,500 ug/kg and 20 x GSI criterion of 620 ug/kg, and the Part 201 RDWP criterion of 1,500 ug/kg and the GSI Protection (GSIP) criterion of 360 ug/kg.
    - Detected toluene detection of 118,000 ug/kg which exceeds the Act 307 20 x Drinking Water criterion of 16,000 ug/kg and 20 x GSI criterion of 2,200 ug/kg, and the Part 201 RDWP criterion of 16,000 ug/kg and the GSIP criterion of 5,400 ug/kg.
    - Detected total xylene at a concentration of 62,000 ug/kg which exceed Act 307 20 x Drinking Water criterion of 5,600 ug/kg and 20 x GSI criterion of

1,200 ug/kg, and Part 201 RDWP criterion of 5,600 ug/kg and GSIP criterion of 820 ug/kg.

In addition WMU10_SB5 detected TPH DRO at a concentration of 11,710 milligrams per kilogram (mg/kg) and TPH GRO at a concentration at 550 mg/kg.

*2.3.2.2 Concrete Sample Analytical Results*

Concrete samples were collected at WMU #10 from the four locations where subsurface concrete was observed:

- Samples - WMU10_SB2C (13-13.5'), WMU10_SB3C (12.5-13'), and WMU10_SB4C (14.5-15')
  - Detected lead at concentrations ranging from 3,130 to 8,640 ug/kg which exceed the Act 307 20 x Drinking Water criterion of 80 ug/kg and the Act 307 20 x GSI criterion of 130 ug/kg criterion; however, these detections do not exceed the MDEQ Part 201 statewide default background level of 21,000 ug/kg.

- Sample - WMU10_SB5C (16.5-17')
  - Detected toluene at a concentration of 2,400 ug/kg, which exceeds the Act 307 20 x GSI criterion of 2,200 ug/kg.
  - Detected total xylene at a concentration of 1,900 ug/kg, which exceeds the Act 307 20 x GSI criterion of 1,200 ug/kg and the Part 201 GSIP criterion of 820 ug/kg.

*2.3.2.3 Summary*

Several samples collected at WMU #10 detected select analytes at concentrations which exceeded Act 307 and/or Part 201 residential drinking water and GSI protection criteria. RACER requests that response actions related to this WMU be deferred to the ongoing RCRA Corrective Action activities. As part of planned corrective actions at the Site the property will be restricted to non-residential use and a groundwater use restriction will be implemented at the Site.

### 2.4 Additional Waste Management Procedures

Investigation-derived waste (e.g. decontamination water, waste materials, etc.) were containerized in segregated labeled 55-gallon Department of Transportation (DOT) - approved drums. All wastes were properly containerized, characterized and disposed of off-site. The laboratory analytical results for all waste characterization samples are presented in Appendix D. Copies of the shipping manifests are presented in Appendix E.

### 2.5 Request Determination

Based on an evaluation of the analytical data collected to data and discussions with the MDEQ the following requests for determination are made:

For WMU #7 - Building 41A, Assembly Plant Waste Storage Tank Area, it is requested that this WMU be deferred to corrective action due to the presence of sheen identified in the soil borings and the proximity of this WMU to known LNAPL plumes.

For WMU #8 - Building 02, Container Storage Area, it is requested that this WMU be clean closed.

For WMU #10 - Factory 86, Building 04, Assembly Plant Waste Storage Tanks, it is requested that this WMU be deferred to be addressed as part of the Site RCRA Corrective Action activities. In addition a restrictive covenant will be filed for this WMU documenting the potential for listed hazardous waste to be present beneath the WMU.

### 3. Certification of Closure

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Grant Trigger

RACER Trust

Edward Cote, PE

Principal Environmental Engineer

STATE OF MICHIGAN
EDWARD COTE
ENGINEER
No. 28482
LICENSED PROFESSIONAL ENGINEER

## 4. References

ARCADIS, 2011. Southend: Work Plan for Response Activities at the RCRA Waste Management Unit – Former General Motors Corporation, NAO Flint Operations Facility (Otherwise known as Buick City), Flint Michigan. July 29, 2011.

ARCADIS BBL, 2007. RCRA Waste Management Unit Closure Status Report. (April 30, 2007).

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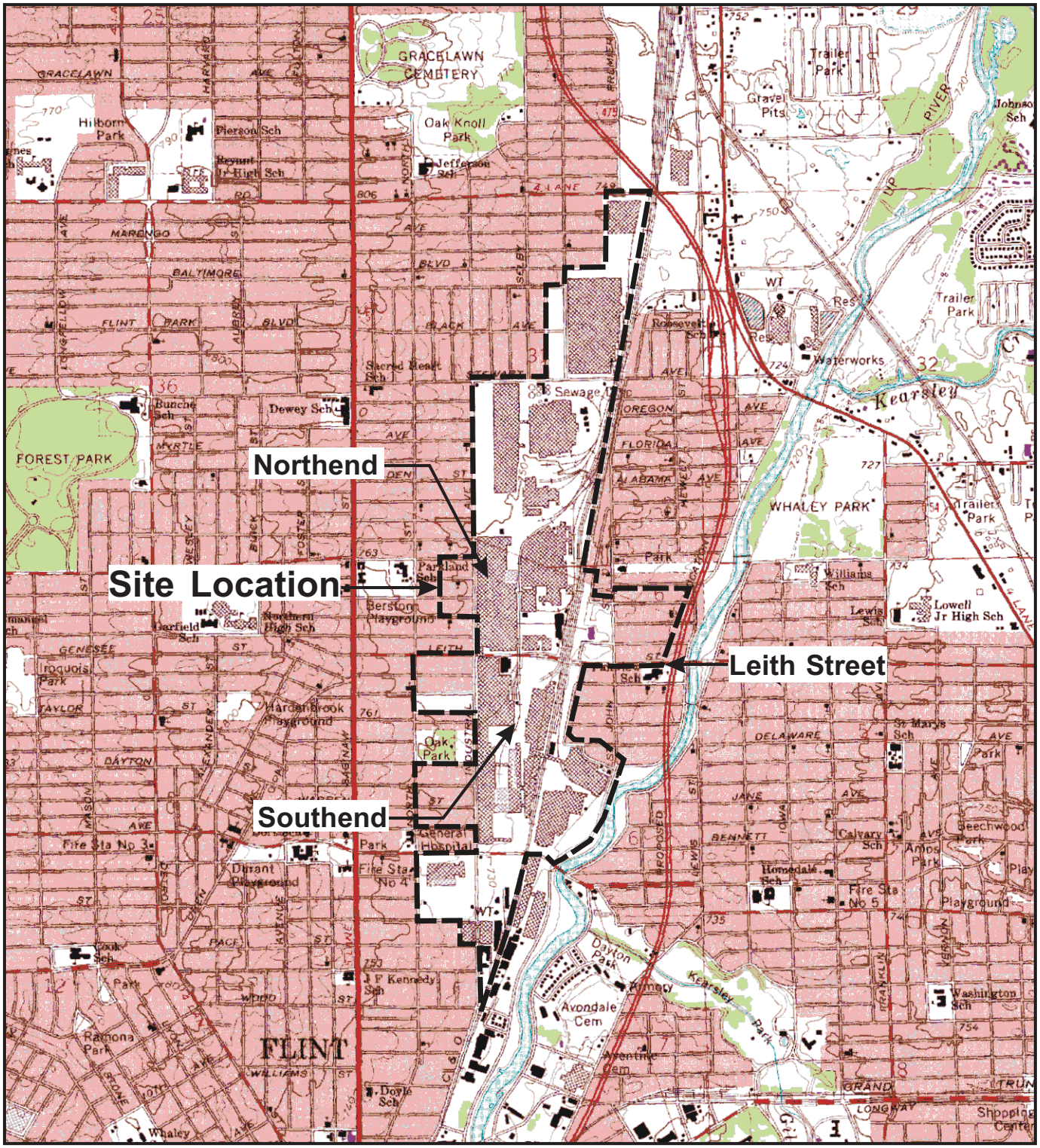
MDEQ. 2011. Southend Work Plan Approval for the RCRA Waste Management Unit Areas at the General Motors Corporation, NAO Flint Operations; MID 005 356 712. October 7, 2011

MDEQ. 2009. Closure Status Report Review Letter for the RCRA Waste Management Unit Areas at the General Motors Corporation, NAO Flint Operations; MID 005 356 712. July 27, 2009

# Figures




**REFERENCE:** Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'

**Approximate Scale: 1" = 2000'**

**Area Location**

RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN

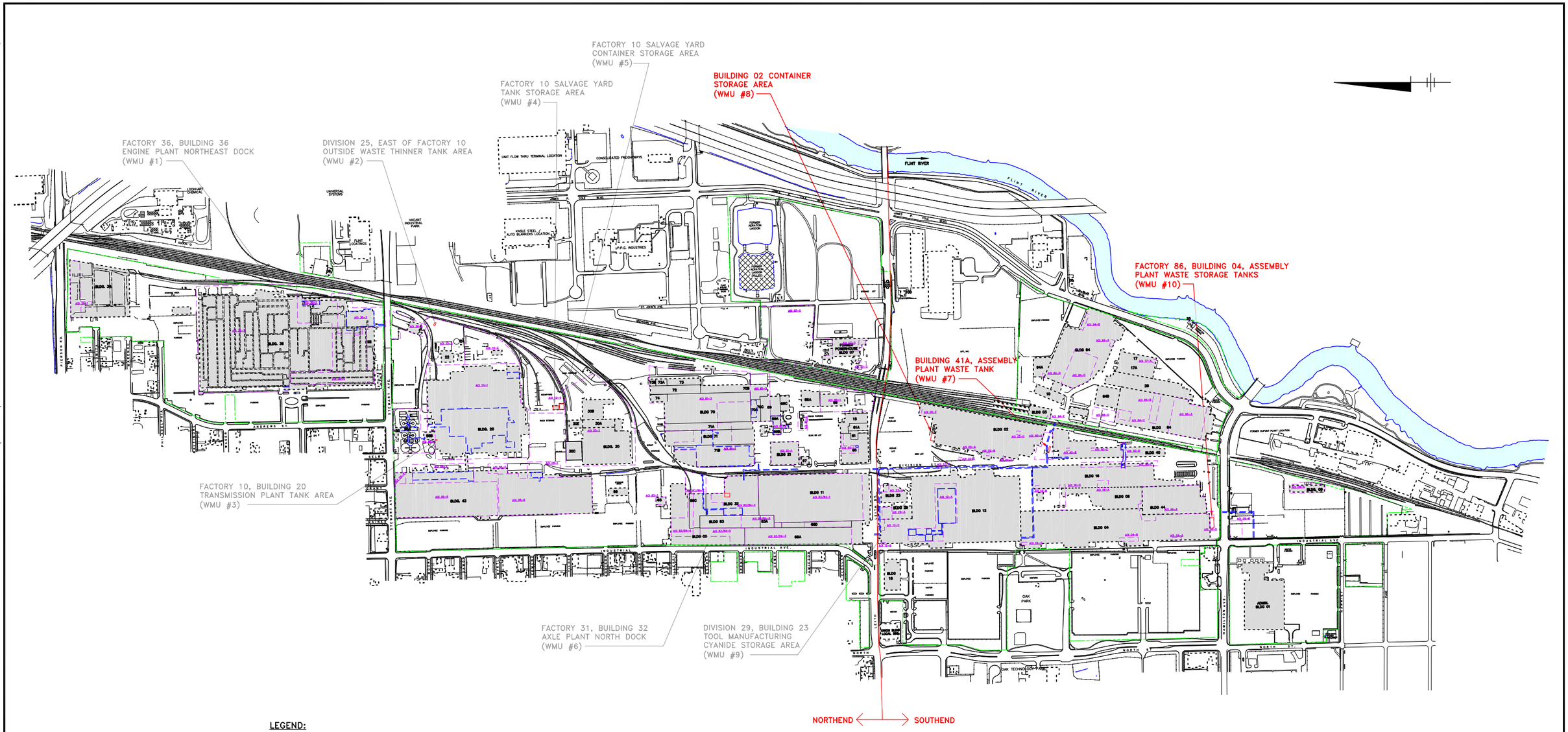
**SOUTHEND CERTIFICATION OF CLOSURE**

# SITE LOCATION MAP

ARCADIS

FIGURE
**1**

03/22/2012 SYRACUSE, NY-ENV/CAD-141-DJHOWES
B0064410/2012/00900/CDR/64410N02.CDR




**LEGEND:**

- PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- APPROXIMATE WMU AREA ADDRESSED IN SEPARATE CERTIFICATION OF CLOSURE

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.

0 400' 800'
GRAPHIC SCALE

RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**SOUTHEND CERTIFICATION OF CLOSURE**

**SITE PLAN**

ARCADIS

FIGURE
**2**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\SOUTHEND\REVISED\64410G01.DWG LAYOUT: 2 SAVED: 3/28/2012 12:13 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:13 PM BY: FORAKER, LYDIA
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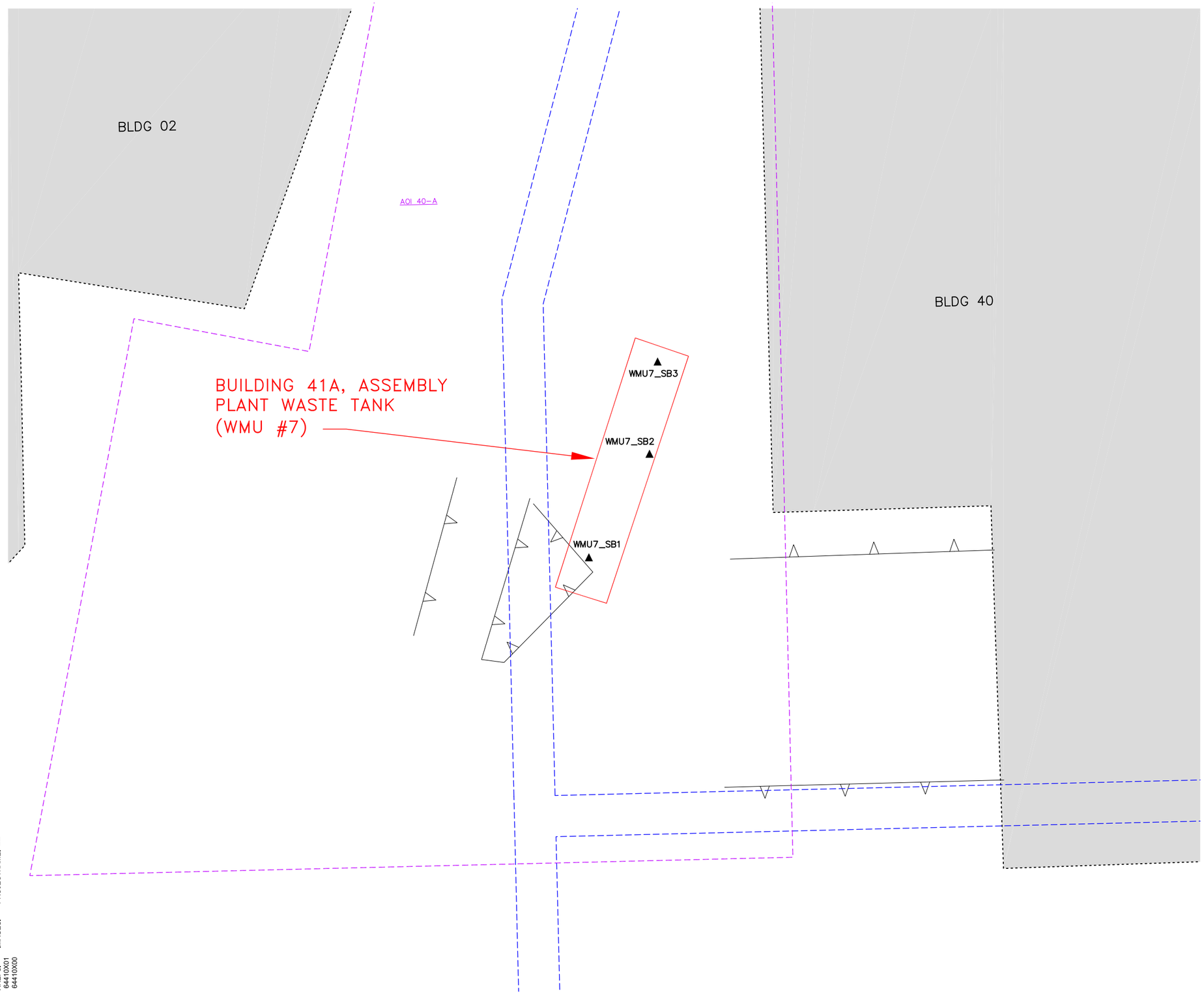



**LEGEND:**

- APPROXIMATE AOI BOUNDARY
- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- SOIL SAMPLING LOCATION

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.

0 10' 20'
GRAPHIC SCALE

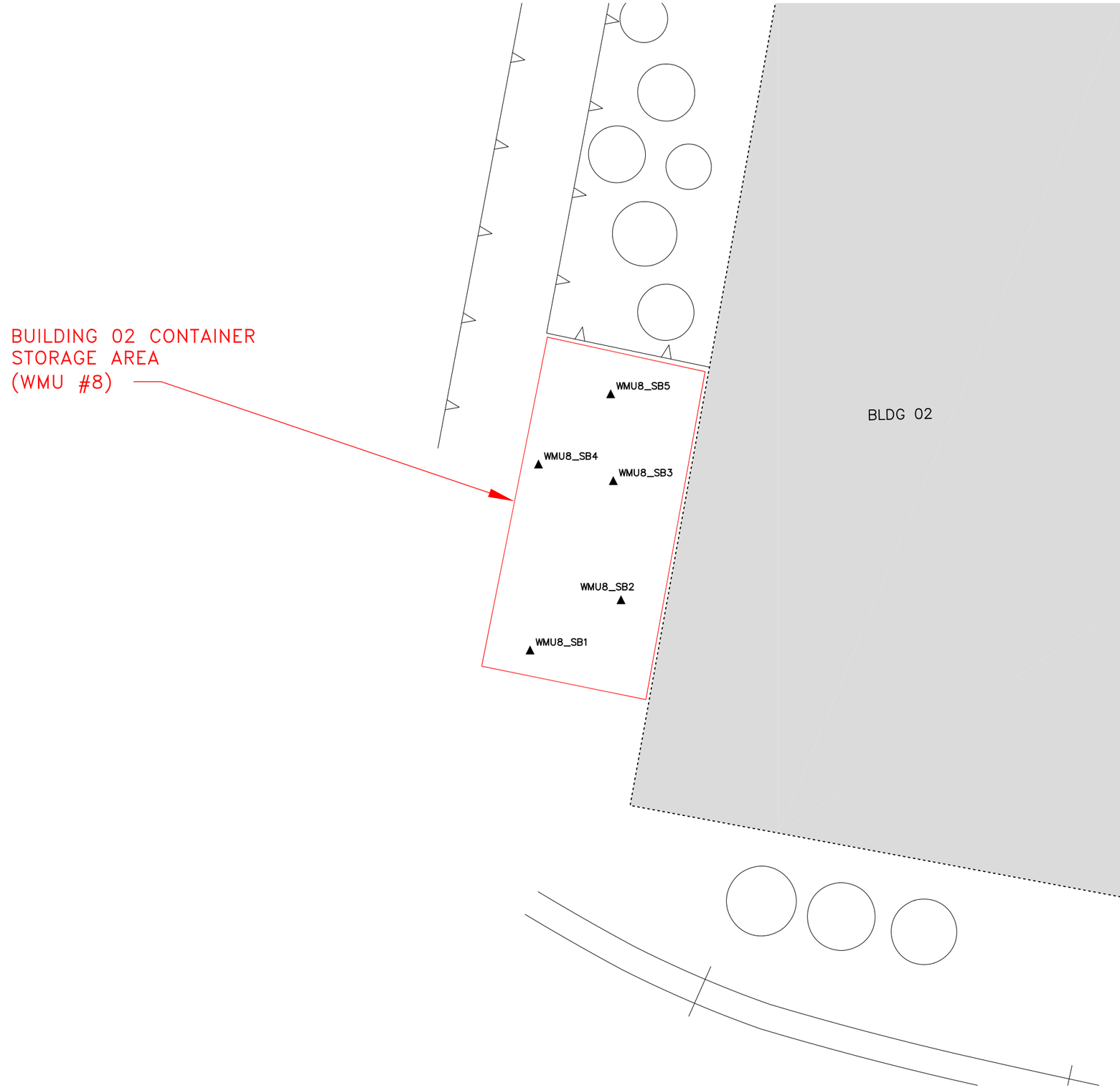
RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**SOUTHEND CERTIFICATION OF CLOSURE**

# WMU # 7 SOIL SAMPLING LOCATIONS

ARCADIS

FIGURE
**3**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DWG\WMU-AREAS\SOUTHEND\REVISED\64410G02.DWG LAYOUT: 3 SAVED: 3/28/2012 11:46 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:14 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---




**LEGEND:**

APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE

▲ SOIL SAMPLING LOCATION

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.

0 10' 20'
GRAPHIC SCALE

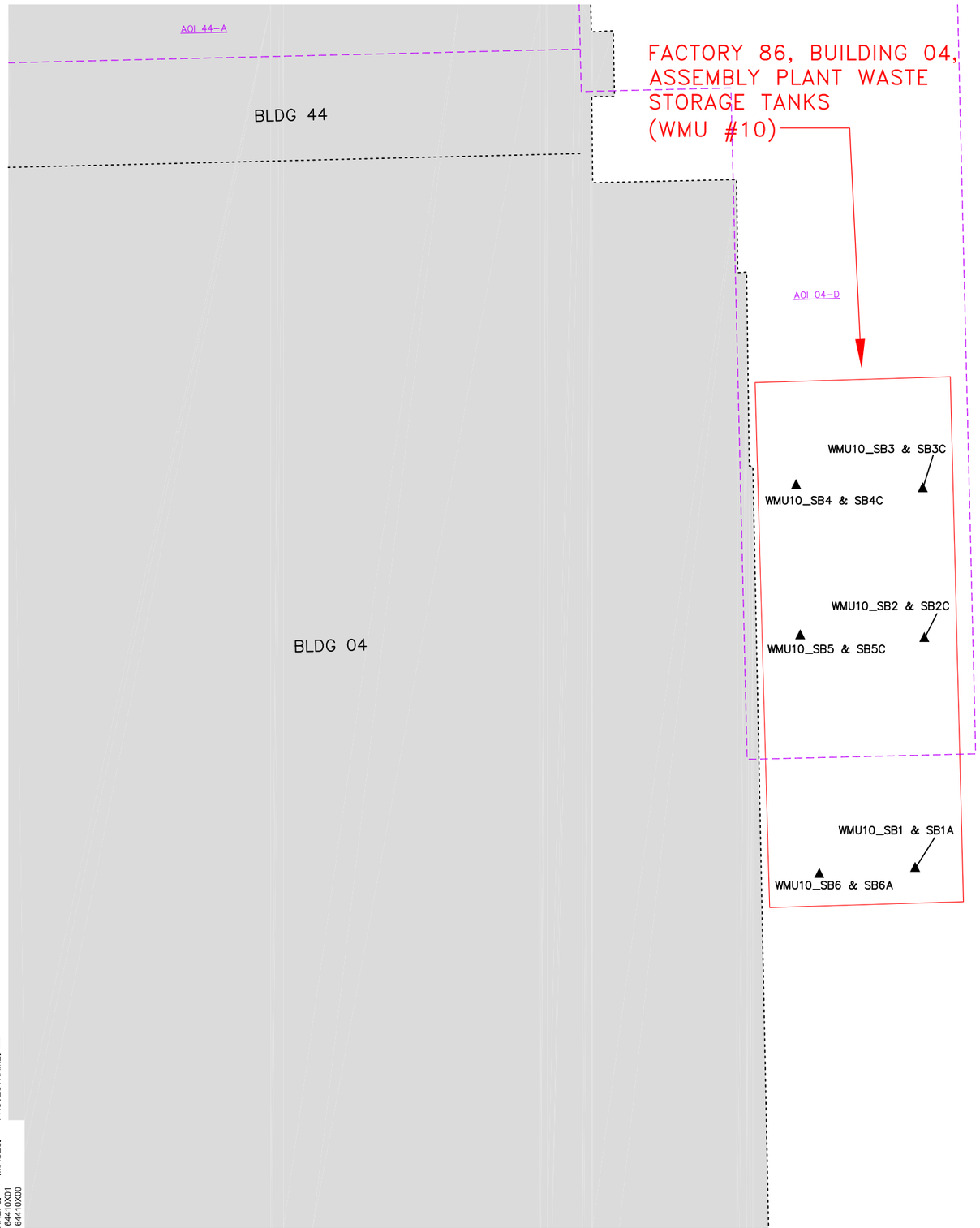
RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**SOUTHEND CERTIFICATION OF CLOSURE**

# WMU # 8 SOIL SAMPLING LOCATIONS

ARCADIS

FIGURE
**4**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL L.FORAKER LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DW\WMU-AREAS\SOUTHEND\REVISED\64410G03.DWG LAYOUT: 4 SAVED: 3/28/2012 11:47 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:14 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---




**LEGEND:**

- PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- APPROXIMATE WMU AREA ADDRESSED IN THIS CERTIFICATION OF CLOSURE
- SAMPLING LOCATIONS

**NOTES:**

1. IN ADDITION TO THE EXISTING HISTORICAL SITE DATA, THE WASTE MANAGEMENT UNIT LOCATIONS ARE ALSO BASED ON GIS DATA PROVIDED BY THE MDNRE IN JANUARY 2010.
2. BASE MAP INFORMATION FROM A SURVEY DATED APRIL 2001 (AT A SCALE OF 1:100) AND SOIL SAMPLING LOCATIONS FROM A SURVEY DATED JANUARY 2012. BOTH SURVEYS WERE COMPLETED BY BMJ INC.
3. TEMPORARY WELLS INSTALLED AT WMU SB4 AND WMU SB5, GROUNDWATER SAMPLE COLLECTED AT WMU SB5.

0 10' 20'
GRAPHIC SCALE

RACER TRUST
FORMER GENERAL MOTORS CORPORATION
NORTH AMERICAN OPERATIONS FACILITY FLINT OPERATIONS SITE - FLINT, MICHIGAN
**SOUTHEND CERTIFICATION OF CLOSURE**

# WMU # 10 SAMPLING LOCATIONS

ARCADIS

FIGURE
**5**

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: G. STOWELL L.FORAKER LD: G. STOWELL PIC: C. PETERS PM: M. MAKI TM: M. MAKI LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0064410\2012\00900\DW\WMU-AREAS\SOUTHEND\REVISED\64410G04.DWG LAYOUT: 5 SAVED: 3/28/2012 11:52 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: C-LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/28/2012 12:14 PM BY: FORAKER, LYDIA
XREFS: 64410X01 64410X00 IMAGES: PROJECTNAME: ---

## Appendix A

MDEQ Approval of Southend Work Plan

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

October 7, 2011

Mr. Grant Trigger
Cleanup Manager
RACER Trust
401 South Old Woodward Avenue, Suite 370
Birmingham, Michigan 48009

Dear Mr. Trigger:

SUBJECT: Approval of Southend: Work Plan for Response Activities at RCRA Waste Management Units (Work Plan); RACER Trust, Former General Motors Corporation North American Operations Facility; MID 005 356 712

The Michigan Department of Environmental Quality (MDEQ), Resource Management Division (RMD), has reviewed the July 29, 2011, Work Plan for the remaining hazardous waste management units on the south end of the site. Based on our review pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the administrative rules promulgated thereto, the RMD has determined that Work Plan is acceptable and hereby approved.

Should you require further information, please contact me at 517-373-7397; quackenbushp@michigan.gov; or MDEQ, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Peter Quackenbush
Hazardous Waste Section
Resource Management Division
517-373-7397

Enclosure
cc: Mr. Chris Peters, ARCADIS
Mr. Dave Favero, RACER Trust
Mr. Chris Black, U.S. Environmental Protection Agency, Region 5
Mr. Dale Bridgford/Mr. Peter Quackenbush, MDEQ
HWS-C&E File

**Appendix B**

Photo Summary Log

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# PHOTOGRAPHIC LOG

| Project: WMU Southend Soil Sampling | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 1 | 12-7-2011 |

**Direction Photo Taken:**

Facing west.

**Description:**

View of WMU 7 during GPRS investigation. The surveyed WMU edges are marked with pink paint and the proposed soil boring locations are marked with orange paint.

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# PHOTOGRAPHIC LOG

| Project: WMU Southend Soil Sampling | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 2 | 1-23-2011 |

**Direction Photo Taken:**

Facing east.

**Description:**

View of WMU 7 during soil sampling event. Coring through concrete at WMU7_SB1.

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# PHOTOGRAPHIC LOG

| Project: WMU Southend Soil Sampling | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 3 | 12-7-2011 |

**Direction Photo Taken:**

Facing northeast.

**Description:**

View of WMU 8, with the WMU area edges marked with pink paint. The proposed soil boring locations are marked by pink pin flags.

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# PHOTOGRAPHIC LOG

| Project: WMU Southend Soil Sampling | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 4 | 12-7-2011 |

**Direction Photo Taken:**

Facing east.

**Description:**

View of WMU 8 during GPRS investigation. The proposed soil boring locations are indicated by pink flags.

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# PHOTOGRAPHIC LOG

| Project: WMU Southend Soil Sampling | Location: Flint, Michigan | Project No. B0064410.2012.00900 |
|---|---|---|

| Photo No. | Date: |
|---|---|
| 5 | 12-7-2011 |

**Direction Photo Taken:**

Facing west.

**Description:**

View of WMU 10, with the edge of the WMU marked with pink paint. The proposed soil boring locations can be seen marked with orange paint and pink pin flags (on berm to north).

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PHOTOGRAPHIC LOG

Project: WMU Southend Soil Sampling | Location: Flint, Michigan | Project No. B0064410.2012.00900

| Photo No. | Date: |
|---|---|
| 6 | 12-7-2011 |

**Direction Photo Taken:**

Facing north.

**Description:**

View of WMU 10, with the WMU edges marked with a wooden stake. Also, a water line identified by the GPRS is marked by orange paint.

**Appendix C**

Soil Boring and Well Logs

| | | |
|---|---|---|
| **Date Start/Finish:** 1/23/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 16' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU7_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1) CONCRETE | Borehole capped with concrete. |
| | | | | | 1.7 | | | (1-2) SAND; medium, trace medium granule, subrounded, well sorted; dry, light yellow brown (10YR 4/6). | |
| | | 1 | 0-5 | 5.0 | 0.6 | | | (2-4) SAND; medium, little clay, trace medium granule, subrounded, poorly sorted; dry, light yellow brown (10YR 4/6). | |
| | | | | | 0.1 | | | (4-6) SAND; medium, little silt, small to large granule, subrounded to subangular, poorly sorted; dry, light yellow brown (10YR 4/6). | |
| 5 | -5 | | | | | | | | |
| | | | | | 0.3 | | | (6-11.5) SAND; medium to coarse, little small to medium granule, trace silt, subrounded to subangular, poorly sorted; moist, light yellow brown (10YR 4/4). | |
| | | 2 | 5-10 | 3.0 | | | | | Borehole backfilled with bentonite chips. |
| | | | | | 11.7 | | | NOTE: wet at 9' bgs. | |
| 10 | -10 | | | | | | | | |
| | | | | | 0.1 | | | | |
| | | | | | | | | (11.5-12.5) SAND; coarse, little medium to large granule, trace silt, subrounded, poorly sorted; wet, gray brown (2.5YR 4/3). | |
| | | 3 | 10-15 | 5.5 | 7.8 | | | (12.5-13.8) SILT; high plasticity, rapid dilatancy, some sand, very fine to fine, soft; wet, gray (GLEY1 3/N). NOTE: odor and sheen. | |
| | | | | | 0.3 | | | (13.8-16) SILT; some clay, low plasticity, no dilatancy, medium stiff; dry, light gray (5YR 4/1). | |
| 15 | -15 | | | | | | | | |
| | | 4 | 15-16 | 1.5 | | X | | | |
| | | | | | 2.3 | | | End of boring 16' bgs. | |

**Remarks:** bgs = below ground surface

Hand auger 0-5' bgs
Groundwater encountered at 9' bgs

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/23/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic Core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 16' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU7_SB2**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1) CONCRETE | Borehole capped with concrete. |
| | | | | | 0.2 | | | (1-2) SAND; fine to medium, trace clay, trace small granule, subangular, poorly sorted; dry, brown (10YR 4/4). | |
| | | 1 | 0-5 | 5.0 | 0.2 | | | (2-4) SAND; fine to medium, trace small granule, subrounded, well sorted; dry, brown (10YR 4/4). | |
| | | | | | 0.5 | | | (4-11.5) SAND; fine to coarse, trace small to large granule, subrounded to subangular; dry, brown (10YR 4/4). | |
| 5 | -5 | | | | | | | | |
| | | | | | 0.3 | | | | |
| | | 2 | 5-10 | 1.9 | | | | | Borehole backfilled with bentonite chips. |
| | | | | | 0.6 | | | NOTE: wet at 8.5' bgs | |
| 10 | -10 | | | | | | | | |
| | | | | | 0.6 | | | | |
| | | | | | | | | (11.5-12.5) SAND; medium, trace silt, trace clay, trace small granule, poorly sorted; wet, brown (2.5YR 4/5) with dark brown (5YR 4/2). | |
| | | 3 | 10-15 | 6.2 | 0.7 | | | (12.5-13.2) SAND; fine to medium, trace small to large granule, subrounded, trace silt; moist, dark brown to black (7.5YR 2.5/1). | |
| | | | | | | | | (13.2-14.2) CLAY; some silt, low plasticity, no dilantancy; dry, very stiff, light gray (10YR 4/1). | |
| | | | | | 5.9 | X | | (14.2-16) SILT, some clay, low plasticity, no dilatancy; dry, stiff, light gray (10YR 5/1). | |
| 15 | -15 | | | | | | | | |
| | | 4 | 15-16 | 1.7 | 0.9 | | | | |
| | | | | | | | | End of boring 16' bgs. | |

**Remarks:** bgs = below ground surface
HA = Hand auger

Hand auger 0-5' bgs
Groundwater encountered at 8.5' bgs

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic Core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 16' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU7_SB3**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1) CONCRETE | |
| | | | | | 0.1 | | | (1-2) SAND; medium to coarse, trace small granule, trace large pebble, subrounded to subangular, poorly sorted; dry, brown (10YR 4/4). | |
| | | 1 | 0-5 | 5.0 | 2.9 | | | (2-7) SAND; fine to medium ,trace silt, well sorted; dry, light brown (10YR 5/4). | |
| | | | | | 0.6 | | | | |
| 5 | -5 | | | | | | | | |
| | | | | | | | | NOTE: wet at 6.5' bgs | |
| | | | | | 1.7 | | | (7-8.2') SAND, fine to medium, little silt, trace small granule, subangular, wet, gray to brown (10yr, 4/2). | |
| | | 2 | 5-10 | 3.9 | | | | | Borehole backfilled with soil cuttings. |
| | | | | | 0.3 | | | (8.2-11') SAND, medium to coarse, little small to medium granule, subangular, poorly sorted, wet, gray to black (10yr, 3/1). | |
| 10 | -10 | | | | | | | | |
| | | | | | 1.2 | | | (11-12') SAND, medium to coarse, trace clay, little small to medium granule, subangular, poorly sorted, wet, dark gray brown (10yr, 2/1). | |
| | | 3 | 10-15 | NA | 0.5 | | | (12-15') SAND, coarse, little small granule, trace clay, trace large pebble, subrounded, poorly sorted, wet (10yr, 3/1). | |
| | | | | | 0.6 | X | | | |
| 15 | -15 | | | | | | | | |
| | | 4 | 15-16 | NA | 0.3 | | | (15-16') SILT and CLAY; trace fine sand, medium plasticity, no dilatancy, medium stiff, dry, light gray (2.5yr, 4/1). | |
| | | | | | | | | End of boring 16' bgs. | |

**Remarks:** bgs = below ground surface
HA = Hand auger

Hand auger 0-5' bgs
Groundwater encountered at 6.5' bgs

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 2.8' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU8_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-2.8 | 2.7 | 0.2<br>0.2 | | | (0-0.9) CONCRETE<br>(0.9-1.5) CLAY; medium plasticity, no dilatancy, and sand, very fine to fine, trace large pebble, subrounded; dry, medium stiff, brown (10YR 4/2).<br>(1.5-2.8) CLAY; medium plasticity, slow dilatancy, little silt, little sand; dry, medium stiff, brown (10YR 4/1). NOTE: trace organic material (wood). | Borehole capped with concrete.<br>Borehole backfilled with bentonite chips. |
| 5 | -5 | | | | | | | End of boring 2.8' bgs. | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface

Hand auger 0-2.8' bgs
Groundwater not encountered
No odor or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3.2' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU8_SB2**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | | |
| | | 1 | 0-3.2 | 3.0 | 1.3 | X | | (0-1.2) CONCRETE | Borehole capped with concrete. |
| | | | | | | | | (1.2-2.2) SAND, medium, little clay, trace small to large granule, trace small pebble, subangular to subrounded; dry, dark brown (7.5YR 2.5/1). | Borehole backfilled with bentonite chips. |
| | | | | | 0.6 | | | (2.2-3.2) SAND; medium, and clay, trace small granule, subangular, poorly sorted; moist, dark brown (10YR 4/2). | |
| | | | | | | | | End of boring 3.2' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

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**Remarks:** bgs = below ground surface
HA - Hand auger

Hand auger from 0-3.2' bgs
Groundwater not encountered
No order or staining observed

| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 4' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU8_SB3**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1.2) CONCRETE | Borehole capped with concrete. |
| | | | | | | | | (1.2-1.5) SAND; well sorted, dark brown. | |
| | | 1 | 0-4 | 4.0 | | | | (1.5-2.5) CONCRETE | Borehole backfilled with bentoinite chips. |
| | | | | | 0.6 | | | (2.5-3.5) SAND; fine to medium, concrete, trace large pebble, subangular, poorly sorted; dry, light gray and brown (10YR 4/2). | |
| | | | | | 1.8 | X | | (3.5-4) CLAY; high plasticity, rapid dilatancy, some sand, fine to medium, trace silt; dry, soft to medium stiff, light brown (10YR 5/2). | |
| | | | | | | | | End of boring 4' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface
HA - Hand auger

Hand auger from 0-4' bgs
Groundwater not encountered
No odor or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 3.2' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU8_SB4**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1.2) CONCRETE | Borehole capped with concrete. |
| | | 1 | 0-3.2 | 3.2 | 0.8 | X | | (1.2-2.2) SAND; fine to coarse, trace silt, subrounded to subangular, poorly sorted; dry, brown (10YR 4/4). | Borehole backfilled with bentoinite chips. |
| | | | | | 0.5 | | | (2.2-3.2) SAND; medium to coarse, little small to medium granule, subangular, poorly sorted; moist, dark brown (10YR 3/2). | |
| | | | | | | | | End of boring 3.2' bgs. | |
| 5 | -5 | | | | | | | | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

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**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-3.2' bgs
Groundwater not encountered
No odor or staining observed

| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Hand Auger<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 5' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU8_SB5**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-2) CONCRETE | Borehole capped with concrete. |
| | | | | | | | | (2-2.5) SAND; fine to coarse, little small to large granule, subrounded to subangular, trace silt, poorly sorted; dry, dark brown (10YR 2/2). | |
| | | 1 | 0-5 | 5.0 | 0.6 | | | (2.5-4) CONCRETE debris. | Borehole backfilled with bentoinite chips. |
| | | | | | 1.0 | | | (4-4.5) SAND; very fine to medium, concrete debris, trace small to medium granule, subrounded, light gray (10YR 6/1). | |
| | | | | | 0.5 | X | | (4.5-5) SILT; no plasticity, no dilatancy, little sand, very fine to fine, trace medium to large granule, soft, dry, light gray (10YR 5/1). | |
| 5 | 5 | | | | | | | End of boring 5' bgs. | |
| 10 | -10 | | | | | | | | |
| 15 | -15 | | | | | | | | |

**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs
Groundwater not encountered
No odor or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic Core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 18' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB1**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1) CONCRETE | Borehole capped with concrete. |
| | | 1 | 0-5 | 5.0 | 0.7<br>1.9 | | | (1-5) SAND; medium, trace clay, well sorted; dry, brown (10YR 5/8). | |
| 5 | -5 | 2 | 5-10 | 3 | 1.2<br>1.0<br>0.3 | | | (5-15.2) SAND; medium, trace clay, trace small to medium granule, subangular, poorly sorted; dry, brown (10YR 5/8)<br><br>NOTE: wet at 8.5' bgs | Borehole backfilled with bentonite chips. |
| 10 | -10 | 3 | 10-15 | 3 | 0.7<br>1.0 | | | | |
| 15 | -15 | 4 | 15-18 | 4 | 1.8<br>1.2 | | | (15.2-15.8) GRAVEL; small to medium granule, subrounded; wet, gray to black. NOTE: sheen.<br>(15.8-17) SAND; very fine to fine, little clay, trace silt, trace small to medium granule, subrounded to subangular; wet, gray to brown (2.5YR 4/2). NOTE: sheen.<br>(17-17.2) SAND; very fine to fine, little clay, trace coarse sand, trace silt, trace small to medium granule, subrounded to subangular; wet, gray to brown (2.5YR 4/2).<br>(17.2-18) SILT; some clay, low plasticity, no dilatancy, little very fine sand; dry, stiff to very hard, gray (2.5YR 4/1).<br>End of boring 18' bgs. | |

**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs
Groundwater encountered at 8.5' bgs
No order observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic Core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 18' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB2**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1) CONCRETE | Borehole capped with concrete. |
| | | | | | 0.3 | | | (1-3) SAND; medium, trace clay, well sorted, dry; brown (10YR 4/6). | |
| | | 1 | 0-5 | 5.0 | | | | | |
| | | | | | 0.7 | | | (3-12) SAND; medium, trace clay, well sorted; moist, brown (10YR 4/6). | |
| 5 | -5 | | | | 0.5 | | | | |
| | | | | | 0.4 | | | | |
| | | 2 | 5-10 | 6.0 | | | | | |
| | | | | | 0.3 | | | (12-13) SAND; medium, trace silt, trace clay, poorly sorted, medium gray (2.5YR 4/2) | Borehole backfilled with bentonite chips. |
| 10 | -10 | | | | | | | NOTE: wet at 10' bgs | |
| | | | | | 0.7 | | | | |
| | | 3 | 10-15 | 7.0 | | | | | |
| | | | | | 0.3 | X | | (13-14.8) CONCRETE; light gray (5YR 7/1) with slight red (5YR 5/2). | |
| 15 | -15 | | | | 2.3 | | | (14.8-17.5) SILT; non plastic, no dilatancy, trace sand, very fine, trace small granule, subangular; moist, very stiff, gray. | |
| | | 4 | 15-18 | 2.5 | | X | | | |
| | | | | | 1.2 | | | (17.5-17.7) SAND; coarse, little silt, trace small granule, poorly sorted; moist, gray (7.5YR 4/2). | |
| | | | | | | | | (17.7-18) SAND; very fine, some silt, trace clay, trace small granule, subangular, poorly sorted; dry, gray (10YR 4/2). | |
| | | | | | | | | End of boring 18' bgs. | |

**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs
Groundwater encountered at 10' bgs
No odor or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/24/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic Core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 18' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB3**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1) CONCRETE |
| | | 1 | 0-5 | 5.0 | 0.6 | | | (1-3) SAND; fine to medium, trace clay, well sorted; dry, brown (10YR 4/4). |
| | | | | | 1.3 | | | (3-10) SAND; medium, trace clay, trace small to large pebble, subrounded, poorly sorted; moist, brown (10YR 4/6). |
| 5 | -5 | | | | 0.5 | | | |
| | | 2 | 5-10 | 1.3 | 0.7 | | | |
| | | | | | 0.8 | | | |
| 10 | -10 | | | | | | | (10-11.5) SAND; medium, trace clay, trace small to large pebble, subrounded, poorly sorted; wet, brown (10YR 4/6).<br>NOTE: wet at 10' bgs |
| | | | | | 2.6 | | | (11.5-12) SAND; coarse, trace silt, little small to large granule, subangular, trace clay, poorly sorted; moist, light gray. |
| | | 3 | 10-15 | 7.0 | 1.3 | X | | (12-14) CONCRETE |
| | | | | | | | | (14-14.5) SILT; low plasticity, some sand, fine to medium, soft to medium stiff, gray. |
| 15 | -15 | | | | 103.3 | | | (14.5-15) SAND; coarse, little small to medium granule, subangular, trace silt, poorly sorted; moist, gray. |
| | | 4 | 15-18 | 2.5 | 10.9 | X | | (15-18) SILT; low to no plasticity, no dilatancy, little sand, very fine to fine, trace medium granule, subrounded, dry, gray. |
| | | | | | | | | End of boring 18' bgs. |

Well/Boring Construction

**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs
Groundwater encountered at 10' bgs
No odor or staining observed

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| | | |
|---|---|---|
| **Date Start/Finish:** 1-25-2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Macrocore<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 22' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB4**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-3) GRAVEL FILL | |
| | | 1 | 0-5 | 5.0 | | | | | |
| | | | | | 0.6 | | | (3-4) CONCRETE | |
| | | | | | | | | (4-14) SAND; medium, trace clay, well sorted; dry, brown (10YR 4/6). | |
| 5 | -5 | | | | 0.4 | | | | |
| | | | | | 0.3 | | | | Bentonite (1-14' bgs) |
| | | 2 | 5-10 | 2.3 | | | | | 2" well casing (0-16' bgs) |
| | | | | | 0.7 | | | | |
| 10 | -10 | | | | | | | NOTE: wet at 10' bgs. | |
| | | | | | 0.4 | | | | |

**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs
Groundwater encountered at 10' bgs
1/25/12: Temporary Monitoring Well installed to monitor the presence of free product (screened from 16-21' bgs).
1/26/12: Tempory well pulled and boring abandoned.

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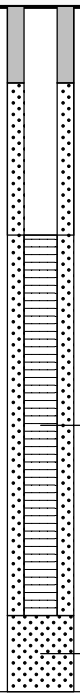
| | | |
|---|---|---|
| **Date Start/Finish:** 1-25-2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Macrocore<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 22' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB4**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description |
|---|---|---|---|---|---|---|---|---|
| | | 3 | 10-18 | 7.9 | 0.7 | | | |
| | | | | | | | | (14-16) CONCRETE |
| 15 | -15 | | | | 5.2 | | | |
| | | | | | | | | (16-16.3) SAND; medium, well sorted; wet, black (GLEY 2.5/N). NOTE: odor and sheen. |
| | | | | | | | | (16.3-17.5) SAND; fine to medium, little silt, trace clay, trace small to medium granule, subrounded; wet to saturated, gray (GLEY 4/N) with dark gray to black (GLEY 2.5/N). |
| | | | | | 7.7 | | | |
| | | | | | | | | (17.5-17.8) SILT; some sand, very fine to fine, little clay, high plasticity, rapid dilatancy; wet to saturated, soft, dark gray (GLEY, 4/N). NOTE: odor. |
| | | | | | | | | (17.8-18.1) SAND; fine to medium, little silt, trace clay, trace small to medium granule, subrounded, wet to saturated, gray (GLEY 4/N) with dark gray to black (GLEY 2.5/N). NOTE: odor and sheen. |
| | | | | | 0.7 | | | (18.1-20) SAND; very fine to fine, some silt, trace clay, trace small granule, subangular to subrounded, poorly sorted, wet, gray (2.5YR 5/1). |
| 20 | -20 | 4 | 18-22 | 4.8 | | | | (20-20.2) SAND; medium to coarse, trace silt, trace small granule, subrounded, poorly sorted; wet, gray (2.5YR 5/1). |
| | | | | | | | | (20.2-22) SAND; very fine to medium, trace small granule, subangular, trace silt, trace clay, poorly sorted; wet, gray (10YR 5/1). |
| | | | | | 0.6 | | | |
| | | | | | | | | End of boring 22' bgs. |
| 25 | -25 | | | | | | | |

Well/Boring Construction




**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs
Groundwater encountered at 10' bgs
1/25/12: Temporary Monitoring Well installed to monitor the presence of free product (screened from 16-21' bgs).
1/26/12: Tempory well pulled and boring abandoned.

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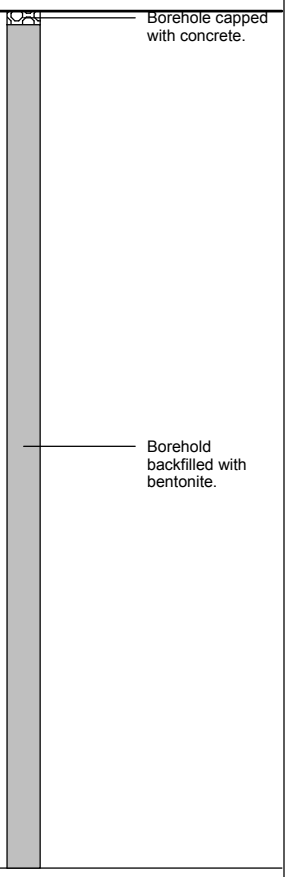
| | | |
|---|---|---|
| **Date Start/Finish:** 1/25/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 19' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB5**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 0-5 | 5.0 | 0.8 | | | (0-2.5) GRAVEL FILL<br>(2.5-3.5) CONCRETE<br>(3.5-13.5) SAND; medium, trace silt, trace clay, well sorted, dry, brown (10yr, 4/6). |
| 5 | -5 | | | | 0.9<br>0.6<br>2.3<br>4.1<br>45.3 | | | NOTE: wet at 10' bgs |
| 10 | -10 | 2 | 5-19 | 7.7 | 236<br>587 | | | (13.5-15) SAND; fine to medium, trace silt, trace small to large granule, subangular: moist, dark gray to black (GLEY, 2.5/N). NOTE: odor, sheen and staining.<br>(15-17) CONCRETE<br>(17-17.5) SAND; fine, trace clay, well sorted; moist, black (GLEY 2.5/N). NOTE: odor.<br>(17.5-18) SILT; high plasticity, rapid dilantancy, little sand, very fine, trace clay, trace medium to large granule, subrounded; wet, soft, (GLEY 4/N).<br>(18-18.7) SAND; medium to coarse, little small granule, trace silt, poorly sorted; moist, gray (5YR 4/1).<br>(18.7-19) SAND; medium, little silt, trace clay, trace small to medium granule, subangular; dry, gray (5YR 4/2). |
| 15 | -15 | | | | | | | |
| 20 | -20 | | | | | | | End of boring 19' bgs. |

**Well/Boring Construction**




**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs.
Groundwater encountered at 10' bgs.
Groundwater sample collected from temporary well.
1/24/12 Temporary Monitoring Well installed to monitor the presence of free product (screen from 14-19' bgs).

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| | | |
|---|---|---|
| **Date Start/Finish:** 1/25/2012<br>**Drilling Company:** Boart Longyear<br>**Driller's Name:** Steve Argue<br>**Drilling Method:** Rotosonic/HA/Vac Truck<br>**Sampling Method:** Sonic core<br>**Rig Type:** NA | **Northing:** NA<br>**Easting:** NA<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 18' bgs<br>**Surface Elevation:** NA<br><br>**Descriptions By:** Megan Meckley | **Well/Boring ID:** **WMU10_SB6**<br><br>**Client:** RACER Trust<br><br>**Location:** RACER Buick City<br>Flint, Michigan |

| DEPTH | ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Analytical Sample | Geologic Column | Stratigraphic Description | Well/Boring Construction |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | (0-1') CONCRETE | Borehole capped with concrete. |
| | | | | | 0.6 | | | (1-10') SAND; medium, trace clay, trace medium to large granule, subrounded, poorly sorted, dry, brown (10yr, 4/6). NOTE: odor from 5-7' bgs. | |
| | | 1 | 0-5 | 5.0 | 0.5 | | | | |
| 5 | -5 | | | | 9.3 | | | NOTE: wet at 6' bgs | |
| | | 2 | 5-10 | 4.2 | 3.3 | | | | |
| | | | | | 2.0 | | | | |
| 10 | -10 | | | | | | | (10-12') SAND; medium, trace clay, trace medium to large granule, subrounded, poorly sorted, moist, brown (10yr, 4/6) | Borehole backfilled with bentonite chipe. |
| | | | | | 132 | | | | |
| | | | | | 243 | | | (12-14') CLAY; little silt, high to medium plasticity, slow dilatancy, medium stiff, trace very fine sand, trace small granule, subangular, dry, gray and brown with staining (2.5yr, 4/2 and 2.5yr, 3/1). NOTE: odor and staining. | |
| 15 | -15 | 3 | 10-20 | NA | 24.4 | | | (14-16.5') SILT; trace clay, medium plasticity, rapid dilatancy, little sand, very fine, trace small to medium granule, subangular, soft to medium stiff, dry, gray (5yr, 4/1). | |
| | | | | | 18.5 | | | (16.5-17.6') SAND; fine to very coarse, trace silt, trace small granule to medium pebble, poorly sorted, wet, dark gray (GLEY, 4/1) | |
| | | | | | | | | (17.6-18') SAND; very fine to fine, some silt, trace medium to large granule, subrounded, poorly sorted, moist, gray (GLEY, 4/1). | |
| | | | | | | | | End of boring 18' bgs | |

**Remarks:** bgs = below ground surface
HA - Hand Auger

Hand auger from 0-5' bgs.
Groundwater encountered at 6' bgs

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**Appendix D**

Laboratory Data

# Analytical Laboratory Report

Report ID: S51410.01(01)
Generated on 02/01/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51410.01-S51410.23
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/23/2012 - 01/25/2012
Submitted Date/Time: 01/25/2012 14:00
Sampled by: Megan Meckley
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (23 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51410.01 | WMU2_SB1_01232012 (3'-3.5') | Soil | 01/23/2012 11:10 |
| S51410.02 | WMU7_SB1_01232012 (15.5-16') | Soil | 01/23/2012 13:40 |
| S51410.03 | WMU7_SB2_01232012 (14.5-15') | Soil | 01/23/2012 16:25 |
| S51410.04 | WMU7_SB3_01242012 (15.5-16') | Soil | 01/24/2012 09:55 |
| S51410.05 | WMU8_SB1_01242012 (2-2.8') | Soil | 01/24/2012 10:40 |
| S51410.06 | WMU8_SB2_01242012 (1.5-2') | Soil | 01/24/2012 10:55 |
| S51410.07 | WMU8_SB3_01242012 (3.5-4') | Soil | 01/24/2012 11:20 |
| S51410.08 | WMU8_SB4_01242012 (1.2-1.7') | Soil | 01/24/2012 11:10 |
| S51410.09 | WMU8_SB5_01242012 (4.2-5') | Soil | 01/24/2012 11:50 |
| S51410.10 | WMU10_SB1_01242012 (17.2-17.7) | Soil | 01/24/2012 14:30 |
| S51410.11 | WMU10_SB2_01242012 (16-16.5) | Soil | 01/24/2012 15:45 |
| S51410.12 | WMU10_SB3_01242012 (15.5-16) | Soil | 01/24/2012 16:40 |
| S51410.13 | WMU10_SB4_01242012 (20-20.5) | Soil | 01/25/2012 10:20 |
| S51410.14 | WMU10_SB5_01242012 (18.5-19) | Soil | 01/25/2012 12:00 |
| S51410.15 | WMU10_SB5A_01242012 (17.5-18') | Soil | 01/25/2012 11:55 |
| S51410.16 | WMU10_SB1A_01242012 (16-16.5') | Soil | 01/24/2012 14:45 |
| S51410.17 | WMU10_SB2C_01242012 (13-13.5') | Soil | 01/24/2012 15:35 |
| S51410.18 | WMU10_SB3C_01242012 (12.5-13') | Soil | 01/24/2012 16:30 |
| S51410.19 | WMU10_SB4C_01242012 (14.5-15') | Soil | 01/25/2012 09:55 |
| S51410.20 | WMU10_SB5C_01242012 (16.5-17') | Soil | 01/25/2012 11:50 |
| S51410.21 | WMU10_SB5B_01252012 (14.5-15') | Soil | 01/25/2012 12:05 |
| S51410.22 | TB1_01232011 | Methanol | 01/23/2012 09:00 |
| S51410.23 | WMU10_SB4A_01252012 (17-17.5') | Soil | 01/25/2012 10:30 |

# Analytical Laboratory Report

Lab Sample ID: S51410.01
Sample Tag: WMU2_SB1_01232012 (3'-3.5')
Collected Date/Time: 01/23/2012 11:10
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 82 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:10 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 15:42 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:03 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:03 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | 320 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 95-50-1 | |
| Ethylbenzene | 670 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 127-18-4 | |
| Toluene | 6,160 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | 100 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 75-69-4 | |
| p,m-Xylene | 1,870 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | | |
| o-Xylene | 680 | ug/kg | 70 | 8260M | 01/30/12 16:03 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 60-29-7 | |

Lab Sample ID: S51410.01 (continued)
Sample Tag: WMU2_SB1_01232012 (3'-3.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:03 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:03 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:03 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 30,000 | ug/kg | 4,400 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.02
Sample Tag: WMU7_SB1_01232012 (15.5-16')
Collected Date/Time: 01/23/2012 13:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 85 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:29 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 15:58 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:22 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:22 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:22 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 60-29-7 | |

Lab Sample ID: S51410.02 (continued)
Sample Tag: WMU7_SB1_01232012 (15.5-16')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:22 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:22 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:22 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 13,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.03
Sample Tag: WMU7_SB2_01232012 (14.5-15')
Collected Date/Time: 01/23/2012 16:25
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 84 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 15:48 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 16:15 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:40 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:40 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:40 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 60-29-7 | |

Lab Sample ID: S51410.03 (continued)
Sample Tag: WMU7_SB2_01232012 (14.5-15')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:40 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:40 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:40 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 10,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.04
Sample Tag: WMU7_SB3_01242012 (15.5-16')
Collected Date/Time: 01/24/2012 09:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 81 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:07 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 16:31 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:59 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 16:59 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 16:59 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 60-29-7 | |

Lab Sample ID: S51410.04 (continued)
Sample Tag: WMU7_SB3_01242012 (15.5-16')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 16:59 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:59 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 16:59 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 10,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.05
Sample Tag: WMU8_SB1_01242012 (2-2.8')
Collected Date/Time: 01/24/2012 10:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 83 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:26 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 16:47 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:17 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:17 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:17 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 60-29-7 | |

Lab Sample ID: S51410.05 (continued)
Sample Tag: WMU8_SB1_01242012 (2-2.8')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:17 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:17 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:17 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 29,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.06
Sample Tag: WMU8_SB2_01242012 (1.5-2')
Collected Date/Time: 01/24/2012 10:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 87 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:56 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:03 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 17:35 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 17:35 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 95-50-1 | |
| Ethylbenzene | 80 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 127-18-4 | |
| Toluene | 220 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | 70 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 75-69-4 | |
| p,m-Xylene | 290 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | | |
| o-Xylene | 210 | ug/kg | 60 | 8260M | 01/30/12 17:35 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 60-29-7 | |

Lab Sample ID: S51410.06 (continued)
Sample Tag: WMU8_SB2_01242012 (1.5-2')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 17:35 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 17:35 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 17:35 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.07
Sample Tag: WMU8_SB3_01242012 (3.5-4')
Collected Date/Time: 01/24/2012 11:20
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 84 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 16:45 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:19 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:54 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 17:54 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 17:54 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 60-29-7 | |

Lab Sample ID: S51410.07 (continued)
Sample Tag: WMU8_SB3_01242012 (3.5-4')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 17:54 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:54 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 17:54 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 26,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.08
Sample Tag: WMU8_SB4_01242012 (1.2-1.7')
Collected Date/Time: 01/24/2012 11:10
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:04 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:35 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:12 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:12 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:12 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 60-29-7 | |

Lab Sample ID: S51410.08 (continued)
Sample Tag: WMU8_SB4_01242012 (1.2-1.7')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:12 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:12 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:12 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.09
Sample Tag: WMU8_SB5_01242012 (4.2-5')
Collected Date/Time: 01/24/2012 11:50
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:23 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:15 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 17:51 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:30 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:30 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 71-55-6 | |

S-Surrogate recovery outside of control limits

# Analytical Laboratory Report

Lab Sample ID: S51410.09 (continued)
Sample Tag: WMU8_SB5_01242012 (4.2-5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:30 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:30 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:30 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:30 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 50,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.10
Sample Tag: WMU10_SB1_01242012 (17.2-17.7)
Collected Date/Time: 01/24/2012 14:30
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 90 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.98 | mg/kg | 0.30 | 6020 | 01/30/12 12:42 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 17:42 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:07 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:48 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 18:48 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | | |

Lab Sample ID: S51410.10 (continued)
Sample Tag: WMU10_SB1_01242012 (17.2-17.7)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 18:48 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 18:48 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:48 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 18:48 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.11
Sample Tag: WMU10_SB2_01242012 (16-16.5)
Collected Date/Time: 01/24/2012 15:45
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 3.03 | mg/kg | 0.30 | 6020 | 01/30/12 12:44 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:01 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:23 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:06 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:06 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.11 (continued)
Sample Tag: WMU10_SB2_01242012 (16-16.5)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:06 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:06 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:06 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:06 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 19,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.12
Sample Tag: WMU10_SB3_01242012 (15.5-16)
Collected Date/Time: 01/24/2012 16:40
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.50 | mg/kg | 0.30 | 6020 | 01/30/12 12:45 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:20 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:39 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:24 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 19:24 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.12 (continued)
Sample Tag: WMU10_SB3_01242012 (15.5-16)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 19:24 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 19:24 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:24 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 19:24 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 9,400 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.13
Sample Tag: WMU10_SB4_01242012 (20-20.5)
Collected Date/Time: 01/25/2012 10:20
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 01/25/12 17:00 | PCS | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.14
Sample Tag: WMU10_SB5_01242012 (18.5-19)
Collected Date/Time: 01/25/2012 12:00
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| DRO Extraction | Completed | | | 3510C | 01/27/12 17:44 | EMR | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 13.2 | mg/kg | 0.30 | 6020 | 01/30/12 12:53 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| TPH DRO (C10-C28) | 11,710,000 | ug/kg | 562,000 | 8015M | 01/31/12 14:39 | PL | | XY |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 20:15 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:48 | JGH | 110-80-5 | |
| TPH GRO (C6-C10) | 550,000 | ug/kg | 60,000 | 8015M | 01/31/12 17:53 | JGH | | Y |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 1,000,000 | 8260M | 01/30/12 21:51 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 1,000,000 | 8260M | 01/30/12 21:51 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 71-43-2 | Y |
| Carbon tetrachloride | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 56-23-5 | Y |
| Chlorobenzene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 108-90-7 | Y |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 95-50-1 | Y |
| Ethylbenzene | 11,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 100-41-4 | Y |
| Methylene chloride | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 75-09-2 | Y |
| Tetrachloroethene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 127-18-4 | Y |
| Toluene | 118,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 108-88-3 | Y |

X-Elevated reporting limit due to matrix interference  Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S51410.14 (continued)
Sample Tag: WMU10_SB5_01242012 (18.5-19)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 71-55-6 | Y |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 79-00-5 | Y |
| Trichloroethene | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 79-01-6 | Y |
| Trichlorofluoromethane | Not detected | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 75-69-4 | Y |
| p,m-Xylene | 46,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | | Y |
| o-Xylene | 16,000 | ug/kg | 1,000 | 8260M | 01/30/12 21:51 | JGH | 95-47-6 | Y |
| Acetone | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 67-64-1 | Y |
| 2-Butanone (MEK) | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 78-93-3 | Y |
| Carbon disulfide | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 75-15-0 | Y |
| Diethyl ether | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 60-29-7 | Y |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 100,000 | 8260M | 01/30/12 21:51 | JGH | 108-10-1 | Y |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 1,000 | 8260B | 01/30/12 21:51 | JGH | 75-71-8 | Y |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 1,000 | 8260B | 01/30/12 21:51 | JGH | 76-13-1 | Y |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

Y-Elevated reporting limit due to high target concentration
O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.15
Sample Tag: WMU10_SB5A_01242012 (17.5-18')
Collected Date/Time: 01/25/2012 11:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 01/25/12 17:00 | PCS | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.16
Sample Tag: WMU10_SB1A_01242012 (16-16.5')
Collected Date/Time: 01/24/2012 14:45
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 83 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 5.83 | mg/kg | 0.30 | 6020 | 01/30/12 12:55 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:39 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 18:55 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 19:42 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 70,000 | 8260M | 01/30/12 19:42 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | | |

Lab Sample ID: S51410.16 (continued)
Sample Tag: WMU10_SB1A_01242012 (16-16.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 70 | 8260M | 01/30/12 19:42 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 7,000 | 8260M | 01/30/12 19:42 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 19:42 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 70 | 8260B | 01/30/12 19:42 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.17
Sample Tag: WMU10_SB2C_01242012 (13-13.5')
Collected Date/Time: 01/24/2012 15:35
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 3.13 | mg/kg | 0.30 | 6020 | 01/30/12 12:56 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 18:58 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:34 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 19:11 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:00 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:00 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 95-50-1 | |

S-Surrogate recovery outside of control limits

Lab Sample ID: S51410.17 (continued)
Sample Tag: WMU10_SB2C_01242012 (13-13.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 75-69-4 | |
| p,m-Xylene | 60 | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:00 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:00 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:00 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:00 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 6,100 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.18
Sample Tag: WMU10_SB3C_01242012 (12.5-13')
Collected Date/Time: 01/24/2012 16:30
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 93 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 4.83 | mg/kg | 0.30 | 6020 | 01/30/12 12:57 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:17 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 15:53 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 19:28 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:18 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 20:18 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 95-50-1 | |

S-Surrogate recovery outside of control limits

Lab Sample ID: S51410.18 (continued)
Sample Tag: WMU10_SB3C_01242012 (12.5-13')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/30/12 20:18 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/30/12 20:18 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:18 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/30/12 20:18 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 19,000 | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.19
Sample Tag: WMU10_SB4C_01242012 (14.5-15')
Collected Date/Time: 01/25/2012 09:55
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/27/12 17:41 | EMR | | |
| FScan Extraction (Replicate 01) | Completed | | | 3550B | 01/31/12 12:52 | PL | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 91 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 8.46 | mg/kg | 0.30 | 6020 | 01/30/12 12:59 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/30/12 19:37 | PL | 110-86-1 | S |
| **F-Scan (Replicate 01)** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 95-48-7 | S |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 3/4-Cresol | S |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 95-48-7 | S |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 98-95-3 | S |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:12 | PL | 110-86-1 | S |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:16 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:14 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:14 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 71-43-2 | X |
| Carbon tetrachloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 56-23-5 | X |
| Chlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 108-90-7 | X |

S-Surrogate recovery outside of control limits
X-Elevated reporting limit due to matrix interference

Lab Sample ID: S51410.19 (continued)
Sample Tag: WMU10_SB4C_01242012 (14.5-15')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 95-50-1 | X |
| Ethylbenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 100-41-4 | X |
| Methylene chloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 75-09-2 | X |
| Tetrachloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 127-18-4 | X |
| Toluene | 900 | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 108-88-3 | X |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 71-55-6 | X |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 79-00-5 | X |
| Trichloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 79-01-6 | X |
| Trichlorofluoromethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 75-69-4 | X |
| p,m-Xylene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | | X |
| o-Xylene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:14 | JGH | 95-47-6 | X |
| Acetone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 67-64-1 | X |
| 2-Butanone (MEK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 78-93-3 | X |
| Carbon disulfide | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 75-15-0 | X |
| Diethyl ether | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 60-29-7 | X |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:14 | JGH | 108-10-1 | X |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:14 | JGH | 75-71-8 | X |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:14 | JGH | 76-13-1 | X |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.20
Sample Tag: WMU10_SB5C_01242012 (16.5-17')
Collected Date/Time: 01/25/2012 11:50
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 8.64 | mg/kg | 0.30 | 6020 | 01/30/12 13:00 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 700 | 8270C | 01/31/12 17:47 | PL | 95-48-7 | X |
| p,m-Cresol | Not detected | ug/kg | 700 | 8270C | 01/31/12 17:47 | PL | 3/4-Cresol | X |
| o-Cresol | Not detected | ug/kg | 400 | 8270C | 01/31/12 17:47 | PL | 95-48-7 | X |
| Nitrobenzene | Not detected | ug/kg | 400 | 8270C | 01/31/12 17:47 | PL | 98-95-3 | X |
| Pyridine | Not detected | ug/kg | 400 | 8270C | 01/31/12 17:47 | PL | 110-86-1 | X |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:32 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:33 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 600,000 | 8260M | 01/30/12 21:33 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 71-43-2 | X |
| Carbon tetrachloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 56-23-5 | X |
| Chlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 108-90-7 | X |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 95-50-1 | X |
| Ethylbenzene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 100-41-4 | X |
| Methylene chloride | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 75-09-2 | X |
| Tetrachloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 127-18-4 | X |
| Toluene | 2,400 | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 108-88-3 | X |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 71-55-6 | X |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 79-00-5 | X |
| Trichloroethene | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 79-01-6 | X |
| Trichlorofluoromethane | Not detected | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 75-69-4 | X |

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S51410.20 (continued)
Sample Tag: WMU10_SB5C_01242012 (16.5-17')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| p,m-Xylene | 1,300 | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | | X |
| o-Xylene | 600 | ug/kg | 600 | 8260M | 01/30/12 21:33 | JGH | 95-47-6 | X |
| Acetone | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 67-64-1 | X |
| 2-Butanone (MEK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 78-93-3 | X |
| Carbon disulfide | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 75-15-0 | X |
| Diethyl ether | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 60-29-7 | X |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 60,000 | 8260M | 01/30/12 21:33 | JGH | 108-10-1 | X |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:33 | JGH | 75-71-8 | X |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 600 | 8260B | 01/30/12 21:33 | JGH | 76-13-1 | X |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51410.21
Sample Tag: WMU10_SB5B_01252012 (14.5-15')
Collected Date/Time: 01/25/2012 12:05
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| Hold until notified | Completed | | | | 01/25/12 17:00 | PCS | | |

# Analytical Laboratory Report

Lab Sample ID: S51410.22
Sample Tag: TB1_01232011
Collected Date/Time: 01/23/2012 09:00
Matrix: Methanol
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 19:44 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 50,000 | 8260M | 01/31/12 16:39 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 50,000 | 8260M | 01/31/12 16:39 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | | |
| o-Xylene | Not detected | ug/kg | 50 | 8260M | 01/31/12 16:39 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 5,000 | 8260M | 01/31/12 16:39 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 50 | 8260B | 01/31/12 16:39 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 50 | 8260B | 01/31/12 16:39 | JGH | 76-13-1 | |

# Analytical Laboratory Report

Lab Sample ID: S51410.23
Sample Tag: WMU10_SB4A_01252012 (17-17.5')
Collected Date/Time: 01/25/2012 10:30
Matrix: Soil
COC Reference: BC012512.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.7 | IR |
| 2 | 4oz Glass | None | Yes | 4.7 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 01/30/12 10:00 | PER | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 89 | % | 1 | Std M 2540 B | 01/26/12 11:00 | SLR | | |
| ***Metals*** | | | | | | | | |
| Lead | 9.63 | mg/kg | 0.30 | 6020 | 01/30/12 13:02 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:31 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/26/12 20:00 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 600,000 | 8260M | 01/31/12 18:10 | JGH | | X |
| Cyclohexanone | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 108-94-1 | X |
| Ethyl Acetate | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 141-78-6 | X |
| Isobutanol | Not detected | ug/kg | 600,000 | 8260M | 01/31/12 18:10 | JGH | | X |
| 2-Nitropropane | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 79-46-9 | X |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 71-43-2 | X |
| Carbon tetrachloride | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 56-23-5 | X |
| Chlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 108-90-7 | X |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 95-50-1 | X |
| Ethylbenzene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 100-41-4 | X |
| Methylene chloride | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 75-09-2 | X |
| Tetrachloroethene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 127-18-4 | X |
| Toluene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 108-88-3 | X |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 71-55-6 | X |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 79-00-5 | X |
| Trichloroethene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 79-01-6 | X |
| Trichlorofluoromethane | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 75-69-4 | X |

X-Elevated reporting limit due to matrix interference

# Analytical Laboratory Report

Lab Sample ID: S51410.23 (continued)
Sample Tag: WMU10_SB4A_01252012 (17-17.5')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| p,m-Xylene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | | X |
| o-Xylene | Not detected | ug/kg | 600 | 8260M | 01/31/12 18:10 | JGH | 95-47-6 | X |
| Acetone | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 67-64-1 | X |
| 2-Butanone (MEK) | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 78-93-3 | X |
| Carbon disulfide | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 75-15-0 | X |
| Diethyl ether | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 60-29-7 | X |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 18:10 | JGH | 108-10-1 | X |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 600 | 8260B | 01/31/12 18:10 | JGH | 75-71-8 | X |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 600 | 8260B | 01/31/12 18:10 | JGH | 76-13-1 | X |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | Not detected | ug/kg | 4,400 | 8015M | 01/26/12 12:00 | Fiber | | O |

X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012512.1

| Send Results To: | |
|---|---|
| Contact & Company Name: Mike Brennan ARCADIS | Telephone: 248-994-2276 |
| Address: 10559 Citation Dr, Suite 100 | Fax: 810-229-8837 |
| City State Zip: Brighton, MI 48116 | E-mail Address: michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): Buick City/ Flint, MI | Project #: B0064410.2012.00900 |
| Sampler's Printed Name: Megan Meckley | Sampler's Signature: Megan Meckley |

| Preservative | E | F | E | E |
|---|---|---|---|---|
| Filtered (✓) | NA | NA | NA | NA |
| # of Containers | 1 | 1 | 1 | 1 |
| Container Information | 10 | 1 | 10 | 10 |

PARAMETER ANALYSIS & METHOD

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane | Methanol | Fscan SVOCs, Total Solids, Ignitability, Lead | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 51410 | | | | | | | | | | |
| .01 WMU2_SB1_01232012 (3-3.5') | 1/23/12 | 1110 | | X | SO | 1 | 1 | 1 | | |
| .02 WMU7_SB1_01232012 (15.5-16') | 1/23/12 | 1340 | | X | SO | 1 | 1 | 1 | | |
| .03 WMU7_SB2_01232012 (14.5-15') | 1/23/12 | 1625 | | X | SO | 1 | 1 | 1 | | |
| .04 WMU7_SB3_01242012 (15.5-16') | 1/24/12 | 955 | | x | SO | 1 | 1 | 1 | | |
| .05 WMU8_SB1_01242012 (2-2.8') | 1/24/12 | 1040 | | x | SO | 1 | 1 | 1 | | |
| .06 WMU8_SB2_01242012 (1.5-2') | 1/24/12 | 1055 | | x | SO | 1 | 1 | 1 | | |
| .07 WMU8_SB3_01242012 (3.5-4') | 1/24/12 | 1120 | | x | SO | 1 | 1 | 1 | | |
| .08 WMU8_SB4_01242012 (1,2-1,7') | 1/24/12 | 1110 | | x | SO | 1 | 1 | 1 | | |
| .09 WMU8_SB5_01242012 (4.5-5') | 1/24/12 | 1150 | | x | SO | 1 | 1 | 1 | | |
| .10 WMU10_SB1_01242012 (17.2-17.7') | 1/24/12 | 1430 | | x | SO | 1 | | 1 | 1 | |
| .11 WMU10_SB2_01242012 (16-16.5') | 1/24/12 | 1545 | | x | SO | 1 | | 1 | 1 | |
| .12 WMU10_SB3_01242012 (15.5-16') | 1/24/12 | 1640 | | x | SO | 1 | | 1 | 1 | |
| .13 WMU10_SB4_01242012 (20-20.5') | 1/25/12 | 1020 | | x | SO | 1 | | 1 | 1 | |
| .14 WMU10_SB5_01242012 (18.5-19') | 1/25/12 | 1200 | | x | SO | 1 | | 1 | 1 | |
| .15 WMU10_SB5A_01242012 (17.5-18') | 1/25/12 | 1155 | | x | SO | 1 | | 1 | 1 | |
| .16 WMU10_SB1A_01242012 (16-16.5') | 1/24/12 | 1445 | | x | SO | 1 | | 1 | 1 | |
| .17 WMU10_SB2C_01242012 (13-13.5) | 1/24/12 | 1535 | | x | SO | 1 | | 1 | 1 | concrete |
| .18 WMU10_SB3C_01242012 (12.5-13') | 1/24/12 | 1630 | | x | SO | 1 | | 1 | 1 | concrete |
| .19 WMU10_SB4C_01242012 (14.5-15') | 1/25/12 | 955 | | x | SO | 1 | | 1 | 1 | concrete |
| .20 WMU10_SB5C_01242012 (16.5-17') | 1/25/12 | 1150 | | x | SO | 1 | | 1 | 1 | concrete |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment
SO = Soil
Wipe
W = Water
A = Air
NL = NAPL / Oil
T = Tissue
SL = Sludge
SW = Surface

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: Megan Meckley | Printed Name: Chris Gauthier | Printed Name: Paula Shaw |
| ☑ Cooler packed with ice (✓) | | Signature: Megan Meckley | Signature: | Signature: |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 4.7° | Date/Time: 1-25-12 1235 | Date/Time: 1-25-12 1255 | Date/Time: 1-25-12 1400 |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012512.1

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| Address: | Fax: |
| 10559 Citation Dr, Suite 100 | 810-229-6837 |
| City State Zip | E-mail Address: |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): | Project #: |
| Buick City/ Flint, MI | B0064410.2012.00900 |
| Sampler's Printed Name: | Sampler's Signature: |
| Megan Meckley | Megan Meckley |

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane | Methanol | Fscan SVOCs, Total Solids, Ignitability, Lead | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | E | F | E | E | | | | | |
| Filtered (✓) | | | | | | NA | NA | NA | NA | | | | | |
| # of Containers | | | | | | 1 | 1 | 1 | 1 | | | | | |
| Container Information | | | | | | 10 | 1 | 10 | 10 | | | | | |
| 51410 .21 WMU10_SB5B_01252012 (14.5-15') | 1/25/12 | 1205 | | x | SO | | 1 | | 1 | 1 | | | | |
| .22 TB1_01232011 | 1/23/12 | 900 | | x | w | | 1 | | | | | | | |
| .23 WMU10_SB4A_01252012 (17-17.5) | 1/25/12 | 1030 | | x | SO | | 1 | | 1 | 1 | | | | |

PARAMETER ANALYSIS & METHOD

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge, SO = Soil, NL = NAPL / Oil, SW = Surface Wipe, W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: Megan Meckley | Printed Name: Chris Gauthier | Printed Name: Paula Stan |
| ☑ Cooler packed with ice (✓) | | Signature: Megan Meckley | Signature: | Signature: |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: Merit |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 4.7° | Date/Time: 1/25/12 - 1235 | Date/Time: 1-25-12 1255 | Date/Time: 1-25-12 1400 |

Fibertec
environmental
services

Tuesday, January 31, 2012

Fibertec Project Number: 48342
Project Identification: 51410 /
Submittal Date: 01/25/2012

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

Samples were received at 17 degrees Celsius.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

*1914 Holloway Drive* *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
*11766 E. Grand River* *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
*8660 S. Mackinaw Trail* *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.01** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **1** | Collect Date: | **01/23/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:10** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-001** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **13** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-001** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **30000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/30/12 | SD12A30A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.02** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **2** | Collect Date: | **01/23/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **13:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-002** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **15** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-002** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **13000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.03** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **3** | Collect Date: | **01/23/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **16:25** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-003** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **15** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-003** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **10000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.04** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **4** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **09:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-004** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **17** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-004** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **10000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.05** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **5** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-005** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **15** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-005** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **29000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.06** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **6** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-006** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **10** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-006** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.07** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **7** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:20** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-007** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **17** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-007** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **26000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.08** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **8** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:10** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-008** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **6.8** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-008** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.09** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **9** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:50** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-009** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.7** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-009** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **50000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.10** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **10** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-010** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **9.6** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-010** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.11** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **11** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:45** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-011** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.0** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-011** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **19000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.12** | Chain of Custody: | **64412** |
| Client Project Name: | **51410** | Sample No: | **12** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **16:40** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-012** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.1** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-012** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **9400** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.14** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **13** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **12:00** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-013** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **11** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-013** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.16** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **14** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:45** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-014** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **14** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-014** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.17** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **15** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:35** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-015** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.7** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-015** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **6100** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.18** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **16** | Collect Date: | **01/24/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **16:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-016** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **6.4** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-016** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **19000** | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.19** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **17** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **09:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-017** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **6.5** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-017** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.20** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **18** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:50** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-018** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.9** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-018** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51410.23** | Chain of Custody: | **64413** |
| Client Project Name: | **51410** | Sample No: | **19** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **10:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48342-019** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **12** | | % | 0.1 | 1.0 | 01/27/12 | MC120127 | 01/30/12 | MC120127 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48342-019** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | U | | µg/kg | 4400 | 1.0 | 01/26/12 | PS12A26B | 01/26/12 | S812A26A |

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Report ID: S51442.01(01)
Generated on 02/02/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51442.01-S51442.06
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/25/2012 - 01/26/2012
Submitted Date/Time: 01/27/2012 13:00
Sampled by: Megan Meckley
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#L11-184), WBENC (#2005110032)
Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814), NELAC FL (#E871045)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (6 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51442.01 | WMU10_SB5_01252012 | Groundwater | 01/25/2012 15:45 |
| S51442.02 | WMU2_SB3_01262012 (2-2.2') | Soil | 01/26/2012 11:30 |
| S51442.03 | Tripblank2_01252012 | Water | 01/25/2012 16:00 |
| S51442.04 | Tripblank_01252012 | Methonal | 01/25/2012 13:00 |
| S51442.05 | WMU10_SB6_01252012 (11.5-12) | Soil | 01/25/2012 14:55 |
| S51442.06 | WMU10_SB6A_01252012 (17.5-18') | Soil | 01/25/2012 15:00 |

# Analytical Laboratory Report

Lab Sample ID: S51442.01
Sample Tag: WMU10_SB5_01252012
Collected Date/Time: 01/25/2012 15:45
Matrix: Groundwater
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 2 | 40ml Glass | None | Yes | 4.4 | IR |
| 1 | 4oz Glass | None | Yes | 4.4 | IR |
| 2 | 40ml Glass | HCL | Yes | 4.4 | IR |
| 4 | 1L Amber | None | Yes | 4.4 | IR |
| 1 | 125ml Plastic | HNO3 | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Inorganics*** | | | | | | | | |
| Flash Point | Not detected | oF | 180 | ASTM D3278 | 01/27/12 14:18 | PL | | |

# Analytical Laboratory Report

Lab Sample ID: S51442.02
Sample Tag: WMU2_SB3_01262012 (2-2.2')
Collected Date/Time: 01/26/2012 11:30
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |
| 2 | 4oz Glass | None | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| ***Inorganics*** | | | | | | | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/30/12 12:00 | WAR | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 16:50 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/27/12 15:26 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 16:57 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 16:57 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 75-69-4 | |
| p,m-Xylene | 320 | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | | |
| o-Xylene | 140 | ug/kg | 60 | 8260M | 01/31/12 16:57 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 60-29-7 | |

Lab Sample ID: S51442.02 (continued)
Sample Tag: WMU2_SB3_01262012 (2-2.2')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 16:57 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 16:57 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 16:57 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 6,400 | ug/kg | 4,400 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51442.03
Sample Tag: Tripblank2_01252012
Collected Date/Time: 01/25/2012 16:00
Matrix: Water
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | HCL | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| **Volatile Organics - DEQ List** | | | | | | | | |
| Diethyl ether | Not detected | ug/L | 10 | 8260B | 01/30/12 17:46 | JGH | 60-29-7 | |
| Acetone | Not detected | ug/L | 50 | 8260B | 01/30/12 17:46 | JGH | 67-64-1 | |
| Methyl iodide | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 74-88-4 | |
| Carbon disulfide | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-15-0 | |
| tert-Methyl butyl ether (MTBE) | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 1634-04-4 | |
| Acrylonitrile | Not detected | ug/L | 2 | 8260B | 01/30/12 17:46 | JGH | 107-13-1 | |
| 2-Butanone (MEK) | Not detected | ug/L | 25 | 8260B | 01/30/12 17:46 | JGH | 78-93-3 | |
| Dichlorodifluoromethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-71-8 | |
| Chloromethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 74-87-3 | |
| Vinyl chloride | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-01-4 | |
| Bromomethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 74-83-9 | |
| Chloroethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-00-3 | |
| Trichlorofluoromethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-69-4 | |
| 1,1-Dichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-35-4 | |
| Methylene chloride | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 75-09-2 | |
| trans-1,2-Dichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 156-60-5 | |
| 1,1-Dichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-34-3 | |
| cis-1,2-Dichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 156-59-2 | |
| Tetrahydrofuran | Not detected | ug/L | 90 | 8260B | 01/30/12 17:46 | JGH | 109-99-9 | |
| Chloroform | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 67-66-3 | |
| Bromochloromethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 74-97-5 | |
| 1,1,1-Trichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 71-55-6 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/L | 50 | 8260B | 01/30/12 17:46 | JGH | 108-10-1 | |
| 2-Hexanone | Not detected | ug/L | 50 | 8260B | 01/30/12 17:46 | JGH | 591-78-6 | |
| Carbon tetrachloride | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 56-23-5 | |
| Benzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 71-43-2 | |
| 1,2-Dichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 107-06-2 | |
| Trichloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 79-01-6 | |
| 1,2-Dichloropropane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 78-87-5 | |
| Bromodichloromethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-27-4 | |
| Dibromomethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 74-95-3 | |
| cis-1,3-Dichloropropene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 10061-01-5 | |
| Toluene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-88-3 | |
| trans-1,3-Dichloropropene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 10061-02-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 79-00-5 | |
| Tetrachloroethene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 127-18-4 | |
| trans-1,4-Dichloro-2-butene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 110-57-6 | |
| Dibromochloromethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 124-48-1 | |
| 1,2-Dibromoethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 106-93-4 | |
| Chlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-90-7 | |
| 1,1,1,2-Tetrachloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 630-20-6 | |
| Ethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 100-41-4 | |

Lab Sample ID: S51442.03 (continued)
Sample Tag: Tripblank2_01252012

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Organics - DEQ List (continued)** | | | | | | | | |
| p,m-Xylene | Not detected | ug/L | 2 | 8260B | 01/30/12 17:46 | JGH | | |
| o-Xylene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 95-47-6 | |
| Styrene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 100-42-5 | |
| Isopropylbenzene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 98-82-8 | |
| Bromoform | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 75-25-2 | |
| 1,1,2,2-Tetrachloroethane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 79-34-5 | |
| 1,2,3-Trichloropropane | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 96-18-4 | |
| n-Propylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 103-65-1 | |
| Bromobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-86-1 | |
| 1,3,5-Trimethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 108-67-8 | |
| tert-Butylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 98-06-6 | |
| 1,2,4-Trimethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 95-63-6 | |
| sec-Butylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 135-98-8 | |
| p-Isopropyltoluene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 99-87-6 | |
| 1,3-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 541-73-1 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 106-46-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 95-50-1 | |
| 1,2,3-Trimethylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 526-73-8 | |
| n-Butylbenzene | Not detected | ug/L | 1 | 8260B | 01/30/12 17:46 | JGH | 104-51-8 | |
| Hexachloroethane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 67-72-1 | |
| 1,2-Dibromo-3-chloropropane | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 96-12-8 | |
| 1,2,4-Trichlorobenzene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 120-82-1 | |
| 1,2,3-Trichlorobenzene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 87-61-6 | |
| Naphthalene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 91-20-3 | |
| 2-Methylnaphthalene | Not detected | ug/L | 5 | 8260B | 01/30/12 17:46 | JGH | 91-57-6 | |

# Analytical Laboratory Report

Lab Sample ID: S51442.04
Sample Tag: Tripblank_01252012
Collected Date/Time: 01/25/2012 13:00
Matrix: Methonal
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles*** | | | | | | | | |
| **Volatile Organics 5035** | | | | | | | | |
| Diethyl ether | Not detected | ug/kg | 200 | 8260B/5035 | 01/31/12 17:16 | JGH | 60-29-7 | |
| Acetone | Not detected | ug/kg | 1,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 67-64-1 | |
| Methyl iodide | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-88-4 | |
| Carbon disulfide | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-15-0 | |
| tert-Methyl butyl ether (MTBE) | Not detected | ug/kg | 200 | 8260B/5035 | 01/31/12 17:16 | JGH | 1634-04-4 | |
| Acrylonitrile | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 107-13-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 750 | 8260B/5035 | 01/31/12 17:16 | JGH | 78-93-3 | |
| Dichlorodifluoromethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-71-8 | |
| Chloromethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-87-3 | |
| Vinyl chloride | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-01-4 | |
| Bromomethane | Not detected | ug/kg | 200 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-83-9 | |
| Chloroethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-00-3 | |
| Trichlorofluoromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-69-4 | |
| 1,1-Dichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-35-4 | |
| Methylene chloride | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-09-2 | |
| trans-1,2-Dichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 156-60-5 | |
| 1,1-Dichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-34-3 | |
| cis-1,2-Dichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 156-59-2 | |
| Tetrahydrofuran | Not detected | ug/kg | 1,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 109-99-9 | |
| Chloroform | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 67-66-3 | |
| Bromochloromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-97-5 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 71-55-6 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 3,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-10-1 | |
| 2-Hexanone | Not detected | ug/kg | 3,000 | 8260B/5035 | 01/31/12 17:16 | JGH | 591-78-6 | |
| Carbon tetrachloride | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 56-23-5 | |
| Benzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 71-43-2 | |
| 1,2-Dichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 107-06-2 | |
| Trichloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 79-01-6 | |
| 1,2-Dichloropropane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 78-87-5 | |
| Bromodichloromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-27-4 | |
| Dibromomethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 74-95-3 | |
| cis-1,3-Dichloropropene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 10061-01-5 | |
| Toluene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-88-3 | |
| trans-1,3-Dichloropropene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 10061-02-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 79-00-5 | |
| Tetrachloroethene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 127-18-4 | |
| trans-1,4-Dichloro-2-butene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 110-57-6 | |
| Dibromochloromethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 124-48-1 | |
| 1,2-Dibromoethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 106-93-4 | |
| Chlorobenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-90-7 | |
| 1,1,1,2-Tetrachloroethane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 630-20-6 | |
| Ethylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 100-41-4 | |

Lab Sample ID: S51442.04 (continued)
Sample Tag: Tripblank_01252012

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **Volatile Organics 5035 (continued)** | | | | | | | | |
| p,m-Xylene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | | |
| o-Xylene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 95-47-6 | |
| Styrene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 100-42-5 | |
| Isopropylbenzene | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 98-82-8 | |
| Bromoform | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 75-25-2 | |
| 1,1,2,2-Tetrachloroethane | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 79-34-5 | |
| 1,2,3-Trichloropropane | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 96-18-4 | |
| n-Propylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 103-65-1 | |
| Bromobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-86-1 | |
| 1,3,5-Trimethylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 108-67-8 | |
| tert-Butylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 98-06-6 | |
| 1,2,4-Trimethylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 95-63-6 | |
| sec-Butylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 135-98-8 | |
| p-Isopropyltoluene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 99-87-6 | |
| 1,3-Dichlorobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 541-73-1 | |
| 1,4-Dichlorobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 106-46-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 95-50-1 | |
| 1,2,3-Trimethylbenzene | Not detected | ug/kg | 100 | 8260B/5035 | 01/31/12 17:16 | JGH | 526-73-8 | |
| n-Butylbenzene | Not detected | ug/kg | 50 | 8260B/5035 | 01/31/12 17:16 | JGH | 104-51-8 | |
| Hexachloroethane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 67-72-1 | |
| 1,2-Dibromo-3-chloropropane | Not detected | ug/kg | 300 | 8260B/5035 | 01/31/12 17:16 | JGH | 96-12-8 | |
| 1,2,4-Trichlorobenzene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 120-82-1 | |
| 1,2,3-Trichlorobenzene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 87-61-6 | |
| Naphthalene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 91-20-3 | |
| 2-Methylnaphthalene | Not detected | ug/kg | 330 | 8260B/5035 | 01/31/12 17:16 | JGH | 91-57-6 | |

# Analytical Laboratory Report

Lab Sample ID: S51442.05
Sample Tag: WMU10_SB6_01252012 (11.5-12)
Collected Date/Time: 01/25/2012 14:55
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |
| 2 | 4oz Glass | None | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 02/01/12 01:00 | SLR | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 92 | % | 1 | Std M 2540 B | 01/30/12 12:00 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.62 | mg/kg | 0.30 | 6020 | 02/02/12 15:44 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:09 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 1,000 | 8260M | 01/27/12 15:58 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 17:34 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 60,000 | 8260M | 01/31/12 17:34 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51442.05 (continued)
Sample Tag: WMU10_SB6_01252012 (11.5-12)

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 60 | 8260M | 01/31/12 17:34 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 6,000 | 8260M | 01/31/12 17:34 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 17:34 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 60 | 8260B | 01/31/12 17:34 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 99,000 | ug/kg | 13,000 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

# Analytical Laboratory Report

Lab Sample ID: S51442.06
Sample Tag: WMU10_SB6A_01252012 (17.5-18')
Collected Date/Time: 01/25/2012 15:00
Matrix: Soil
COC Reference: BC012712.1

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 4.4 | IR |
| 2 | 4oz Glass | None | Yes | 4.4 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| FScan Extraction | Completed | | | 3550B | 01/30/12 22:33 | EMR | | |
| Metal Digestion | Completed | | | 3050B | 02/01/12 01:00 | SLR | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 01/27/12 14:18 | PL | | |
| Total Solids | 82 | % | 1 | Std M 2540 B | 01/30/12 12:00 | WAR | | |
| ***Metals*** | | | | | | | | |
| Lead | 2.61 | mg/kg | 0.30 | 6020 | 02/02/12 15:47 | PER | 7439-92-1 | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **F-Scan** | | | | | | | | |
| Cresylic Acid | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 95-48-7 | |
| p,m-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 3/4-Cresol | |
| o-Cresol | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 95-48-7 | |
| Nitrobenzene | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 98-95-3 | |
| Pyridine | Not detected | ug/kg | 300 | 8270C | 01/31/12 17:28 | PL | 110-86-1 | |
| ***Organics - Volatiles*** | | | | | | | | |
| 2-Ethoxyethanol | Not detected | ug/kg | 2,000 | 8260M | 01/27/12 16:15 | JGH | 110-80-5 | |
| **F Scan** | | | | | | | | |
| 1-Butanol | Not detected | ug/kg | 80,000 | 8260M | 01/31/12 17:52 | JGH | | |
| Cyclohexanone | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 108-94-1 | |
| Ethyl Acetate | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 141-78-6 | |
| Isobutanol | Not detected | ug/kg | 80,000 | 8260M | 01/31/12 17:52 | JGH | | |
| 2-Nitropropane | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 79-46-9 | |
| **F Scan** | | | | | | | | |
| Benzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 71-43-2 | |
| Carbon tetrachloride | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 56-23-5 | |
| Chlorobenzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 108-90-7 | |
| 1,2-Dichlorobenzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 95-50-1 | |
| Ethylbenzene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 100-41-4 | |
| Methylene chloride | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 75-09-2 | |
| Tetrachloroethene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 127-18-4 | |
| Toluene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 108-88-3 | |
| 1,1,1-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 71-55-6 | |
| 1,1,2-Trichloroethane | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 79-00-5 | |
| Trichloroethene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 79-01-6 | |
| Trichlorofluoromethane | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 75-69-4 | |
| p,m-Xylene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | | |

# Analytical Laboratory Report

Lab Sample ID: S51442.06 (continued)
Sample Tag: WMU10_SB6A_01252012 (17.5-18')

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | CAS # | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Volatiles (continued)*** | | | | | | | | |
| **F Scan (continued)** | | | | | | | | |
| o-Xylene | Not detected | ug/kg | 80 | 8260M | 01/31/12 17:52 | JGH | 95-47-6 | |
| Acetone | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 67-64-1 | |
| 2-Butanone (MEK) | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 78-93-3 | |
| Carbon disulfide | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 75-15-0 | |
| Diethyl ether | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 60-29-7 | |
| 4-Methyl-2-pentanone (MIBK) | Not detected | ug/kg | 8,000 | 8260M | 01/31/12 17:52 | JGH | 108-10-1 | |
| **Volatile Halocarbons** | | | | | | | | |
| Dichlorodifluoromethane | Not detected | ug/kg | 80 | 8260B | 01/31/12 17:52 | JGH | 75-71-8 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Not detected | ug/kg | 80 | 8260B | 01/31/12 17:52 | JGH | 76-13-1 | |
| ***Other / Misc.*** | | | | | | | | |
| Methanol | 110,000 | ug/kg | 15,000 | 8015M | 01/30/12 12:00 | Fiber | | O |

O-Analysis performed by outside laboratory. See attached report.

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012712.1

**Send Results To:**

| | |
|---|---|
| Contact & Company Name: Mike Brennan ARCADIS | Telephone: 248-994-2276 |
| Address: 10559 Citation Dr, Suite 100 | Fax: 810-229-8837 |
| City State Zip: Brighton, MI 48116 | E-mail Address: michael.brennan@arcadis-us.com |
| Project Name/Location (City, State): Buick City/ Flint, MI | Project #: B0064410.2012.00900 |
| Sampler's Printed Name: Megan Meckley | Sampler's Signature: Megan Meckley |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Preservative | E | F | E | E | B | D | E | E |
| | | | | | Filtered (✓) | NA | NA | NA | NA | NA | NA | NA | NA |
| | | | | | # of Containers | 1 | 1 | 1 | 4 | 2 | 1 | 1 | 1 |
| | | | | | Container Information | 10 | 1 | 10 | 2 | 1 | 3 | 10 | 10 |
| | | | | | **PARAMETER ANALYSIS & METHOD** | | | | | | | | |
| **Sample ID** | **Collection w2 Date** | **Time** | **Type Comp** | **Type Grab** | **Matrix** | Fscan SVOCs, Total Solids | Fscan VOCs plus 1,1,2-Trichloro-1,2,2-Trifluoroethane and dichlorodifluoromethane | Methanol | PCBs/SVOCs | VOCs | Total Metals | Ignitability | Fscan SVOCs, Total Solids, Ignitability, Lead | **REMARKS** |
| 51447.01 WMU10_SB5_01252012 | 1/25/12 | 1545 | | X | GW | | | X | X | X | X | X | | |
| .02 WMU2_SB3_01262012 (2-2.2') | 1/26/12 | 1130 | | X | SO | X | X | X | | | | | | |
| .03 TRIPBLANK2_01252012 | 1/25/12 | 1600 | | X | W | | | | | X | | | | Lab filled water VOA |
| .04 TRIPBLANK_01252012 | 1/25/12 | 1300 | | X | W | | | X | | | | | | |
| .05 WMU10_SB6_01252012 (11.5-12) | 1/25/12 | 1455 | | X | SO | | X | X | | | | | X | |
| .06 WMU10_SB6A_01252012 (17.5-18') | 1/25/12 | 1500 | | X | SO | | X | X | | | | | X | |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge
SO = Soil, NL = NAPL / Oil, SW = Surface
Wipe
W = Water, T = Tissue

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS).

**Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| **Laboratory Information and Receipt** | | **Relinquished By** | **Received By** | **Laboratory Received By** |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal: ☐ Intact ☐ Not Intact | Printed Name: Megan Meckley | Printed Name: Chris Gosthice | Printed Name: Andrew Ball |
| ☑ Cooler packed with ice (✓) | | Signature: Megan Meckley | Signature: [signature] | Signature: Andrew Ball |
| Specify Turnaround Requirements: 5-day TAT | Sample Receipt: | ARCADIS | Firm: Merit | Firm: MERIT |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 4.4° | Date/Time: 1/27/2012 1200 | Date/Time: 1-27-12 1200 | Date/Time: 27 JAN 12 1300 |

Fibertec
environmental
services

Thursday, February 02, 2012

Fibertec Project Number: 48376
Project Identification: 51442 /
Submittal Date: 01/27/2012

Ms. Paula Shaw
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Dear Ms. Shaw,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51442.02** | Chain of Custody: | **64414** |
| Client Project Name: | **51442** | Sample No: | **1** | Collect Date: | **01/26/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **11:30** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48376-001** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **8.2** | | % | 0.1 | 1.0 | 01/30/12 | MC120130 | 01/31/12 | MC120130 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48376-001** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **6400** | | µg/kg | 4400 | 1.0 | 01/30/12 | PS12A30A | 01/30/12 | SD12A30A |

**Analytical Laboratory Report**
**Laboratory Project Number: 48376**
**Laboratory Sample Number: 48376-002**



| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51442.05** | Chain of Custody: | **64414** |
| Client Project Name: | **51442** | Sample No: | **2** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **14:55** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48376-002** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **7.1** | | % | 0.1 | 1.0 | 01/30/12 | MC120130 | 01/31/12 | MC120130 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48376-002** **Matrix: Soil/Solid** **Analyst: TMC**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **99000** | | µg/kg | 13000 | 5.0 | 01/30/12 | S812A30A | 01/30/12 | S812A30A |

| | | | | | |
|---|---|---|---|---|---|
| Client Identification: | **Merit Laboratories, Inc.** | Sample Description: | **51442.06** | Chain of Custody: | **64414** |
| Client Project Name: | **51442** | Sample No: | **3** | Collect Date: | **01/25/12** |
| Client Project No: | **NA** | Sample Matrix: | **Soil/Solid** | Collect Time: | **15:00** |

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)** **Aliquot ID: 48376-003** **Matrix: Soil/Solid** **Analyst: BMG**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Percent Moisture (Water Content) (NN) | **18** | | % | 0.1 | 1.0 | 01/30/12 | MC120130 | 01/31/12 | MC120130 |

**Semivolatile Compounds by GC-FID (FES S-229/EPA 8015C)** **Aliquot ID: 48376-003** **Matrix: Soil/Solid** **Analyst: BDA**

| Parameter(s) | Result | Q | Units | Reporting Limit | Dilution | Prep Date | Prep Batch | Analysis Date | Analysis Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1. Methanol | **110000** | | µg/kg | 15000 | 5.0 | 01/30/12 | PS12A30A | 01/30/12 | SD12A30A |

**Definitions/ Qualifiers:**

**A:** Spike recovery or precision unusable due to dilution.
**B:** The analyte was detected in the associated method blank.
**E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
**J:** The concentration is an estimated value.
**M:** Modified Method
**U:** The analyte was not detected at or above the reporting limit.
**X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
**W:** Results reported on a wet-weight basis.
***:** Value reported is outside QA limits

**Exception Summary:**

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number:

**E-10395**

# Analytical Laboratory Report

Report ID: S51446.01(01)
Generated on 02/14/2012

Report to

Attention: Mike Brennan
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Michael.Brennan@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S51446.01-S51446.02
Project: B0064410.2012.00900 / Buick City / Flint MI
Collected Date: 01/27/2012
Submitted Date/Time: 01/30/2012 08:25
Sampled by: Megan Meckley
P.O. #: MLT1295

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Samples are held by the lab for 30 days from the sample submittal date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#L11-184), WBENC (#2005110032)
Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814), NELAC FL (#E871045)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

# Analytical Laboratory Report

Sample Summary (2 samples)

| Sample ID | Sample Tag | Matrix | Collected Date/Time |
|---|---|---|---|
| S51446.01 | IDW_01272012 | Methanol | 01/27/2012 17:25 |
| S51446.02 | Tripblank_01272012 | Methanol | 01/27/2012 17:00 |

# Analytical Laboratory Report

Lab Sample ID: S51446.01
Sample Tag: IDW_01272012
Collected Date/Time: 01/27/2012 17:25
Matrix: Methanol
COC Reference: BCO12712.2

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 1L Amber | None | Yes | 10.0 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Extraction / Prep.*** | | | | | | | | |
| Extraction, PCB | Completed | | | 3550B | 01/30/12 15:48 | CCM | | |
| Mercury Digestion | Completed | | | 7471A | 02/10/12 11:15 | JRH | | |
| Metal Digestion | Completed | | | 3015A | 02/13/12 11:00 | PER | | |
| TCLP Zero Headspace Ext. | Completed | | | 1311 | 02/07/12 15:30 | WAR | | |
| TCLP/SPLP BNA Extraction | Completed | | | 3510C | 02/09/12 20:34 | EMR | | |
| **TCLP Extraction** | | | | | | | | |
| Inital Sample pH | 10.83 | | | 1311 | 02/08/12 15:30 | WAR | | |
| pH after 3.5 ml HCl | 5.20 | | | 1311 | 02/08/12 15:30 | WAR | | |
| % Solids | 100 | | | 1311 | 02/08/12 15:30 | WAR | | |
| Sample Used g | 100 | | | 1311 | 02/08/12 15:30 | WAR | | |
| Final Volume mL | 2,000 | | | 1311 | 02/08/12 15:30 | WAR | | |
| TCLP Extraction Fluid | 2 | | | 1311 | 02/08/12 15:30 | WAR | | |
| Final Extract pH | 5.19 | | | 1311 | 02/08/12 15:30 | WAR | | |
| ***Inorganics*** | | | | | | | | |
| Flashpoint for Solids | Not detected | mm/sec | 2.2 | 1030 | 02/03/12 14:01 | PL | | |
| Total Solids | 65 | % | 1 | Std M 2540 B | 02/01/12 14:00 | WAR | | |
| ***Metals*** | | | | | | | | |
| Arsenic, TCLP | Not detected | mg/L | 0.02 | 6020 | 02/13/12 14:16 | PER | 5.0 | |
| Barium, TCLP | 0.50 | mg/L | 0.05 | 6020 | 02/13/12 14:16 | PER | 100.0 | |
| Cadmium, TCLP | Not detected | mg/L | 0.005 | 6020 | 02/13/12 14:16 | PER | 1.0 | |
| Chromium, TCLP | Not detected | mg/L | 0.05 | 6020 | 02/13/12 14:16 | PER | 5.0 | |
| Lead, TCLP | 0.06 | mg/L | 0.03 | 6020 | 02/13/12 14:16 | PER | 5.0 | |
| Mercury, TCLP | Not detected | mg/L | 0.0002 | 7471A | 02/10/12 15:55 | JRT | 0.2 | |
| Selenium, TCLP | Not detected | mg/L | 0.05 | 6020 | 02/13/12 14:16 | PER | 1.0 | |
| Silver, TCLP | Not detected | mg/L | 0.005 | 6020 | 02/13/12 14:16 | PER | 5.0 | |
| ***Organics - PCBs/Pesticides*** | | | | | | | | |
| **PCB List** | | | | | | | | |
| PCB-1016 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| PCB-1242 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| PCB-1221 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| PCB-1232 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| PCB-1248 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| PCB-1254 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| PCB-1260 | Not detected | ug/kg | 330 | 8082A | 01/30/12 19:37 | JANB | | |
| ***Organics - Semi-Volatiles*** | | | | | | | | |
| **TCLP Semi Volatiles** | | | | | | | | |
| o-Cresol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 200,000 | |
| p,m-Cresol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 200,000 | |

# Analytical Laboratory Report

Lab Sample ID: S51446.01 (continued)
Sample Tag: IDW_01272012

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Organics - Semi-Volatiles (continued)*** | | | | | | | | |
| **TCLP Semi Volatiles (continued)** | | | | | | | | |
| Pentachlorophenol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 100,000 | |
| 2,4,5-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 400,000 | |
| 2,4,6-Trichlorophenol | Not detected | ug/L | 1,000 | 8270C | 02/10/12 13:38 | PL | 2,000 | |
| 2,4-Dinitrotoluene | Not detected | ug/L | 90 | 8270C | 02/10/12 13:38 | PL | 130 | |
| Hexachlorobenzene | Not detected | ug/L | 90 | 8270C | 02/10/12 13:38 | PL | 130 | |
| Hexachlorobutadiene | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 500 | |
| Hexachloroethane | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 3,000 | |
| Nitrobenzene | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 2,000 | |
| Pyridine | Not detected | ug/L | 100 | 8270C | 02/10/12 13:38 | PL | 5,000 | |
| ***Organics - Volatiles*** | | | | | | | | |
| **TCLP Volatiles** | | | | | | | | |
| Benzene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 500 | |
| Carbon tetrachloride | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 500 | |
| Chlorobenzene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 100,000 | |
| Chloroform | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 6,000 | |
| 1,4-Dichlorobenzene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 7,500 | |
| 1,2-Dichloroethane | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 500 | |
| 1,1-Dichloroethene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 700 | |
| 2-Butanone (MEK) | Not detected | ug/L | 1,000 | 8260B | 02/10/12 16:52 | WAT | 200,000 | |
| Tetrachloroethene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 700 | |
| Trichloroethene | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 500 | |
| Vinyl chloride | Not detected | ug/L | 100 | 8260B | 02/10/12 16:52 | WAT | 200 | |

# Analytical Laboratory Report

Lab Sample ID: S51446.02
Sample Tag: Tripblank_01272012
Collected Date/Time: 01/27/2012 17:00
Matrix: Methanol
COC Reference: BCO12712.2

Sample Containers

| # | Type | Preservative(s) | Refrigerated? | Arrival Temp. (C) | Thermometer # |
|---|---|---|---|---|---|
| 1 | 40ml Glass | MeOH | Yes | 10.0 | IR |

| Analysis | Results | Units | RL | Method | Run Date/Time | Analyst | Limits | Flags |
|---|---|---|---|---|---|---|---|---|
| ***Other / Misc.*** | | | | | | | | |
| No Analyses | Completed | | | | 01/31/12 08:45 | PCS | | |

ARCADIS

# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

eCOC ID: BC012712.2

**Send Results To:**

| Contact & Company Name: | Telephone: |
|---|---|
| Mike Brennan ARCADIS | 248-994-2276 |
| **Address:** | **Fax:** |
| 10559 Citation Dr, Suite 100 | 810-229-8837 |
| **City State Zip** | **E-mail Address:** |
| Brighton, MI 48116 | michael.brennan@arcadis-us.com |

| Project Name/Location (City, State): | Project #: |
|---|---|
| Buick City/ Flint, MI | B0064410.2012.00900 |
| **Sampler's Printed Name:** | **Sampler's Signature:** |
| Megan Meckley | Megan Meckley |

| Preservative | E | E | F |
|---|---|---|---|
| Filtered (✓) | NA | NA | NA |
| # of Containers | 1 | 6 | 1 |
| Container Information | 8 | 2 | 1 |

**PARAMETER ANALYSIS & METHOD**

| Sample ID | Collection Date | Collection Time | Type Comp | Type Grab | Matrix | TCLP VOCs/SVOCs/Metals, PCBs, total solids, ignitability | TCLP VOCs/SVOCs/ Metals/ PCBs, pH, reactivity, ignitability | Methanol |
|---|---|---|---|---|---|---|---|---|
| 51446.01 IDW-01272012 | 1-27-12 | 7:25 | X | | SO | X | | |
| .02 TRIPBLANK-01272012 | 1-27-12 | 17:00 | | X | W | | | |
| | | | | | | | | X |

**KEYS**

**Preservation Key:**
A. $H_2SO_4$
B. HCL
C. NaOH
D. $HNO_3$
E. None
F. MeOH
G.
H.

**Container Information Key:**
1. 40 mL VOA
2. 1 L Amber
3. 125 mL Plastic
4. 250 mL Plastic
5. 500 mL Plastic
6. 1 L Plastic
7. 2 oz. Glass
8. 32 oz. Glass
9. 8 oz. Glass
10. Other

**Matrix Key:**
SE = Sediment, A = Air, SL = Sludge, SO = Soil, NL = NAPL / Oil, SW = Surface, Wipe, W = Water, T = Tissue

**REMARKS**

**Special Instructions/Comments:** Invoice to: Ms. Monica Wallingford, Racer Trust, 2930 Ecorse Road, Ypsilanti, MI 48198, (313) 486.2928, P.O.No: MT1295a - Please also send copy of Invoicing to Micki Maki (ARCADIS). **Special QA/QC Instructions:** Standard deliverable with EDD Requested.

| Laboratory Information and Receipt | | Relinquished By | Received By | Laboratory Received By |
|---|---|---|---|---|
| Lab Name: Merit | Cooler Custody Seal | Printed Name: Megan Meckley | Printed Name: Merit Drop Box | Printed Name: Andrew Bell |
| ☑ Cooler packed with ice (✓) NO | ☐ Intact ☐ Not Intact | Signature: Megan Meckley | Signature: | Signature: Andrew Bell |
| Specify Turnaround Requirements: Standard TAT | Sample Receipt: | ARCADIS | Firm: | Firm: MERIT |
| Fed-Ex Tracking #: Not Applicable | Condition/Cooler Temp: 10.0 | Date/Time: 1-27-12 - 1845 | Date/Time: | Date/Time: 30JAN12 0825 |



827101V
DATE TIME PRESERVATIVE CLIENT
...go, IL • Richmond, VA
...m (800) 233-8425

**Appendix E**

Waste Manifests

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: MID005356712
2. Page 1 of: 1
3. Emergency Response Phone: 313-486-2908
4. Manifest Tracking Number: 005280338 FLE

5. Generator's Name and Mailing Address
Racer trust/Arcadis NAO Flint Attn: Beth Nanzer
28550 Cabot Drive
Novi, MI 48377 313-486-2908
Generator's Phone:

Generator's Site Address (if different than mailing address)
Racer Trust NAO Flint Ops Attn: Beth Nanzer
902 E. Leith
Flint, MI 48550 313-486-2908

6. Transporter 1 Company Name: U.S. Industrial Technologies
U.S. EPA ID Number: MIK755944491

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
U.S. Industrial Technologies, Inc.
13075 Newburgh Road
Livonia, MI 48150 734-462-4100
Facility's Phone:
U.S. EPA ID Number: MIK755944491

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| | 1. Non RCRA, Non DOT Regulated Material | 04 | DM | 220 | G | NONE | | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information
1) # RTFN-OT-0222-01 Solid Non Haz, Non PCB - WMU IDW

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: B. Nanzer for Racer
Signature:
Month 3 Day 21 Year 12

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Todd Thomas
Signature:
Month 3 Day 21 Year 12
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

July 27, 2009

Mr. Kurt Blizzard
Project Manager
General Motors Corporation
Worldwide Facilities Group
Remediation Team
902 East Leith Street
Flint, Michigan 48550

Dear Mr. Blizzard:

SUBJECT: Resource Conservation and Recovery Act of 1976 (RCRA) Waste Management Unit Closure Status Report (ARCADIS Report); General Motors Corporation (GM), NAO Flint Operations; MID 005 356 712

The Department of Environmental Quality (DEQ), Waste and Hazardous Materials Division (WHMD), has reviewed the ARCADIS Report dated April 30, 2007, pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Based on our review, the WHMD has the following comments, with additional details in the enclosure:

1. Division 29, Building 23, Tool Manufacturing Cyanide Container Storage Area – According to the January 1988 Closure Report, this unit was an 8 feet by 16 feet room within a corner of Building 23 and was used to store waste cyanide salts from heat-treat pots (listed waste F011), and the wastes did not contain any free liquids. The unit underwent closure in May 1995, and a closure report for the unit was submitted August 7, 1995.

   As this was an enclosed room within a building, the wastes did not contain free liquids, and the data in the August 7, 1995, Closure Report do not suggest evidence of a release, the WHMD concurs with the clean closure of this unit.

2. Division 25, East of Factory 10, Outside Waste Thinner Tank Area – No data is available underneath the unit. The ARCADIS BBL (ARCADIS) mapped location of the unit does not fit with the location depicted in the ARCADIS Report. The report text has mixed tense, with respect to investigation and sampling, which confuses the issue of what investigation and sampling had been performed and what was proposed to be done. It is unclear whether samples were actually collected from beneath the tank and if the pertinent parameters were analyzed. The quantity and location of samples must be consistent for a unit of this size (i.e., the number of samples should be determined by following the enclosed Table 1.1 excerpted from the DEQ, Remediation and Redevelopment Division, Sampling Strategies and Statistics Training Materials for Part 201 Cleanup Criteria [S3TM]). Contrary to the

assertion in the ARCADIS Report, there is an absence of the RCRA facility investigation (RFI) samples in the vicinity of the former unit that could be utilized for closure purposes. To achieve closure of the unit, GM must be able to provide a map and the associated data for samples collected from beneath the actual tank location or the samples must be collected and analyzed again. This unit stored listed hazardous waste (F003 and F005) and, to achieve clean closure, must meet the deminimus concentrations for these waste constituents for all closure samples collected.

3. Factory 86, Building 04, Assembly Plant Waste Storage Tanks – There is an October 1985 Partial Closure Report that details the removal of the tanks and some excavation of soils; however, there is no real data or gridding to confirm that the closure was completed (i.e., the number of samples should be determined by following the enclosed Table 1.1 of the S3TM). None of the known RFI samples are close enough to be relevant to the closure of this unit. Soils and concrete cores must be collected within the excavation footprint to both verify closure and determine if there is any residual contamination that may be deferred to corrective action. These tanks stored both listed (F003 and F005) and characteristic hazardous waste (D001 and D008). To achieve clean closure, soil and concrete core samples must meet the deminimus concentrations for these listed hazardous waste constituents and meet the Part 201, Environmental Remediation, of Act 451, cleanup criteria for the characteristic hazardous waste constituents of concern.

4. Building 41A, Assembly Plant Waste Storage Tank Area – There is neither a copy of the closure report in the WHMD files, nor any data or documentation that the tanks were removed. The copy of the approved January 20, 1987, Closure Plan in the WHMD files has a figure that specifies locations of samples and borings. Three borings appear to be for soil classification only. The only analytical data present for this closure are from the analysis of the liquids and sludges in Tank 73 and Tank 74. This unit needs documentation that the tanks were, indeed, removed and appropriate closure sampling was conducted consistent with the guidance on the number of samples, as specified by the enclosed Table 1.1 of the S3TM. This unit stored listed hazardous waste (F003 and F005) and, to achieve clean closure, must meet the deminimus concentrations for these listed hazardous waste constituents and meet the Part 201 cleanup criteria for the characteristic hazardous waste constituents of concern for all closure samples collected.

   The location depicted in the ARCADIS Report does not match what is supplied with the 1986 Closure Plan. Additionally, there are not any RFI samples that are close enough to be relevant for closure of this unit. This unit needs to be sampled beneath the location of the tanks.

5. Factory 10, Building 20, Transmission Plant Tank Area – Based upon the soil investigation documented in the October 1988 Remedial Action Investigation Report, the possibility that the release may have been from the adjacent product tank and not the regulated waste tank, as well as the fact that some soil removal was conducted during a waterline repair, it may be appropriate to defer this unit to corrective action and conduct the work proposed for closure under the RFI portion of corrective action. While this unit stored listed hazardous waste (F002), it is not

clear as to the source of the impacts. If this unit is deferred to corrective action, it needs to meet the Part 201 cleanup criteria for the constituents of concern in all samples collected.

6. Building 02, Container Storage Area – This drum storage pad was described as a 15 feet by 30 feet area in the January 1988 Closure Report, yet the illustration scales off to a 30 feet by 60 feet area. Photographs, found only in the January 1988 Closure Report, focus on an area that abuts the western end of the Hydraulic Oil Reclaim Area and is curbed at its west side. The January 1988 Closure Report denotes nine sample locations, two of which are in the area of the drum storage area (B4 and B5). This container storage area stored both listed (F001) and characteristic hazardous waste (D001). To achieve clean closure, samples from the unit must meet the deminimus concentrations for those listed hazardous waste constituents and meet the Part 201 cleanup criteria for the characteristic hazardous waste constituents of concern for all closure samples collected.

   There is no data or approval of this closure plan in the WHMD files. To achieve closure for this unit, it should be cleared of demolition debris and the concrete surface examined for cracks. Then, a biased sampling along cracks and joints in the concrete must be conducted to determine if there was a release. The revised report must provide this data, as proposed in the original Closure Plan, or new data must be collected by following the enclosed Table 1.1 of the S3TM for the correct number of samples.

7. Factory 36, Building 36, Engine Plant Northeast Dock – This container storage area needs further investigation. If the building is slated for demolition, the flooring should be removed, the sump sampled, and the underlying concrete examined for staining on joints and cracks and sampled appropriately. If the building is not slated for demolition, then if any leaks are observed during decontamination, these leaks should be allowed to pool and the soil beneath the areas where the water collects should be sampled. This container storage area stored listed (F001, F003, and F005) and characteristic hazardous waste (D001 and D035). To achieve clean closure, soil samples from beneath the unit must meet the deminimus concentrations for those listed hazardous waste constituents and meet the Part 201 cleanup criteria for the characteristic hazardous waste constituents of concern for all closure samples collected.

8. Factory 31, Building 32, Axle Plant North Dock – The January 1988 Closure Report notes that this unit was identified, but not utilized, for greater than 90-day storage. The ARCADIS Report calls for sampling the sump. The proposed sampling plan is sufficient.

9. Factory 10, Salvage Yard Container Storage Area – To properly close this unit, the entirety of the unit must be cleaned of all debris and examined for cracking and staining along joints. The slab must be cleaned, triple rinsed, and sampled with a bias towards any cracks or joints. The number of samples should be determined by following the enclosed Table 1.1 of the S3TM with at least one sample from beneath the sump. This unit stored listed hazardous waste (F002) and, to achieve

clean closure, must meet the deminimus concentrations for these waste constituents for all closure samples collected.

10. Factory 10, Salvage Yard Tank Storage Area – To properly close this unit, GM must provide documentation on the cleaning of the tanks, as outlined in the closure plan for the unit, or it must perform the decontamination and provide that documentation. GM must also remove the water from the secondary containment and evaluate the structure for integrity. If the tanks can be demonstrated to be tight by pressure testing and the secondary containment is free of any potential for leaks, then the unit can be clean closed. If the secondary containment structure has cracking or jointing that would permit leakage, then the soil beneath those cracks and joints must be sampled for the appropriate constituents. This unit stored listed hazardous waste (F001 and F002) and, to achieve clean closure, must meet the deminimus concentrations for these listed hazardous waste constituents and meet the Part 201 cleanup criteria for the characteristic hazardous waste constituents of concern for all closure samples collected.

11. In general, any soil sampling conducted at these ten hazardous waste management units must be biased toward staining, cracks, and jointing since the size of these units is not large enough to conduct random sampling.

Should you have any questions or concerns regarding this information, please contact me via e-mail at quackenbushp@michigan.gov or by telephone at the number below.

Sincerely,

Peter Quackenbush
Senior Environmental Engineer
Hazardous Waste Management Unit
Hazardous Waste Section
Waste and Hazardous Materials Division
517-373-7397

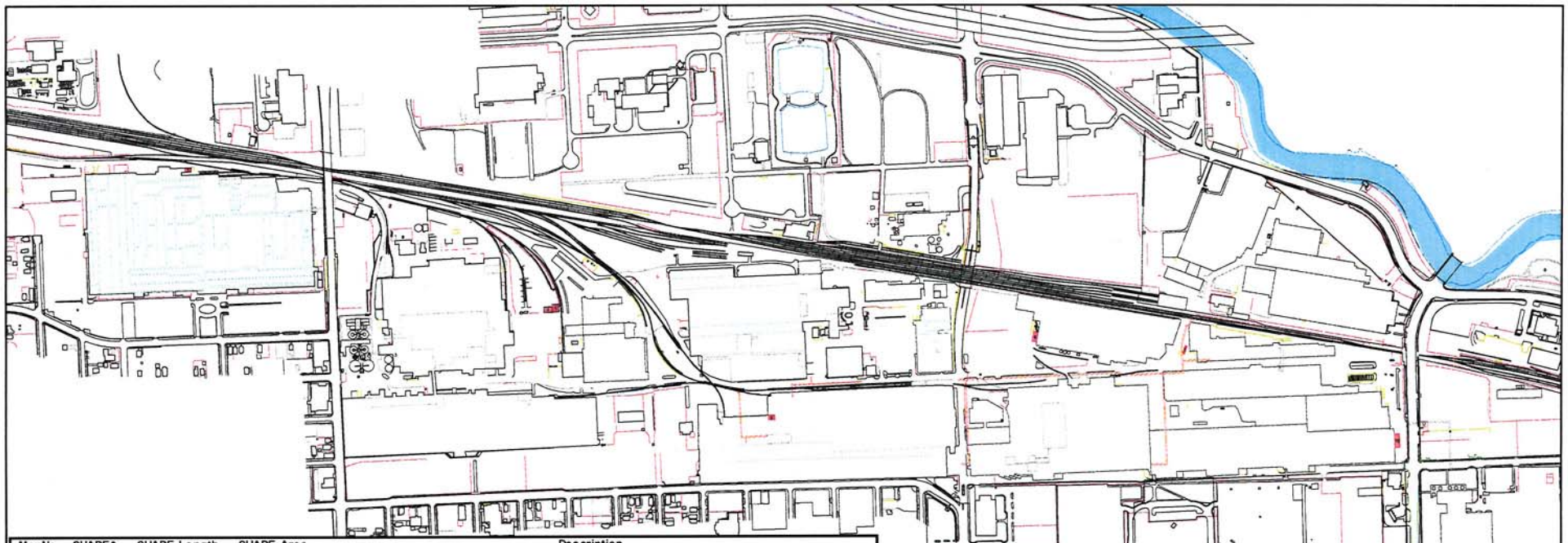
Enclosure
cc/enc: Mr. Derek C.Kaiding, ARCADIS
Mr. Mark A. Lovejoy, ARCADIS
Ms. Jean Caufield, GM
Ms. Amanda Kurzman, GM
Ms. Jill Groboski, U.S. Environmental Protection Agency, Region 5
Mr. Steve Buda, DEQ
Mr. John McCabe/Mr. Dale Bridgford, DEQ
Mr. William Yocum, DEQ
HWS-C&E File

Excerpted From S3TM

**Table 1.1 Number of Excavation Floor Samples**

| Area of Floor ($ft^2$) | Number of Samples |
|---|---|
| < 500 | 2 |
| 500 < 1,000 | 3 |
| 1,000 < 1,500 | 4 |
| 1,500 < 2,500 | 5 |
| 2,500 < 4,000 | 6 |
| 4,000 < 6,000 | 7 |
| 6,000 < 8,500 | 8 |
| 8,500 <10,890 | 9 |

# GM NAO Flint MID 005 356 712
## Hazardous Waste Units



| MapNo | SHAPE* | SHAPE_Length | SHAPE_Area | Description |
|---|---|---|---|---|
| 1 | Polygon | 116.658743 | 762.741356 | Factory 36, Building 36, Engine Plant Northeast Dock |
| 2 | Polygon | 71.648352 | 285.282086 | Division 25, East of Factory 10, Outside Waste Thinner Tank Area |
| 3 | Polygon | 17.664916 | 24.591243 | Factory 10, Building 20, Transmission Plant Tank Area - Waste 1,1,1-TCA |
| 4 | Polygon | 158.68624 | 1490.924721 | Factory 10 Salvage Yard Tank Storage Area |
| 5 | Polygon | 167.762079 | 1742.273696 | Factory 10 Salvage Yard Container Storage Area |
| 6 | Polygon | 146.664926 | 1310.372746 | Factory 31, Building 32, Axle Plant North Dock |
| 7 | Polygon | 127.957812 | 587.783697 | Building 41A, Assembly Plant Waste Tank |
| 8 | Polygon | 183.507897 | 1860.340869 | Building 02 Container Storage Area |
| 9 | Polygon | 46.505218 | 121.755332 | Division 29, Building 23 Tool Manufacturing Cyanide Storage Area |
| 10 | Polygon | 234.113458 | 2704.080023 | Factory 86, Building 04, Assembly Plant Waste Storage Tank |

**Legend**

RCRA HW Management Units

0 445 890 1,780 2,670 3,560 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

Map Drawn 11/12/2008 by DRB

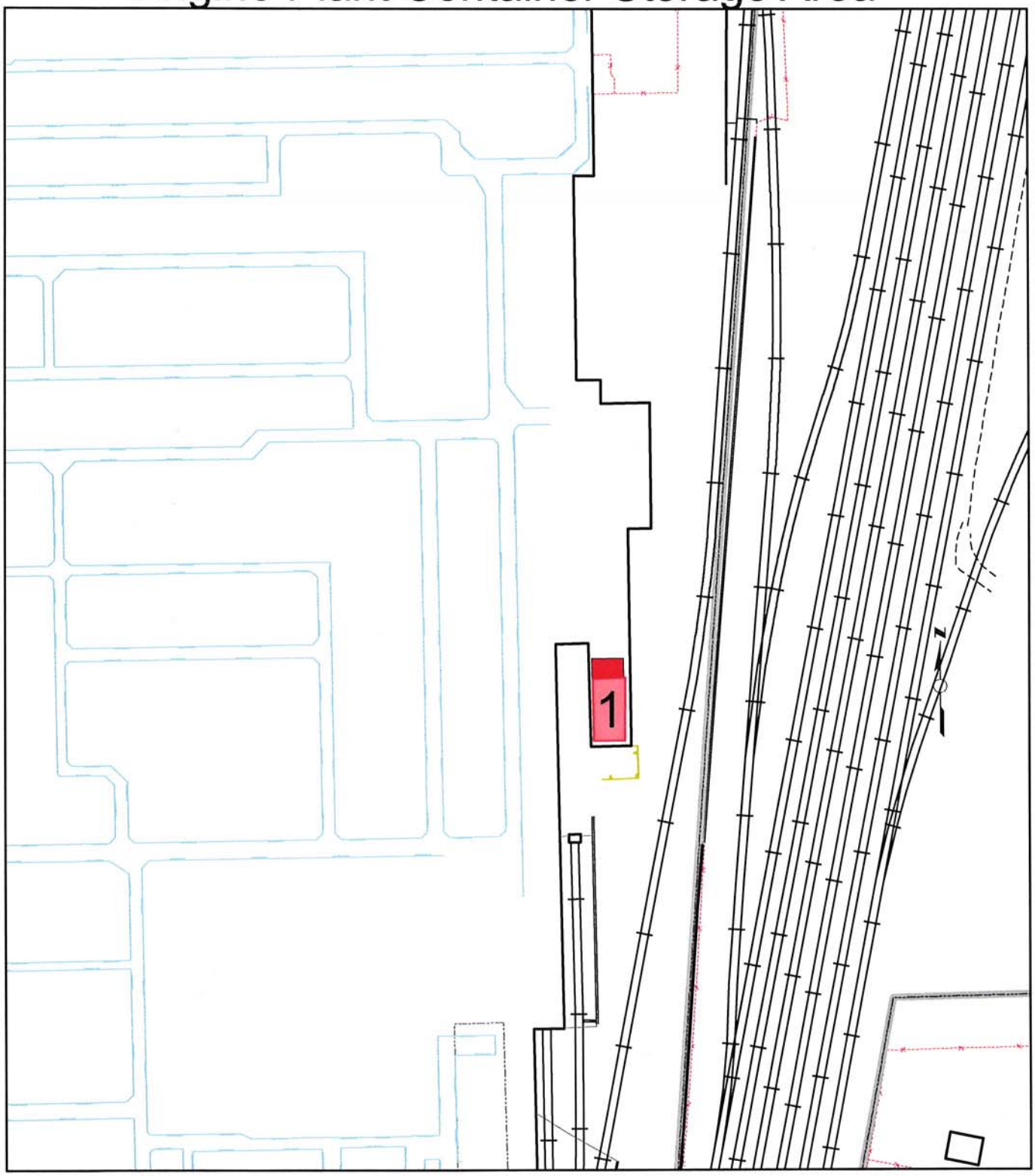
N

Figure 1

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Engine Plant Container Storage Area –** According to the Part B Permit Application, it was to contain 306 55-gallon steel drums of 1,1,1-Trichloroethane and/or paint thinner. Location of container storage area footprint was modified based upon Figure D.4a in 1985 Part B Application and is denoted with a "1" on Figure 2. Unless GM can operationally verify that no HW or Pre-RCRA HW activity occurred in this location, GM should remove steel flooring and sample beneath both sump and other probable locations (stains, cracks, joints, specifically stained cracks and joints) to verify presence/absence of releases.

# GM NAO Flint - MID 005 356 712
# Engine Plant Container Storage Area




**Legend**

RCRA HW Management Units (Refined Location)

HW Unit Location as Provided

0 25 50 100 150 200 Feet

Waste & Hazardous Materials Division

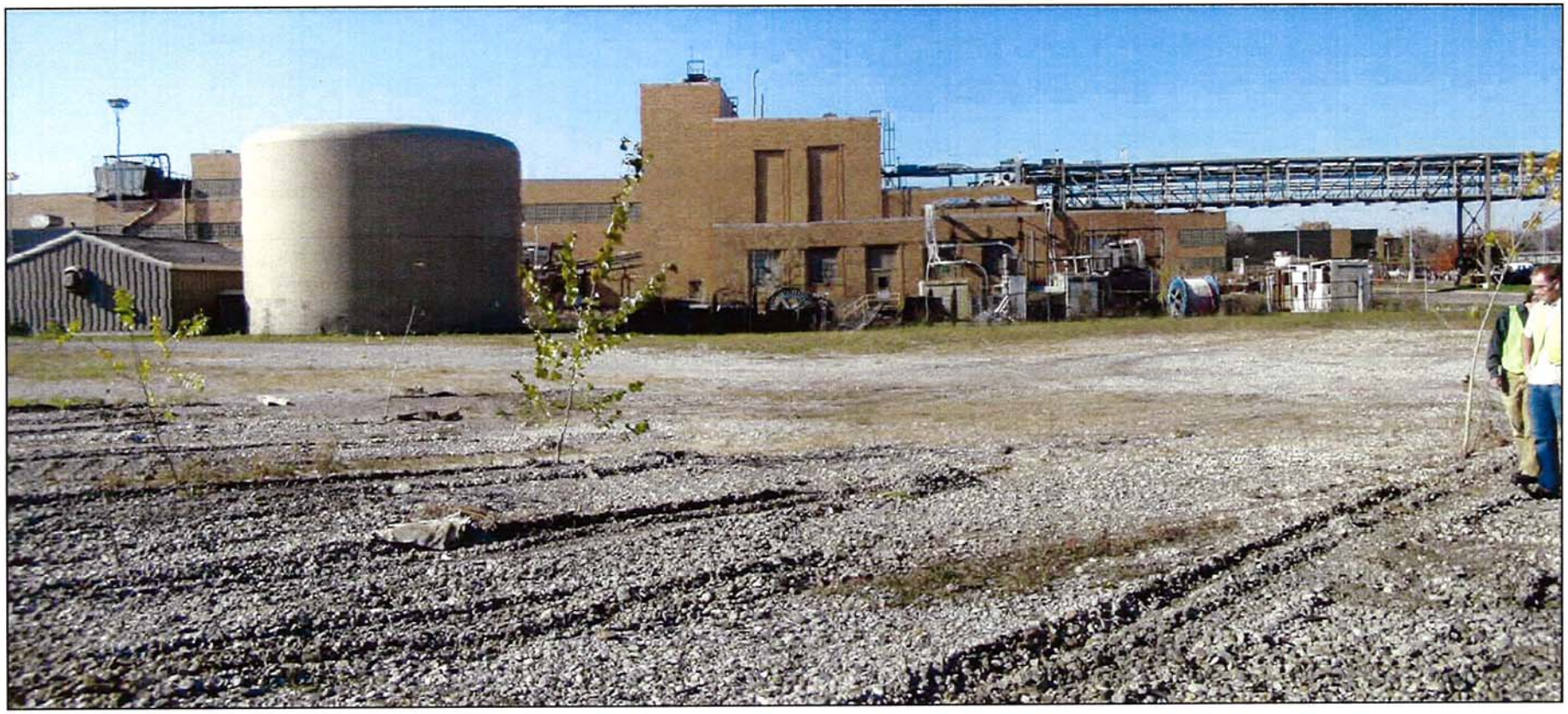
DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

Map Drawn 11/12/2008 by DRB

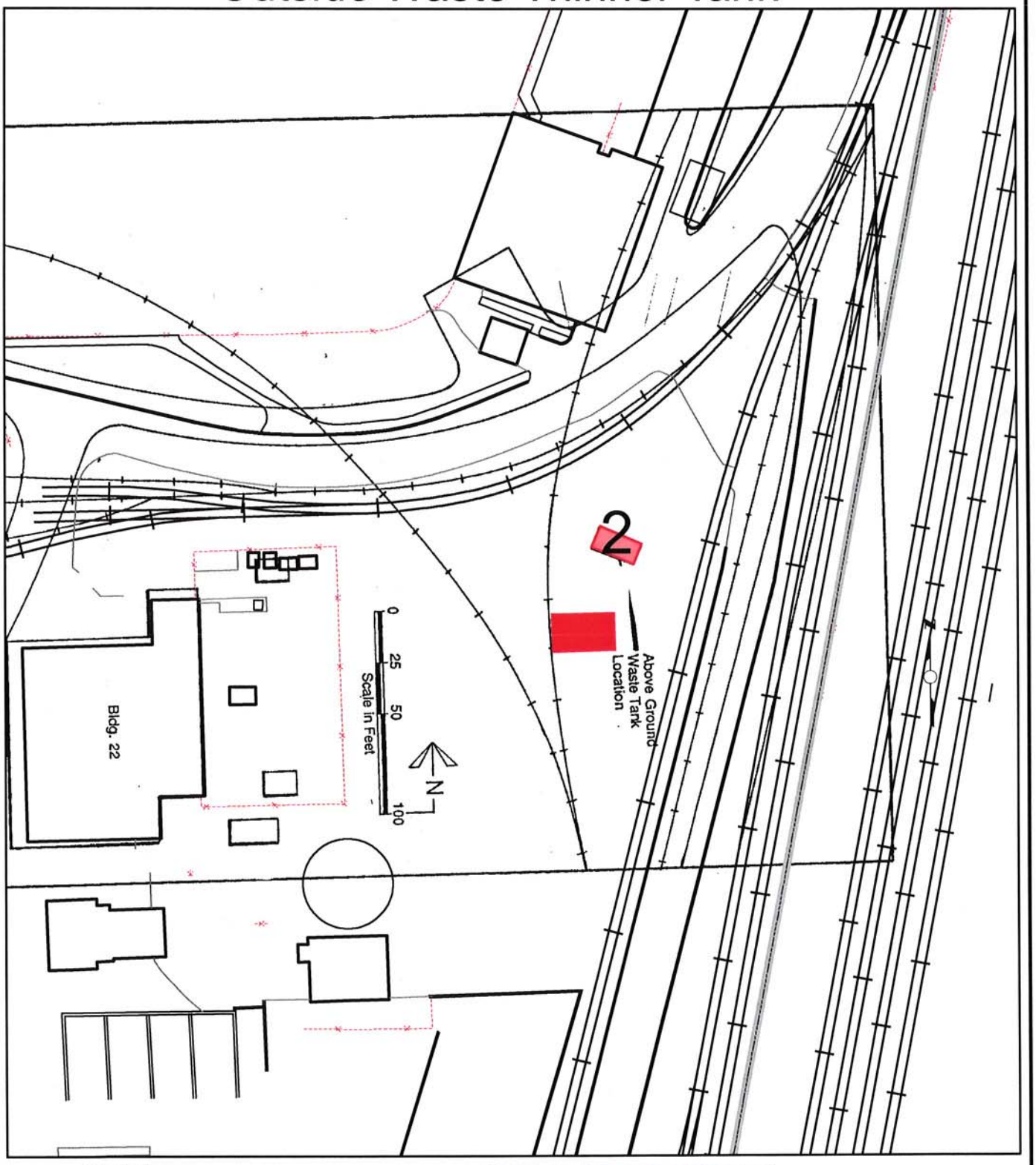
Figure 2

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG



**East of Factory 10 Tank Storage Area (Outside Waste Thinner Tank)** – According to the January 1988 Closure Report, the tank was not connected to any facility piping, but was manually connected to fill and empty the tank. The 12,000-gallon tank was located east of Building 22. Its location was modified from that provided by ARCADIS by utilizing Figure V.C.1 from the January 1988 Closure Report and is denoted with a "2" on Figure 3. The 1988 report notes that "… the analysis indicate the presence of some detectable hazardous waste constituents under the former storage tank area." The Report provided no information on sample locations or analytical results for those soil samples. GM should resample in the correct location for the waste constituents. Once sampled, any remaining issues can probably be folded into corrective action.

# GM NAO Flint - MID 005 356 712
# Outside Waste Thinner Tank




**Legend**

RCRA HW Management Units (Refined Location)

HW Unit Location as Provided

0 20 40 80 120 160 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

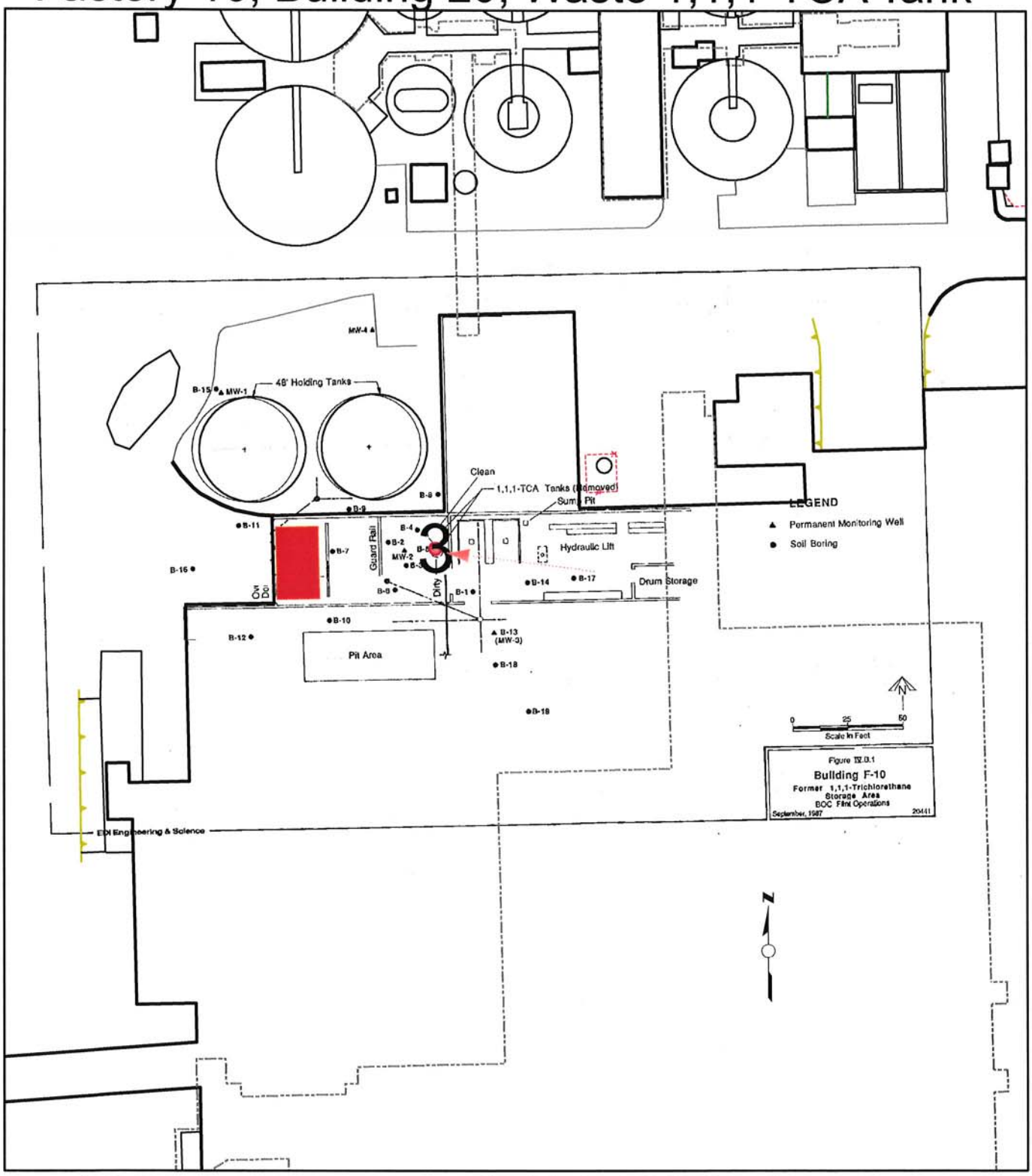
Map Drawn 11/12/2008 by DRB

Figure 3

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Factory 10 Tank Storage Area –** According to the January 1988 Closure Report, this unit was a 1000 gallon above-ground storage tank used to store 1,1,1-Trichloroethane. Immediately north of this tank was a 5000-gallon above-ground storage tank used to store new product 1,1,1-Trichloroethane. Its mapped location was modified from that provided by ARCADIS by utilizing Figure IV.B.1 from the January 1988 Closure Report and is denoted with a "3" on Figure 4. The tanks were removed in March 1985. In May 1986, underground sprinkler repairs identified solvent (1,1,1-Trichloroethane and 1,1-Dichloroethane) in the areas beneath the former tanks. The subsequent investigation and remediation work is documented in the October 1988 Remedial Action Investigation at the Former 1,1,1-Trichloroethane Storage Area and is included as Appendix F in the ARCADIS report. Probably can be folded into CA.

# GM NAO Flint - MID 005 356 712
# Factory 10, Building 20, Waste 1,1,1-TCA Tank




**Legend**

RCRA HW Management Units (Refined Location)

HW Unit Location as Provided

0 20 40 80 120 160 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

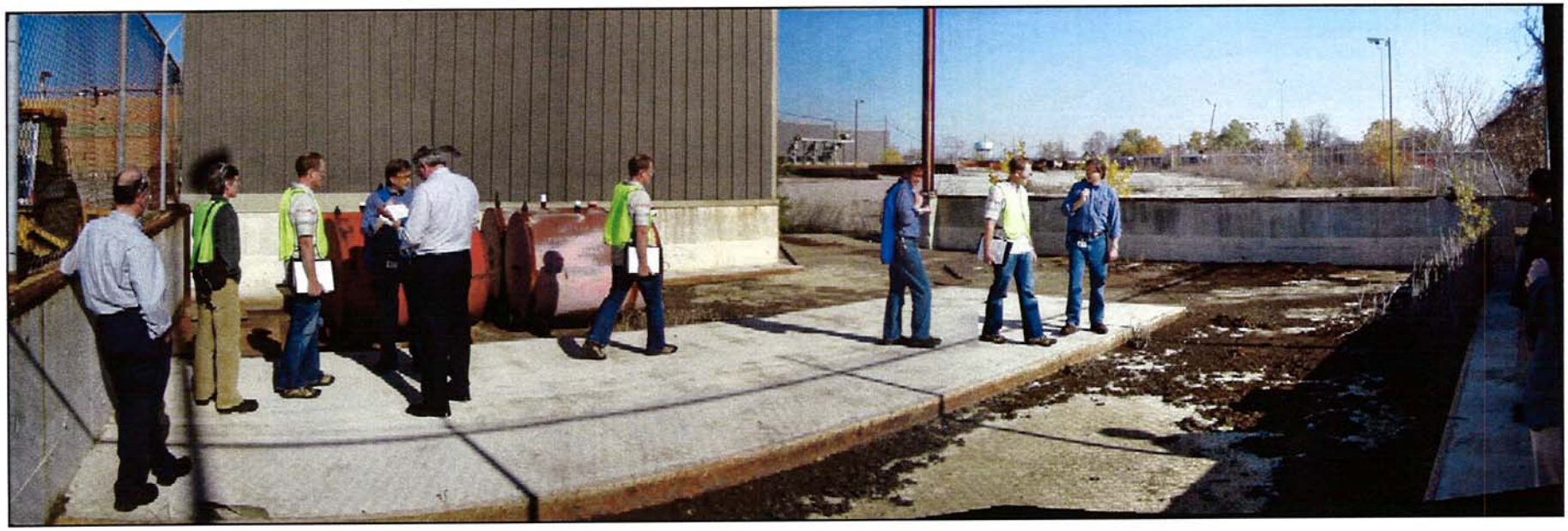
Hazardous Waste Section
Technical Support Unit

Map Drawn 11/12/2008 by DRB

Figure 4

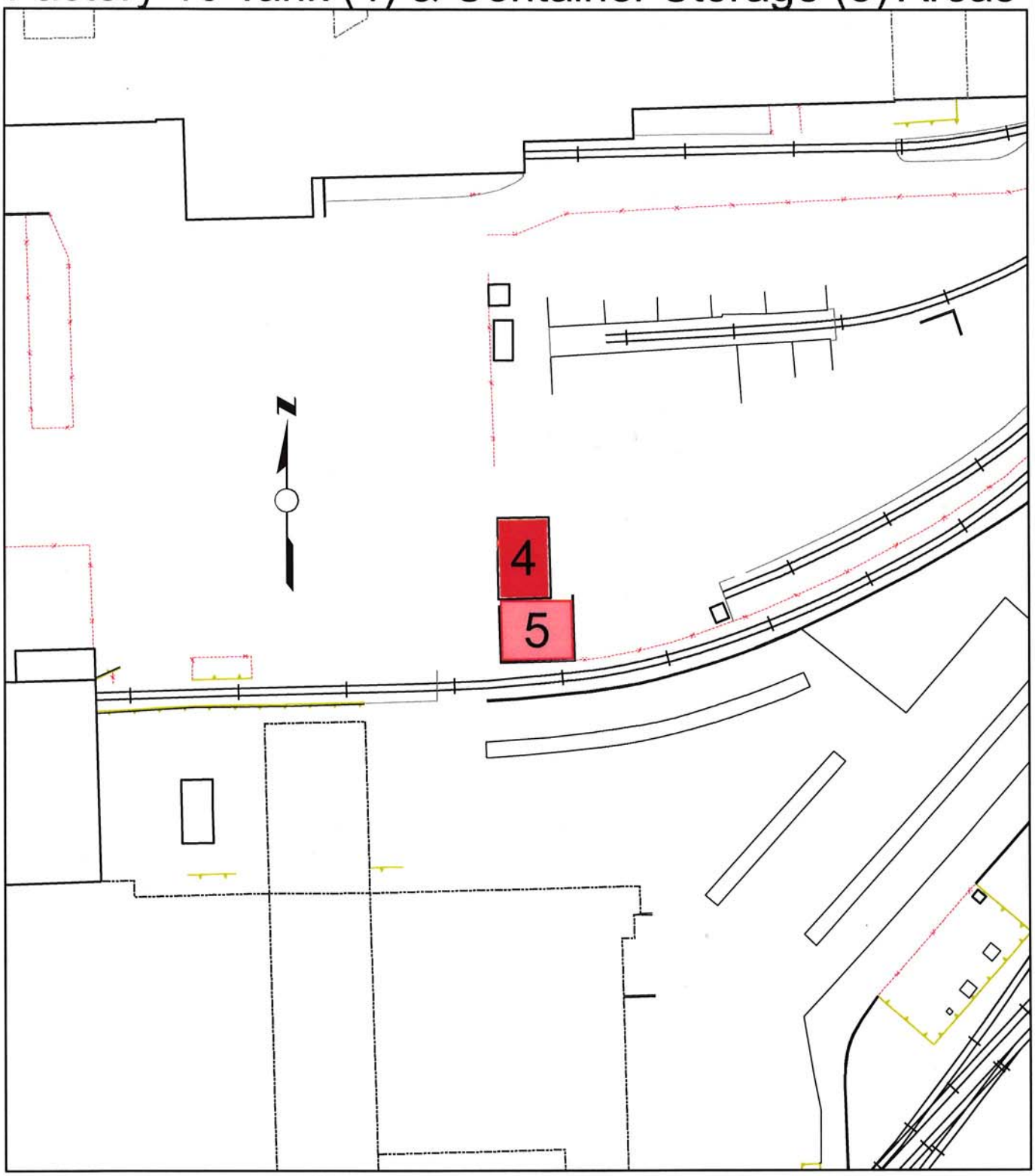
Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Factory 10 Tank Storage Area –** According to the January 1988 Closure Report, this unit was a 1000-gallon above-ground storage tank used to store 1,1,1-Trichloroethane. Immediately north of this tank was a 5000-gallon above-ground storage tank used to store new product 1,1,1-Trichloroethane. Its mapped location was modified from that provided by ARCADIS by utilizing Figure IV.B.1 from the January 1988 Closure Report and is denoted with a "3" on Figure 4. The tanks were removed in March 1985. In May 1986, underground sprinkler repairs identified solvent (1,1,1-Trichloroethane and 1,1-Dichloroethane) in the areas beneath the former tanks. The subsequent investigation and remediation work is documented in the October 1988 Remedial Action Investigation at the Former 1,1,1-Trichloroethane Storage Area and is included as Appendix F in the ARCADIS report. Probably can be folded into CA.



**Factory 10 Salvage Yard Container Storage Area –** According to the January 1988 Closure Report, this unit was designed to hold 230 55-gallon drums of paint thinner and was placed into service in early 1985. The drums were to be placed upon the raised areas along the walls and down the center. Any liquids were to accumulate in the sump in the northwest corner of the unit. In the January 1988 Closure Report, the unit was to be cleaned and returned to use for less than 90-day storage. The location of this unit on the ARCADIS map is collocated with the Factory 10 Salvage Yard Tank Storage Area, but corrected location is shown on Figure 5, denoted with a "5".

# GM NAO Flint - MID 005 356 712
# Factory 10 Tank (4) & Container Storage (5) Areas




**Legend**

HW Unit as Provided

RCRA HW Management Units (Refined Location)

0 30 60 120 180 240 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

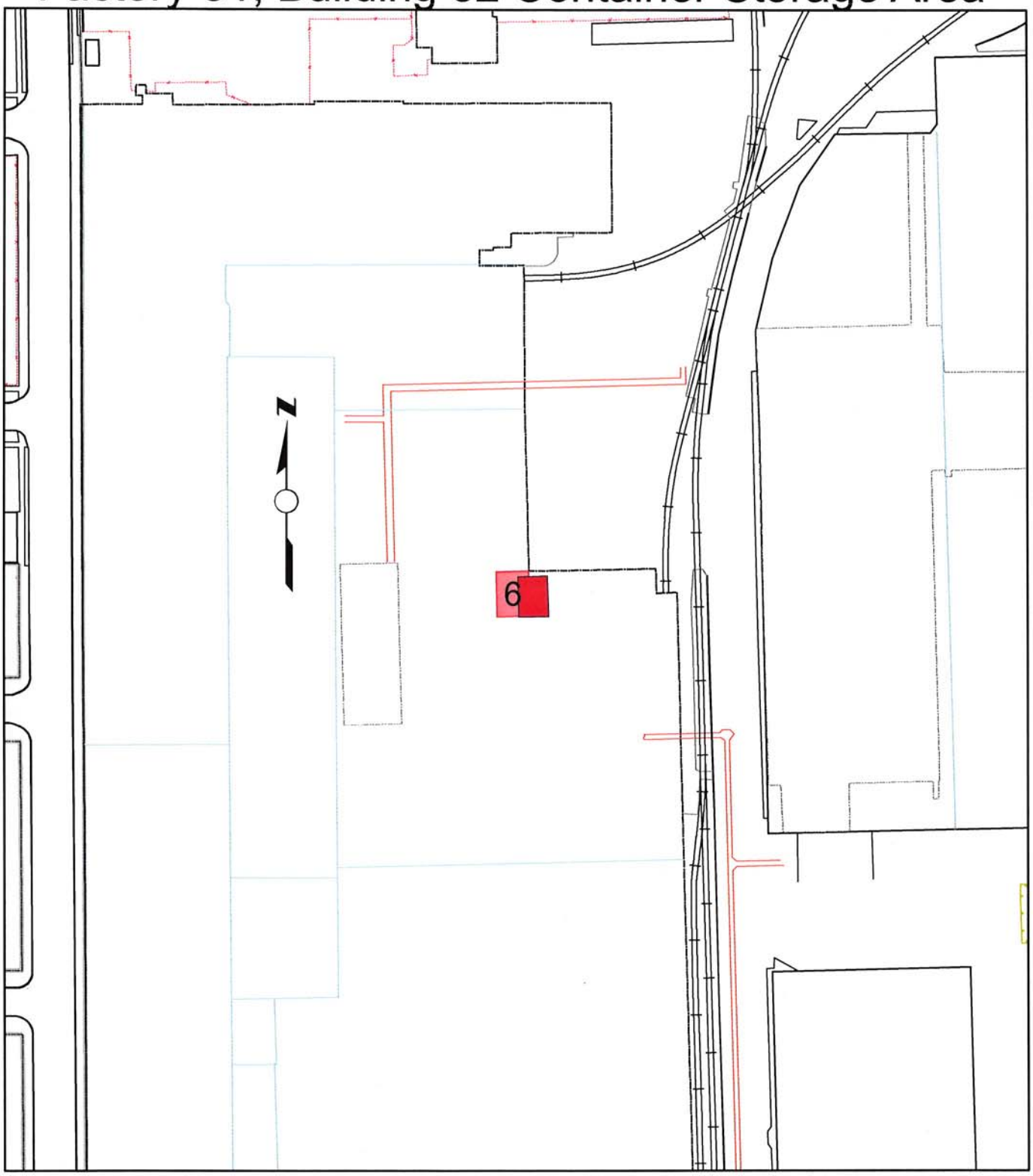
Map Drawn 11/12/2008 by DRB

Figure 5

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Factory 31, Building 32 Container Storage Area –** The January 1988 Closure Report does not address this container storage area. The Part B Permit Application (page 43) identifies the storage area as the Oil Dock (Axle Plant) and that its maximum inventory would be 40 55-gallon drums of paint thinner and 1,1,1-Trichloroethane. Its location was modified from that provided by ARCADIS by utilizing field memory and is denoted with a "6" on Figure 6.

# GM NAO Flint - MID 005 356 712
# Factory 31, Building 32 Container Storage Area




**Legend**

- HW Unit Location as Provided
- RCRA HW Management Units (Refined Location)

0 45 90 180 270 360 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

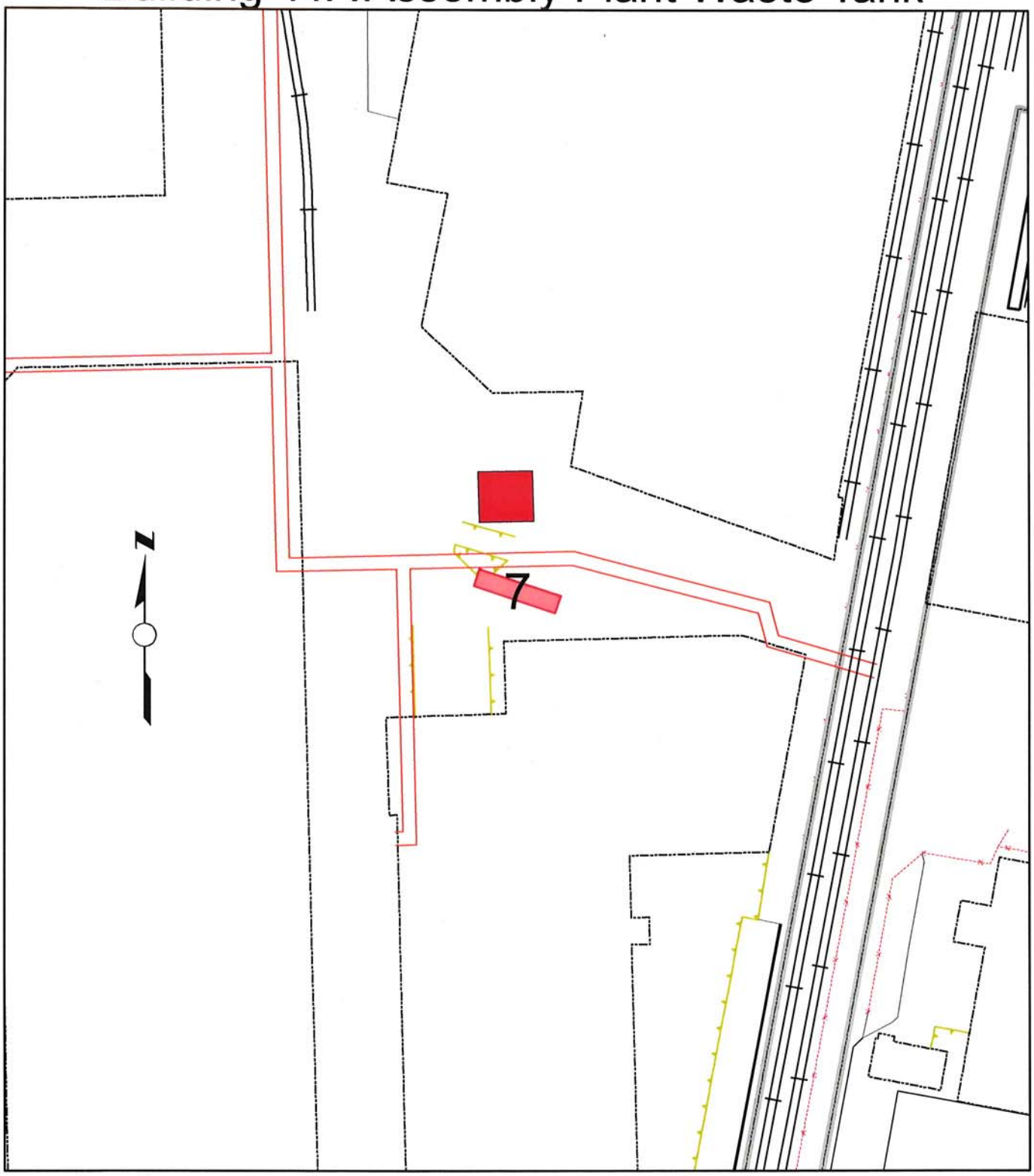
Map Drawn 11/12/2008 by DRB

Figure 6

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Building 41A Hazardous Waste Storage Tanks –** According to the January 1988 Closure Report, this unit was comprised of two 12,000-gallon underground tanks installed in 1946. They were identified as Tank 73 and Tank 74 and were used to hold various chlorinated solvents and paint sludge wastes. The January 1988 Closure Report states that a copy of the approved closure plan and the closure report can be found in Appendix V.E, however the closure report is absent and was supposed to be submitted in March 1988. Its location was modified from that provided by ARCADIS by utilizing the D size drawing in the Closure Plan found in Appendix V.E.1 and is denoted with a "7" on Figure 7.

# GM NAO Flint - MID 005 356 712
# Building 41A Assembly Plant Waste Tank




**Legend**

HW Unit Location as Provided

RCRA HW Management Units (Refined Location)

0 25 50 100 150 200 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

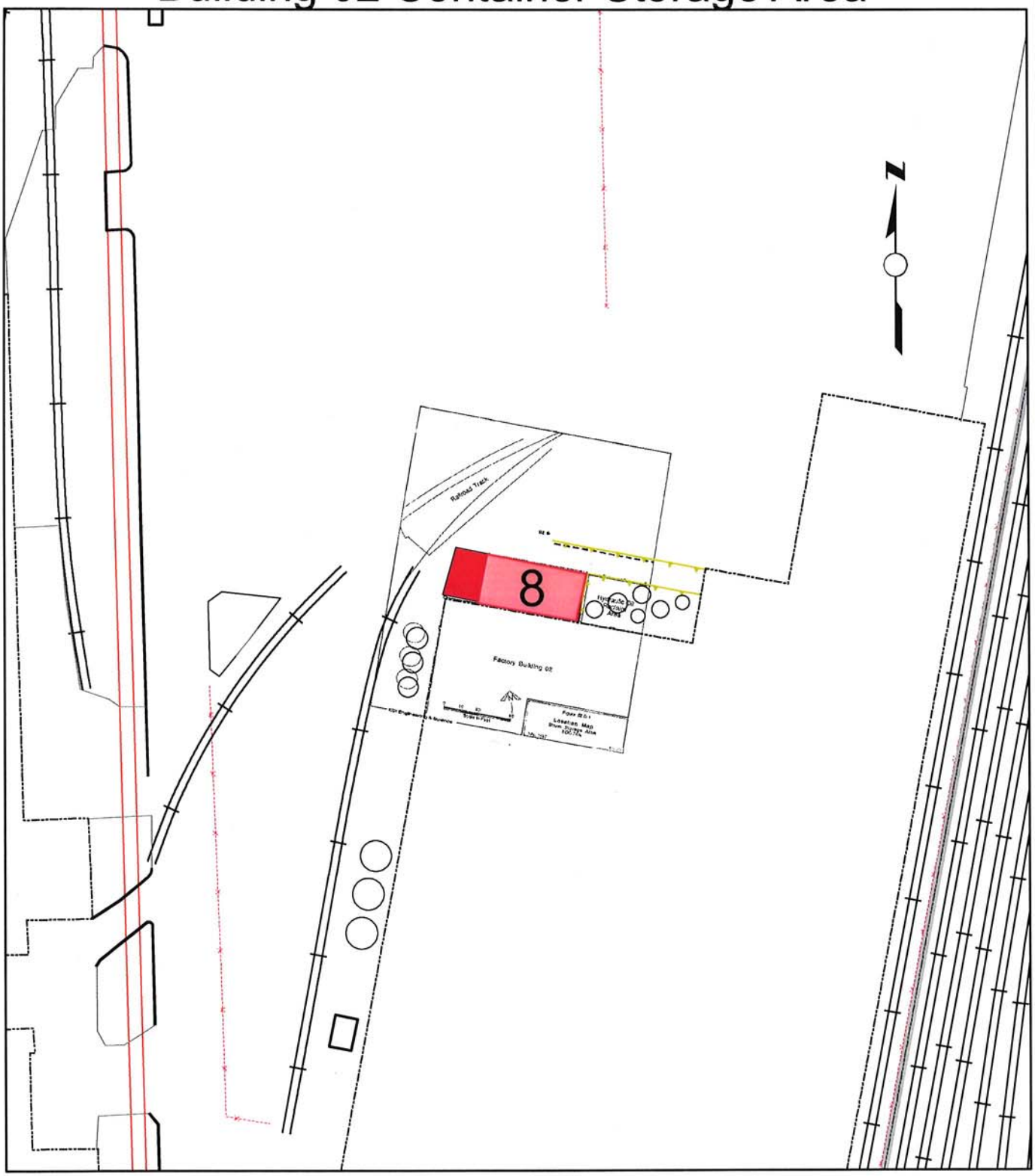
Map Drawn 11/12/2008 by DRB

Figure 7

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Building 02 Container Storage Area –** According to the January 1988 Closure Report, this unit was a 15' by 30' paved storage area along the north wall of Building 02 which stored methylene chloride and ignitable wastes from 1980 to 1984. Guard rails were located on the east and west sides of the storage area. The north side was bordered by a ramped driveway leading into Building 02. Closure Plan refers to previously collected samples, but the analytical and other field information was to be provided upon approval of the closure plan. No data is present in the January 1988 Closure Report. The text refers repeatedly to the 15' by 30' drum storage pad, but the scaled figure in the January 1988 Closure Report (Figure IV.D.1) measures approximately 30' by 60'. The location was modified from that provided by ARCADIS by utilizing Figure IV.D.1 in the Closure Plan and is denoted with a "8" on Figure 8.

# GM NAO Flint - MID 005 356 712
# Building 02 Container Storage Area




**Legend**

RCRA HW Management Units (Refined Location)

HW Unit Location as Provided

0 25 50 100 150 200 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

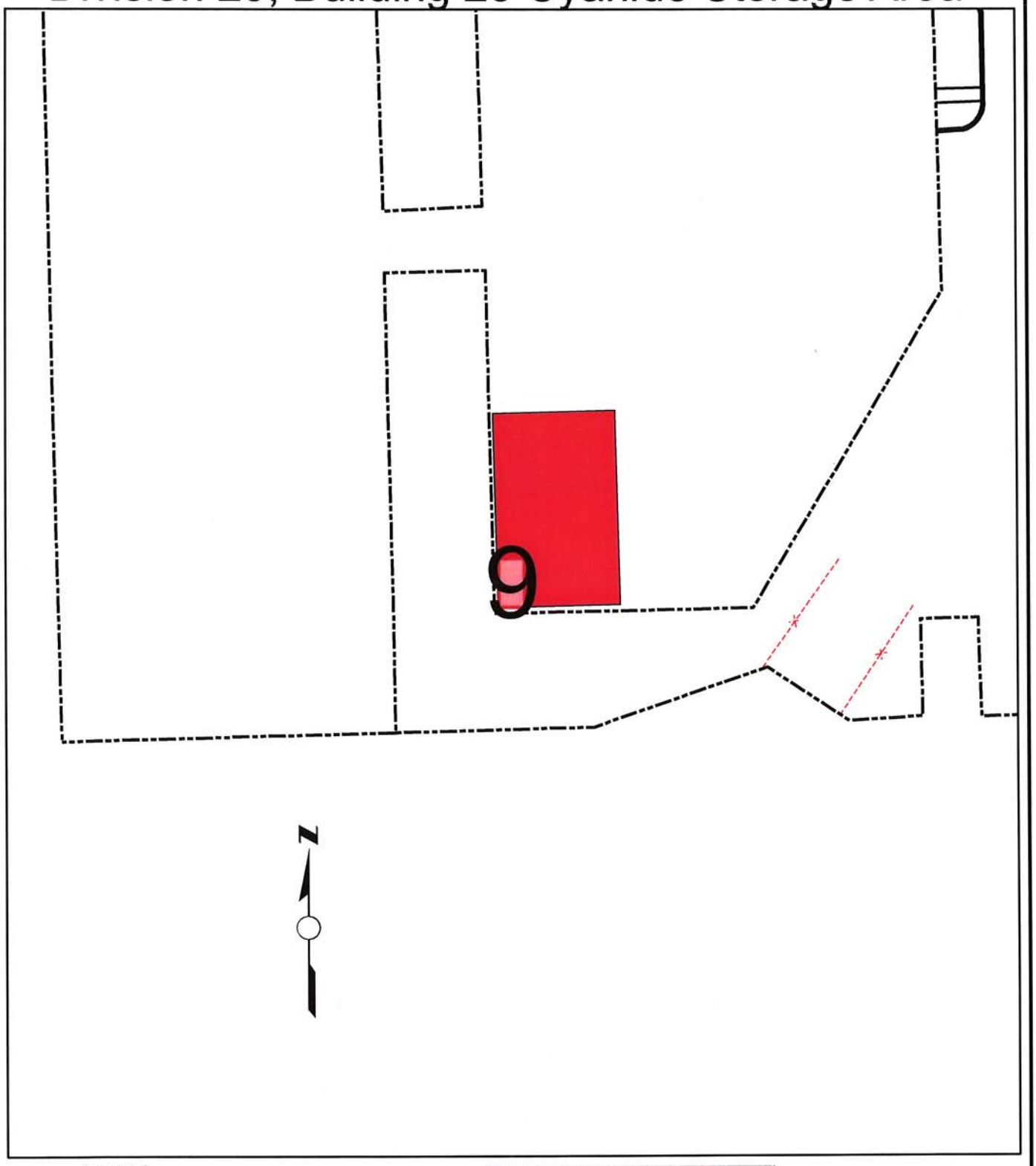
Hazardous Waste Section
Technical Support Unit

Map Drawn 11/12/2008 by DRB

Figure 8

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

# GM NAO Flint - MID 005 356 712
# Division 29, Building 23 Cyanide Storage Area




**Legend**

RCRA HW Management Units (Refined Location)

HW Unit Location as Provided

0 10 20 40 60 80 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

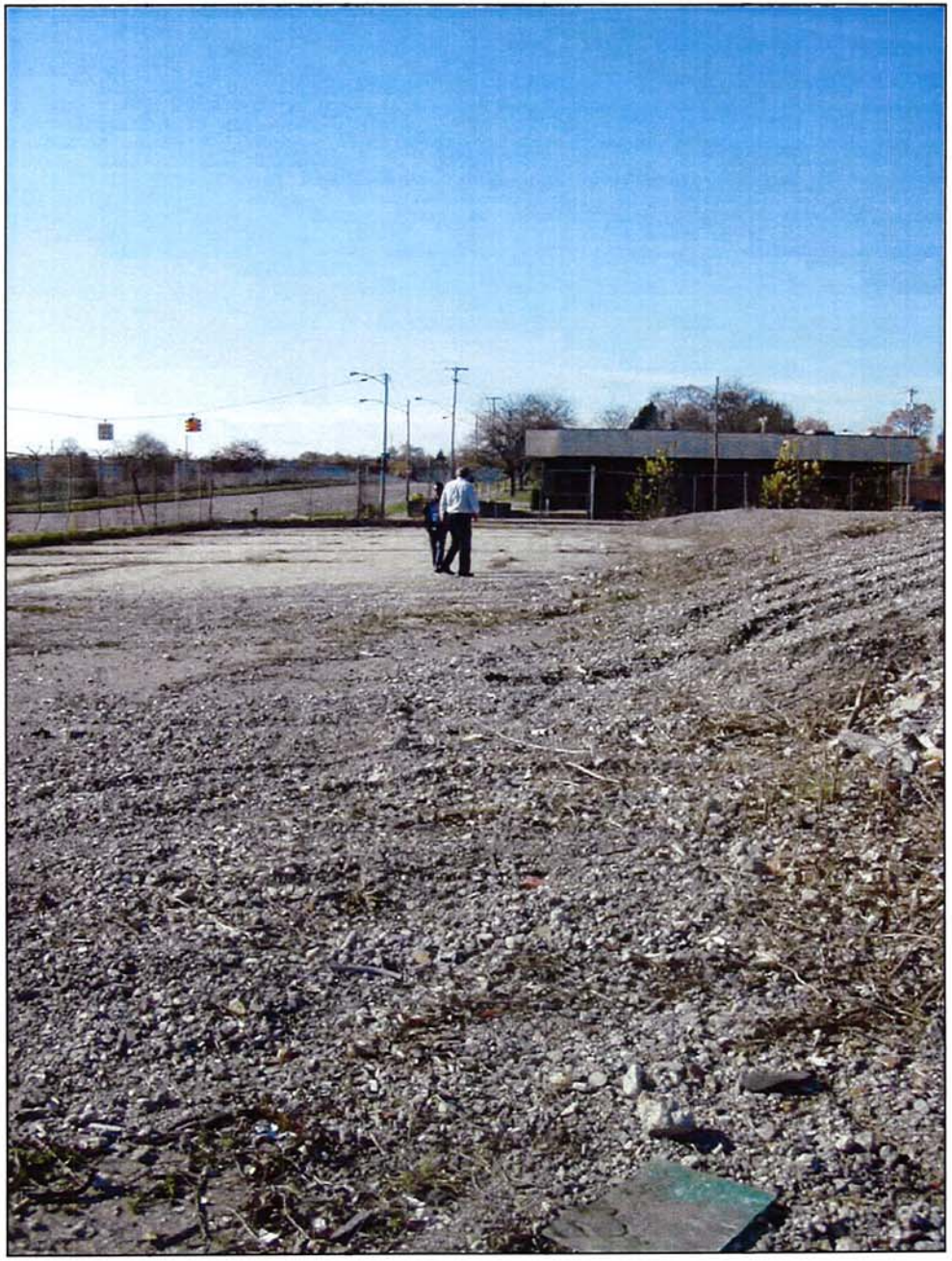
Hazardous Waste Section
Technical Support Unit

Map Drawn 11/12/2008 by DRB

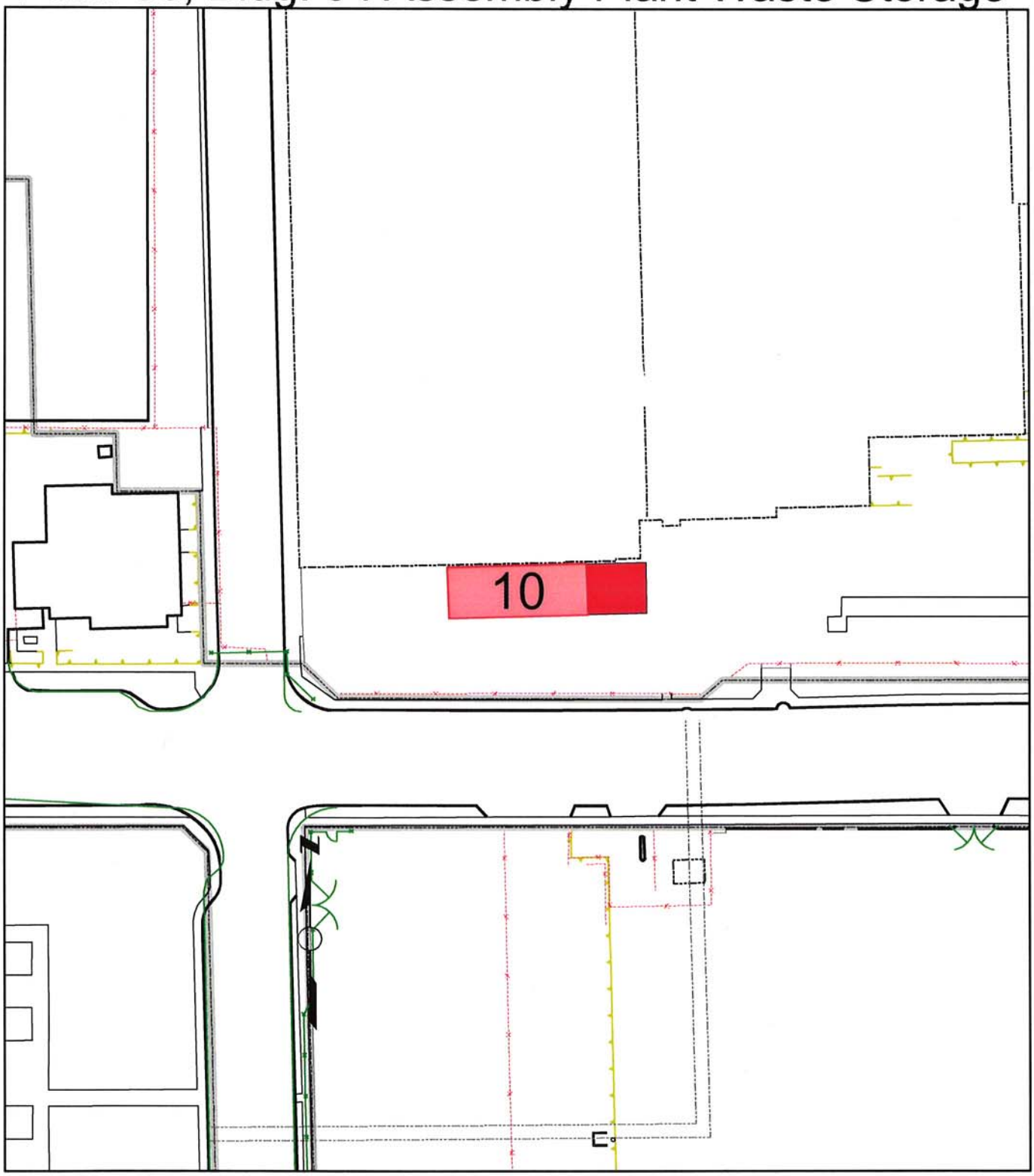
Figure 9

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

**Factory 86, Building 04 Assembly Plant Hazardous Waste Storage Tanks -** According to the January 1988 Closure Report, this unit consisted of four 12,000 gallon underground tanks located at the south end of Building 04, Factory 86 and were used to store paint related wastes. Its mapped location was modified from that provided by ARCADIS by utilizing Figure 2 from Appendix D of the ARCADIS Report and is denoted with a "10" on Figure 10.



# GM NAO Flint - MID 005 356 712
# Fact. 86, Bldg. 04 Assembly Plant Waste Storage




**Legend**

RCRA HW Management Units (Refined Location)

HW Unit Location as Provided

0 20 40 80 120 160 Feet

Waste & Hazardous Materials Division

DEQ Department of Environmental Quality

Hazardous Waste Section
Technical Support Unit

Map Drawn 11/12/2008 by DRB

Figure 10

Basemap provided by Arcadis BBL
Drawing 64410X01.DWG

ARCADIS

**Appendix J**

Bulkheading Construction Drawings

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**MEMO**

To:
Chris Black, USEPA Region 5

Copies:
Chris Peters, ARCADIS
Edward Cote, ARCADIS
Grant Trigger, RACER
Dave Favero, RACER

From:
Micki M. Maki

Date:
May 15, 2012

ARCADIS Project No.:
B0064410.2012.01301

Subject:
Outfall 002 and 005 Storm Sewer Bulkheading Work Plan
Buick City Site, Flint, MI

---

## Introduction

This Outfall 002 and 005 Storm Sewer Bulkheading Work Plan (work plan) was prepared by ARCADIS on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Buick City Site (Site) located in Flint, Michigan. This work plan outlines the approach that will be used to bulkhead storm sewer lines draining to Outfalls 002 and 005 in order to eliminate the Site's contribution to the outfalls. The proposed bulkhead locations for Outfalls 002 and 005 are depicted on Drawing 1. Drawing 2 presents the specification and abbreviations. The Bulkhead Section and Details, the Stewart Street Drain Modification and the Manhole Cap Details are presented on Drawings 3 through 5, respectively.

## Background

Oil infiltration has been identified at locations along the Outfall 002 and 005 storm sewer piping systems. In 2011 a boom study was completed along the on Site portion of the Outfall 002 storm sewer system to identify locations where oil is infiltrating the sewer system. Based on the results of the study infiltration appears to be primarily occurring between manholes (MH) 2-21 and 2-18, Drawing 1.

As discussed in the RFI Phase II Report (BBL, 2006) historically oil infiltration was identified at two locations along the Outfall 005 storm sewer. The first area was a pipe draining to the storm sewer inside Factory 83/84. This pipe was permanently filled with concrete at MH 5-19 in 2005-2006. The second area was the French drain system behind the north retaining wall of the Leith Street underpass. To address this issue two 'P-traps' were installed at the manholes located at the western and eastern ends of the French Drain in 2004. However, a sheen continued to appear at Outfall 005. In 2010 a boom study was completed along the Outfall 005 storm sewer to determine where oil was infiltrating the storm sewer. Based on the results of the boom study oil infiltration is occurring at MH 5-5 and appears to be coming from a lateral emptying into manhole from an adjacent property.

Permanent booms and absorbent booms are maintained at the outfalls to collect and contain the oil. Absorbent booms are also maintained in manholes along the Outfall 002 and 005 storm sewers at the down gradient onsite manholes to minimize the amount of oil reaching the discharge point.

**Manhole Locations Requiring Bulkheading**

Based on the 2011 boom study, oil infiltration was observed at Outfall 002 primarily between MH 2-18 and 2-21, shown on Drawing 1. Bulkheads will be installed both upgradient (MH 2-21) and downgradient (MH 2-18) of the infiltration area, which will prevent oil from leaving the Site and will also serve as a passive collection trench. In addition the lateral lines leading into the manholes, as well as those between the manholes, will be plugged. This will help to both contain the oil and limit the amount of non-oil infiltration entering the section of sewer between the two bulkheads. A gasketed manhole cover will be installed, as indicated on Drawing 5, at manhole 2-18 to provide access for monitoring and oil removal, if needed.

At Outfall 005 a bulkhead will be installed at MH 5-12 which will eliminate contributions from the Site to the Outfall 005 discharge location. Manholes MH 5-11 through MH 5-1 service Leith Street, the UPF property and James P. Cole Boulevard. Please note that bulkheading the manhole locations that service the Leith Street underpass would likely result in flooding.

**Outfall 002 and 005 Storm Sewer Bulkheading Installation**

<u>Sewer Bulkheading</u>

The bulkheads will be installed on the downstream sides of MH 2-18, 2-21, and 5-12 (Drawing 1). Bulkheads will consist of a reinforced concrete barrier with doweling rods into the existing sewer for added

stability as indicated in Drawing 3. The sewer pipe surface will be roughened so that the barrier will create a hydraulic seal upon completion.

Any water encountered during the construction and curing of the bulkhead will be bypassed to the next available manhole. The bulkhead at MH 2-21 will be installed prior to the bulkheading at MH 2-18 as there are no discharge points downgradient of MH 2-18 onsite.

The existing cover at these manholes will be removed and a new assembly will be installed as indicated on Drawing 5. The new covers will prevent stormwater drainage and allow access.

Pipe Plugging

The lateral pipes entering the storm sewer main at MH 2-18, 2-19, and 2-20 shall be plugged as indicated on Drawing 1. Concrete plugs will be placed in the two 12-inch laterals entering MH 2-18, the one 12-inch lateral entering MH 2-19 and the one 12-inch lateral entering MH 2-20. The concrete plugs will create a hydraulic seal upon completion.

Manhole Capping

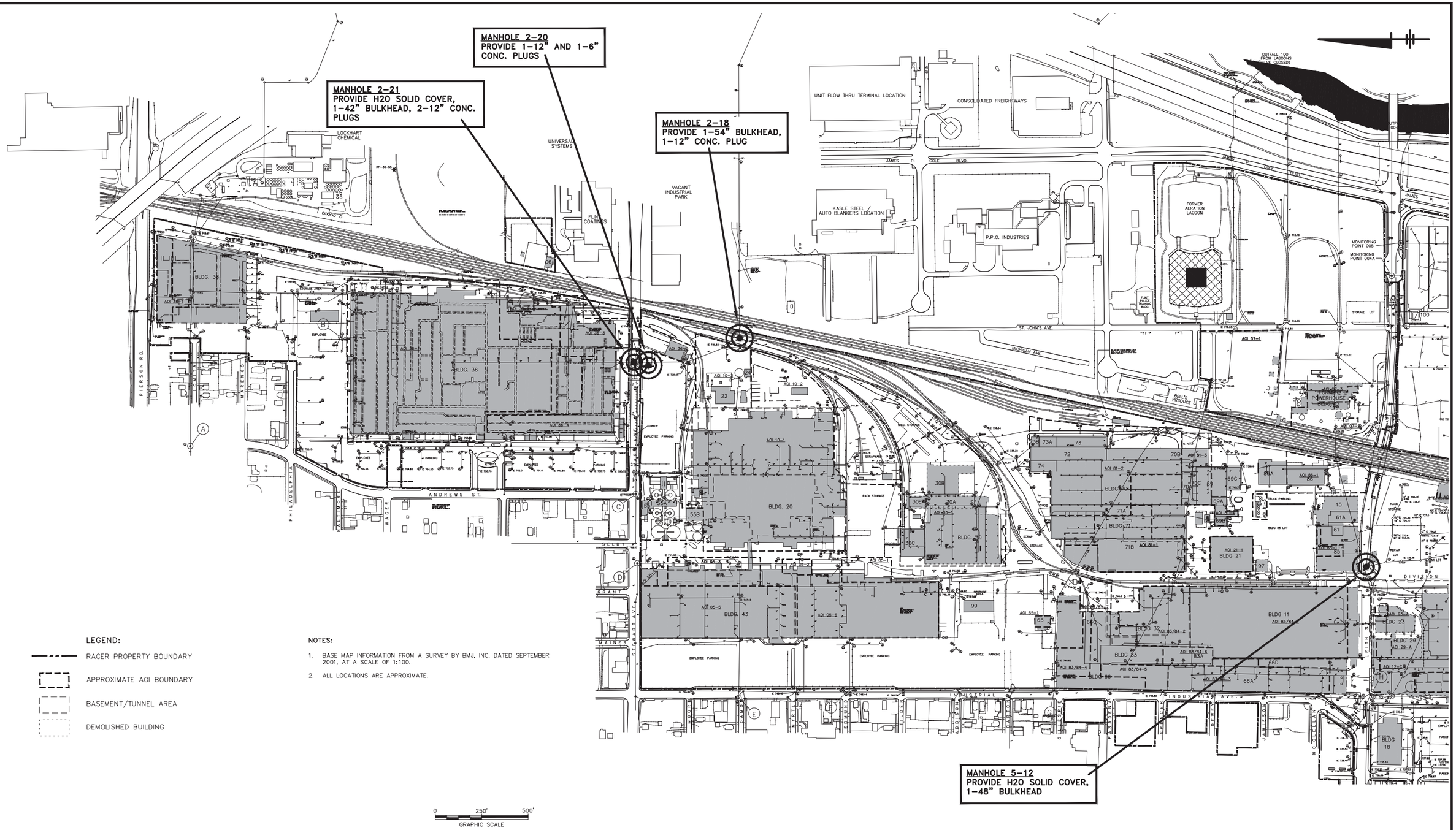
Upgradient manhole grates shall be capped with poly plastic, manhole cover plate, and 21AA stone as detailed on Drawing 5 to prevent surface water drainage to the abandoned sewer system. The manhole cover plate shall be installed over the poly plastic in such a manner so that 21AA aggregate installation does not puncture the poly plastic. The manhole caps shall create a hydraulic seal upon completion.

Stewart Street Drain

The existing Stewart Street overpass stormwater drain is connected to a vertical support for the overpass and is piped into the Outfall 002 storm sewer system. This drainage line will be cut and the bottom section will be replaced with a 90 degree elbow of similar material. The existing penetration to the sewer will be plugged as indicated on Drawing 4. Upon completion of the plugging grouted riprap shall be installed directly beneath the new pipe discharge to reduce any potential for erosion of the surface beneath.

**Next Steps**

A budget amendment will be prepared and submitted to request authorization for budget to implement this work. Upon approval of this Outfall 002 and 005 Storm Sewer Bulkhead Work Plan and a budget amendment, ARCADIS will prepare a request for proposal (RFP) and solicit bids from subcontractors to complete the work.




LEGEND:

- RACER PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

0 250' 500'
GRAPHIC SCALE

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Acad Version : R18.1s (LMS Tech)
User Name : jmeiser

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REV. ISSUED DATE DESCRIPTION

KEYPLAN

ARCADIS

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RACER TRUST
BUICK CITY SITE
FLINT, MICHIGAN

| PROJECT MANAGER | DEPARTMENT MANAGER | LEAD DESIGN PROF. | CHECKED |
|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
| SHEET TITLE: SITE PLAN | | TASK/PHASE NUMBER 01301 | DRAWN BY JAM |
| | | PROJECT NUMBER B0064410.2012 | DRAWING NUMBER 1 |

## DESIGN AND CODE INFORMATION

1. ALL CONSTRUCTION SHALL CONFORM TO 2009 INTERNATIONAL BUILDING CODE, MICHIGAN EDITION.

2. VERIFY EXISTING CONDITIONS AND DIMENSIONS AND NOTIFY ENGINEER OF ANY CONDITIONS WHICH DO NOT COMPLY WITH PLANS AND SPECIFICATIONS.

3. SHOP DRAWINGS WILL NOT BE REVIEWED BY THE DESIGNER UNTIL AFTER THE GENERAL CONTRACTOR HAS THOROUGHLY REVIEWED THE SHOP DRAWINGS, VERIFIED EXISTING CONDITIONS, AND COORDINATED THE SHOP DRAWINGS WITH OTHER AFFECTED TRADES. SUBMIT FOUR COPIES OF REVIEWED DRAWINGS FOR ENGINEER'S REVIEW. ONLY THREE SETS OF MARKED UP SHOP DRAWINGS SHALL BE RETURNED BY THE DESIGNER. REPRODUCTION OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED.

4. DO NOT SCALE STRUCTURAL DRAWINGS.

5. LIVE LOADS:
   BULKHEAD DESIGN IS BASED ON 35ft HEAD.

6. SPECIAL INSPECTIONS:
   THIS WORK IS EXEMPT FROM SPECIAL INSPECTIONS BECAUSE "WORK IS OF MINOR NATURE" PER IBC 2009 SECTION 1704.1 EXCEPTION 1.

## GENERAL NOTES:

1. EPOXY ADHESIVE FOR DOWELS:

   MANUFACTURERS:
   HILTI CORPORATION, HIT–RE 500 SD.
   OR AS APPROVED.

   A. INJECTABLE TWO–COMPONENT EPOXY ADHESIVE.

   B. DEFORMED REINFORCING BAR.

   C. ADHESIVE ANCHORAGE SYSTEM SHALL BE SEISMIC QUALIFIED PER IBC 2009.

   D. ADHESIVE ANCHORAGE SYSTEM SHALL MEET REQUIREMENTS OF ASTM C881–90, TYPE N, GRADE 2 AND 3, CLASS A, B, C EXCEPT GEL TIMES.

2. BONDING AGENT: 3 COMPONENT, SOLVENT FREE WATER–BASED EPOXY RESIN WITH PORTLAND CEMENT, SIKA CORP., SIKA ARMATEC 110 EPOCEM, OR AS APPROVED.

3. NON_SHRINK GROUT: PRE–MIXED COMPOUND CONSISTING OF NON_METALLIC AGGREGATE, CEMENT, WATER–REDUCING AND PLASTICIZING AGENTS; CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI IN 28 DAYS; BASF MASTERFLOW 713 PLUS, OR AS APPROVED.

4. PREFORMED PLASTIC ADHESIVE WATERSTOP (PPAWS): FEDERAL SPECIFICATION SS–SS–210A; SINGLE– COMPONENT, SELF–SEALING PLASTIC ADHESIVE TYPE, EXTRUDED ROPE FORM BETWEEN TWO PROTECTIVE SILICONE TREATED PAPERS, 1 INCH SQUARE CROSS SECTION, 1 INCH LAP SPLICE, FURNISH WITH PRIMER; SYNKO–FLEX PRODUCTS SYNKO–FLEX, OR AS APPROVED.

5. FORM MATERIALS

   FORMS FOR FINISH CONCRETE: PLYWOOD, METAL, METAL–FRAMED PLYWOOD FACED, OR OTHER ACCEPTABLE PANEL–TYPE MATERIALS, TO PROVIDE CONTINUOUS, STRAIGHT, SMOOTH, SURFACES. FURNISH IN LARGEST PRACTICABLE SIZES TO MINIMIZE NUMBER OF FORM MARKS. SEAL FORM TIE HOLES TO WATERTIGHT CONDITION.

6. FIELD QUALITY CONTROL

   TESTS OF CONCRETE SLUMP, AIR CONTENT AND STRENGTH WILL BE MADE AT THE DIRECTION OF ENGINEER. SAMPLES FOR STRENGTH SHOULD BE TAKEN AS NEAR AS PRACTICAL TO THE POINT OF PLACEMENT INTO THE FORMWORK OR AT A LOCATION WHICH CLOSELY MATCHES THE HANDLING CONDITIONS WHEN THE CONCRETE IS PLACED IN THE FORMS. PRIOR TO THE ADDITION OF A MID OR HIGH RANGE WATER REDUCER, A SLUMP TEST MAY BE MADE FROM A SAMPLE TAKEN FROM THE VERY FIRST CONCRETE OUT OF THE LOAD.

## REINFORCED CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318–05).

2. REINFORCING STEEL SHALL BE DEFORMED BARS ASTM A–615 (GRADE 60).

3. THE COMPRESSIVE STRENGTH AT 28 DAYS OF ALL CAST IN PLACE CONCRETE SHALL BE 4000 PSI. MINIMUM

4. LAP SPLICES FOR REINFORCING BARS SHALL BE CLASS B IN ACCORDANCE WITH ACI 318–05, UNLESS NOTED OTHERWISE.

5. CLEAR CONCRETE COVER FOR REINFORCING STEEL:

| | |
|---|---|
| WALLS | 2" |
| SLAB ON GRADE | 2" TOP STEEL |
| | 3" BOTTOM CAST AGAINST GROUND |
| FOOTINGS | 2" TOP & FORMED EDGES |
| | 3" CAST AGAINST GROUND |

6. CONCRETE MATERIALS AND ADMIXTURES
   CEMENT: ASTM C150, TYPE I NORMAL PORTLAND TYPE.

   FINE AND COARSE AGGREGATES: ASTM C33 (NORMAL WEIGHT AGGREGATE); MATERIALS CONTAINING DELETERIOUS SUBSTANCES (SPALLING CAUSING)
   ARE NOT ACCEPTABLE.

   WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE.

   AIR ENTRAINMENT: ASTM C260; MASTER BUILDERS (BASF CONSTRUCTION CHEMICALS) MICRO–AIR, OR AS APPROVED.

   CHEMICAL: ASTM C494 TYPE A – WATER–REDUCING, TYPE B RETARDING, TYPE D – WATER–REDUCING AND RETARDING, TYPE F – WATER–REDUCING, HIGH RANGE, TYPE G – WATER–REDUCING, HIGH RANGE AND RETARDING; CONTAINING NO CHLORIDES; MASTER BUILDERS (BASF CONSTRUCTION CHEMICALS), W.R. GRACE, OR AS APPROVED.

   FLY ASH: ASTM C618 CLASS F OR C; LOSS ON IGNITION LESS THAN 3 PERCENT.

   MEMBRANE CURING COMPOUND: ASTM C309, TYPE I–D, CLASS B, CLEAR WITH FUGITIVE DYE WHICH DISAPPEARS APPROXIMATELY 24 HOURS AFTER EXPOSURE TO SUNLIGHT; SPRAY–CURE SAFE CURE CLEAR, EUCLID CHEMICAL COMPANY KUREZ DR, OR AS APPROVED. WET CURING CONCRETE MAY BE SUBSTITUTED FOR CURING COMPOUND.

7. CONCRETE MIX
   CONCRETE PROPORTIONS: COMPLY WITH ACI 301, 4.2.

   PROVIDE CONCRETE TO THE FOLLOWING CRITERIA:
   COMPRESSIVE STRENGTH (7 DAY): 3,200 PSI.
   COMPRESSIVE STRENGTH (28 DAY): 4,000 PSI.
   WATER/CEMENT RATIO (MAXIMUM): 0.42 BY WEIGHT.
   AIR ENTRAINED: NOT APPLICABLE.
   FLY ASH CONTENT: MAXIMUM 25 PERCENT OF CEMENT CONTENT.
   SLUMP (MAXIMUM): 3 INCHES (DUE TO WATER).
   MID OR HIGH RANGE WATER REDUCER:
   ADD AT SITE TO INCREASE SLUMP
   TO 7 INCHES ±1 INCHES.

## ABBREVIATIONS

| | |
|---|---|
| ABANDONED | ABAND |
| ASPHALT | ASPH |
| BACK OF CURB | BC |
| BASE LINE | BL |
| BASEMENT | BSMT |
| BEARING | BRG |
| BENCH MARK | BM |
| BOTTOM | BOT |
| CAST IRON | CI |
| CATCH BASIN | CB |
| CENTER LINE | CL |
| CENTER TO CENTER | C/C |
| CLEANOUT | CO |
| CLEAR | CLR |
| CONCRETE | CONC |
| CONTROL DENSITY FILL | CDF |
| CORRUGATED METAL PIPE | CMP |
| CROSS SECTION | X SECT |
| CURB INLET | CI |
| DEMOLITION | DEMO |
| DETAIL DET | DET |
| DIAMETER | DIA |
| DRAIN | DR |
| DROP MANHOLE | DMH |
| DUCTILE IRON | DI |
| EASEMENT | ESMT |
| EDGE OF PAVEMENT | EP |
| ELECTRIC (AL) | ELEC |
| ELEVATION | EL |
| ENGINEER | ENGR |
| EXISTING | EX, EXIST |
| FORCE MAIN | FM |
| GRAD (E) (ING) | GR |
| GROUND | GND |
| HEADWALL | HDWL |
| HORIZONTAL | HORIZ |
| INSIDE DIAMETER | ID |
| INVERT | INV |
| IRON PIPE | IP |
| LINEAR | LIN |
| LINEAR FOOT | LF |
| MANHOLE | MH |
| MAXIMUM | MAX |
| MECHANICAL JOINT | MJ |
| MINIMUM | MIN |
| MONUMENT | MON |
| NUMBER | #, NO |
| PK NAIL | PK |
| POUNDS PER SQUARE INCH | PPSI |
| PREFORMED PLASTIC ADHERED WATER STOP | PPAWS |
| PRESTRESSED CONCRETE | PS CONC |
| PROPERTY LINE | PL |
| QUANTITY | QTY |
| REINFORCE (D) (ING) (MENT) | REINF |
| REINFORCED CONCRETE | RCONC |
| REINFORCED CONCRETE PIPE | RCP |
| RIGHT OF WAY | ROW |
| SANITARY | SAN |
| SEWER | SWR |
| SQUARE FOOT | SQ FT |
| SQUARE YARD | SQ YD |
| STATION | STA |
| STONE | STN |
| STORM | STM |
| TELEPHONE | TELE |
| TEST BOING–XX (E.G. TB–1) | TB–XX |
| TO BE REMOVED | TBR |
| THICKNESS | THK |
| TYPICAL | TYP |
| UNDERGROUND | UND |
| UNLESS OTHERWISE NOTED | UON |
| VALVE BOX | VB |
| VERTICAL | VERT |
| WATER MAIN | WM |

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User Name : jmeeker
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KEYPLAN

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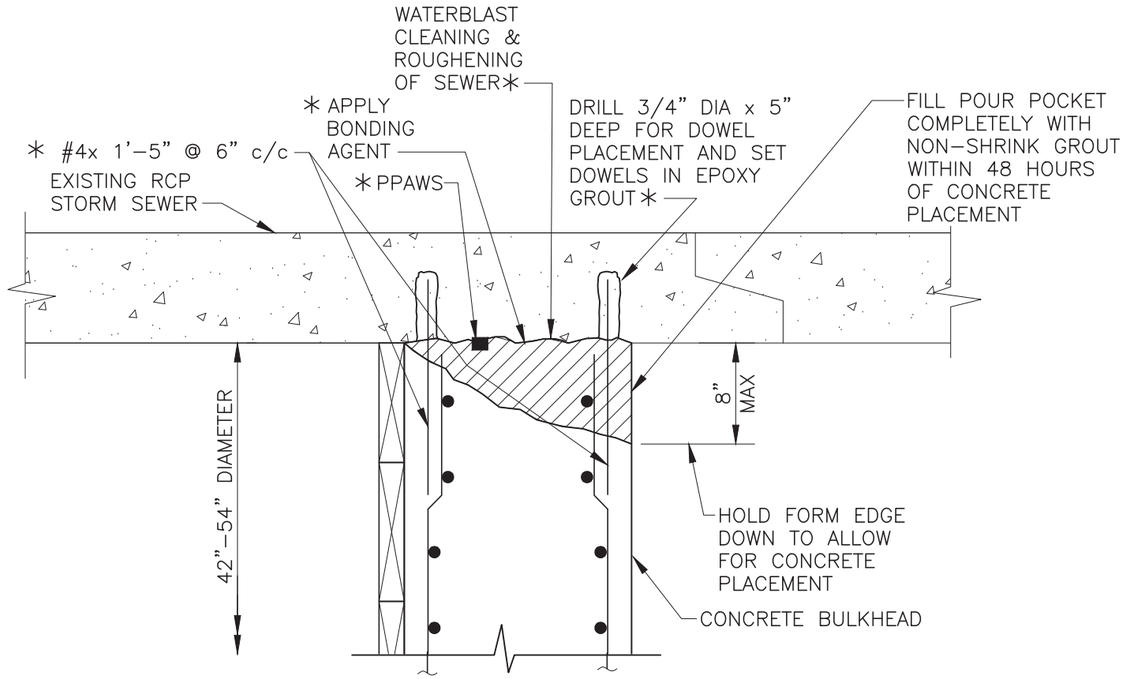
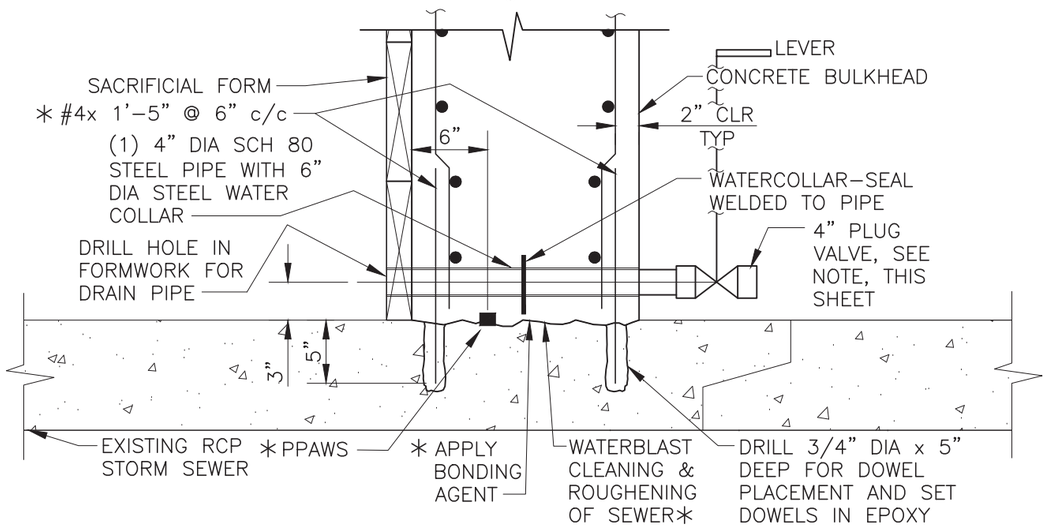
| PROJECT MANAGER | DEPARTMENT MANAGER | LEAD DESIGN PROF. | CHECKED |
|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
| SHEET TITLE: GENERAL NOTES | | TASK/PHASE NUMBER: 01301 | DRAWN BY: JAM |
| | | PROJECT NUMBER: B0064410.2012 | DRAWING NUMBER: 2 |



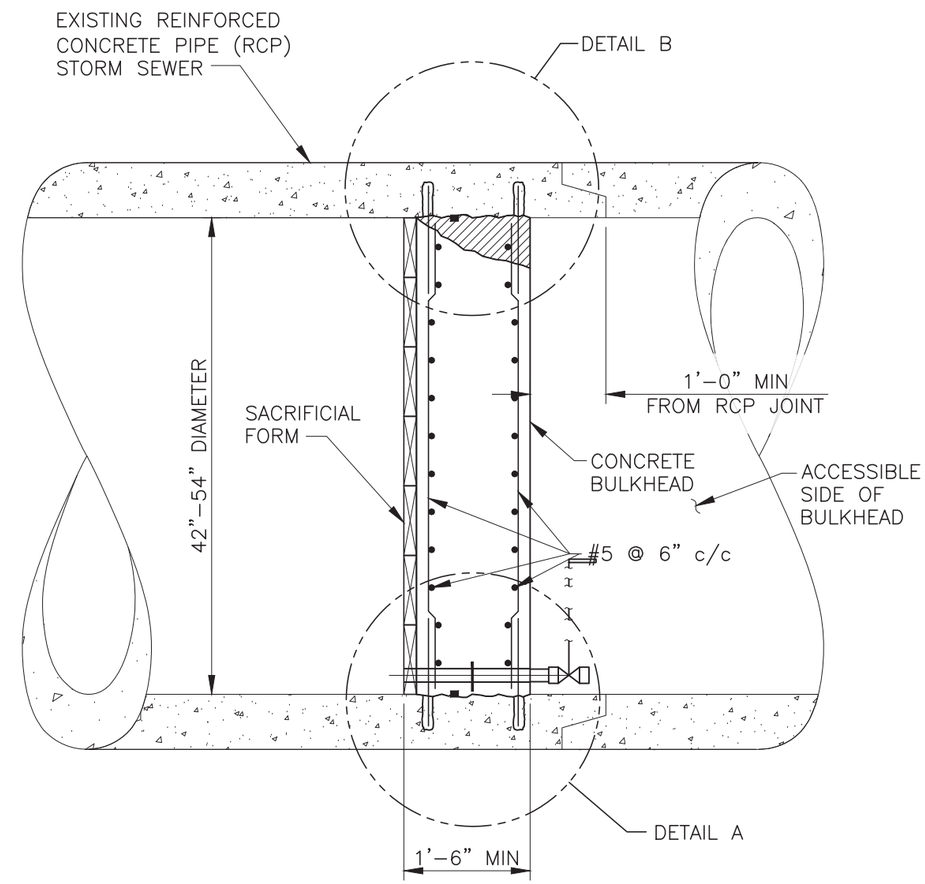

## DETAIL B

1" = 1'–0"




## DETAIL A

1" = 1'–0"




## TYPICAL BULKHEAD SECTION

1/2" = 1'–0"

NOTES:

DRAIN PIPE IS TO BE USED TO ALLOW FLOW TO WEEP UNTIL CONCRETE BULKHEAD HAS ACHIEVED FULL STRENGTH. PROVIDE 4" RESILIENT SEAT PLUG VALVE EQUAL TO USABLUEBOOK.COM ME–26421. PROVIDE LEVER OPERATOR EXTENSION TO 6" BELOW MANHOLE COVER.

∗ FULL CIRCUMFERENCE OF BULKHEAD.

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User Name : jmeeker
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|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
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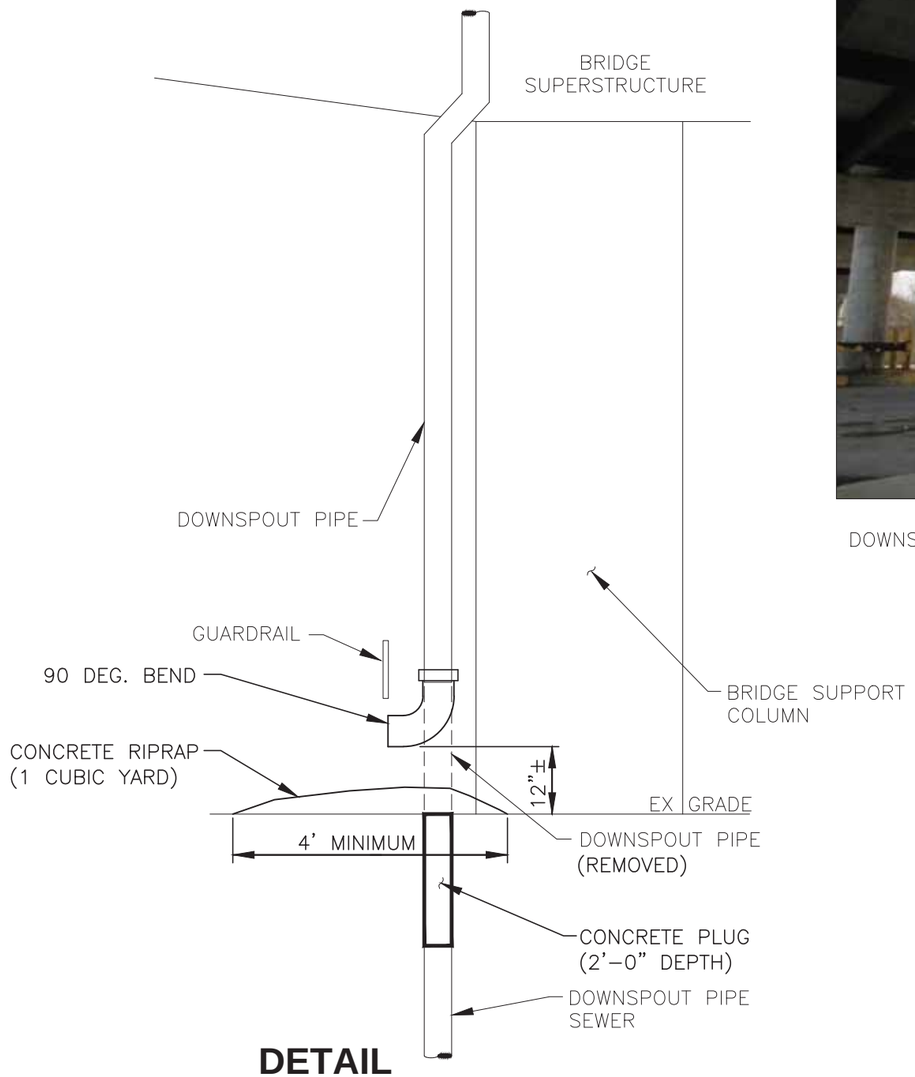
| | | PROJECT NUMBER: B0064410.2012 | DRAWING NUMBER: 3 |




## DETAIL

## STEWART STREET DRAIN

NOTES:

1. CUT DOWNSPOUT PIPE 1'-6" ABOVE GRADE.
2. PLUG DOWNSPOUT PIPE SEWER BELOW GRADE (MIN. 2'-0" CONCRETE).
3. PROVIDE APPROX. 1 CUBIC YARD OF CLEAN BROKEN CONCRETE RIPRAP ABOVE DOWNSPOUT PLUG, ABOVE GRADE.
4. INSTALL 90 DEG. BEND TO BOTTOM OF CUT DOWNSPOUT PIPE AIMED OPPOSITE FROM BRIDGE SUPPORT COLUMN.

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Acad Version : R18.1s (LMS Tech)
User Name : jmeeker
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|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
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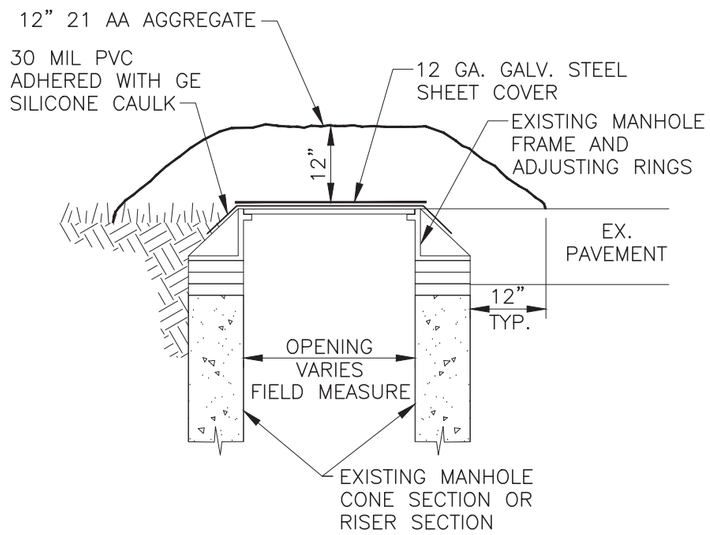
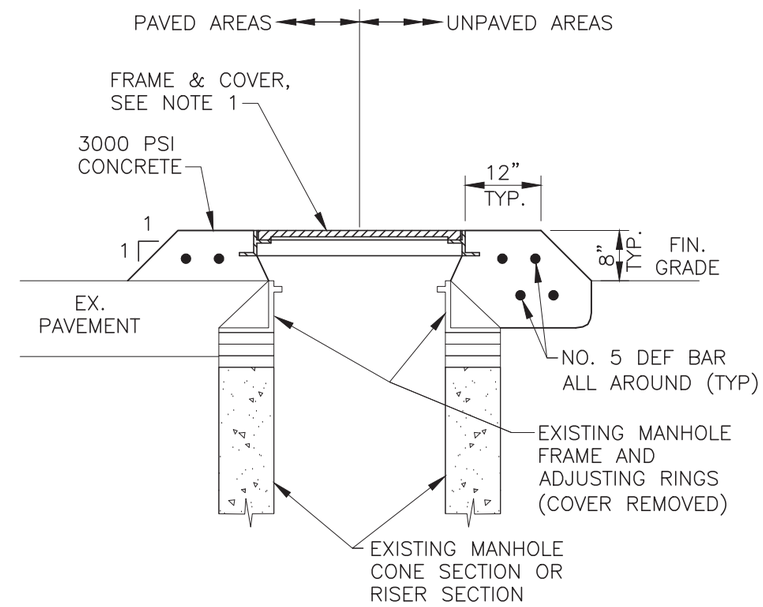
| | | PROJECT NUMBER: B0064410.2012 | DRAWING NUMBER: 4 |




**PROPOSED**
1/2" = 1'-0"

## MANHOLE CAP DETAIL "A"

NOTE 1:
EAST JORDAN IRON WORKS CAST IRON
FRAME W/ COMPOSITE COVER, 32" OPENING,
COM 1480 ASY




**PROPOSED**
1/2" = 1'-0"

## MANHOLE CAP DETAIL "B"

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|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
| SHEET TITLE: MANHOLE CAP DETAILS | | TASK/PHASE NUMBER: 01301 | DRAWN BY: JAM |
| | | PROJECT NUMBER: B0064410.2012 | DRAWING NUMBER: 5 |

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**MEMO**

To:
Chris Black, USEPA Region 5

Copies:
Chris Peters, ARCADIS
Edward Cote, ARCADIS
Grant Trigger, RACER
Dave Favero, RACER

From:
Micki M. Maki

Date:
December 13, 2012

ARCADIS Project No.:
B0064410.2012.01301

Subject:
Outfall 002 and 005 Storm Sewer Bulkheading Work Plan:
Modification to Outfall 005 Bulkhead Location
Buick City Site, Flint, MI

---

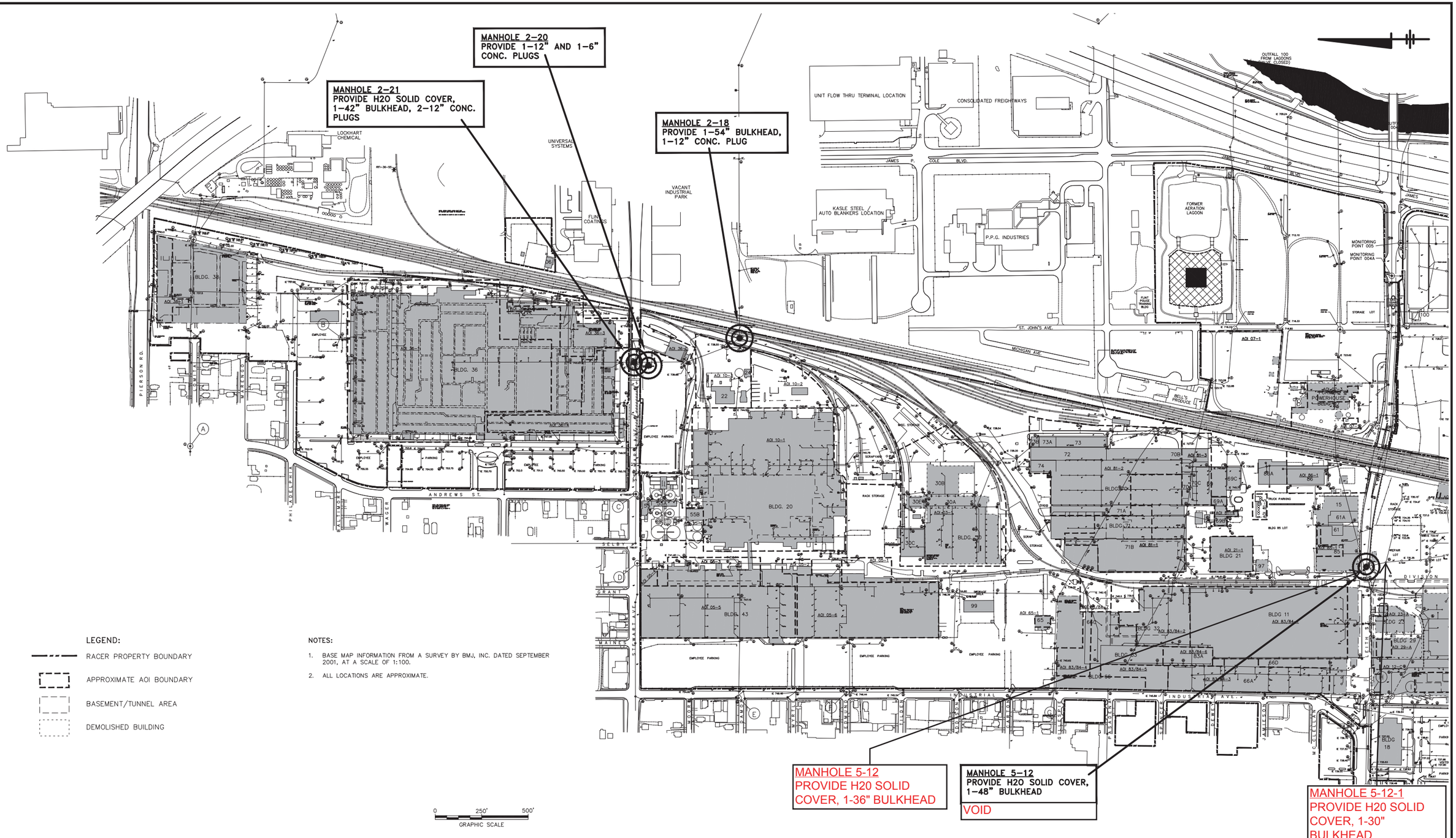
This Modification to the Outfall 002 and 005 Storm Sewer Bulkheading Work Plan (the Work Plan) was prepared by ARCADIS on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Buick City Site (Site) located in Flint, Michigan.

During a recent review of site data to assess possible options for addressing oil infiltration at Outfall 004; one of the options identified was potentially re-routing the Outfall 004 storm sewer main into the Outfall 005 storm sewer. In the event that this option is implemented the connection of Outfall 004 to Outfall 005 would occur at manhole MH 5-12, which is the location currently slated for bulkheading in the Work Plan. This modification includes removing the proposed bulkhead at manhole MH 5-12 and instead placing bulkheads at the two manholes (MH5-13 and MH5-12-1) located upstream of MH5-12. This modification will leave manhole MH5-12 intact so that it remains a viable connection location in the event that it is needed and will still achieve the goal of eliminating the Site's contribution to Outfall 005. In addition, the cost of installing the two smaller bulkheads at MH 5-13 and MH 5-12-1 is expected to be less than the cost of installing the larger bulkhead at manhole MH 5-12.

The proposed modifications are shown on the attached Figure and will include the following:

- The 48 inch bulkhead planned for manhole 5-12 will no longer be installed.
- A 36 inch bulkhead will be installed at manhole 5-13.
- A 30 inch bulkhead will be installed at manhole 5-12-1.

All activities associated with bulkheading along Outfall 005 will be completed in accordance with the processes and procedures presented in the Work Plan.




LEGEND:

- RACER PROPERTY BOUNDARY
- APPROXIMATE AOI BOUNDARY
- BASEMENT/TUNNEL AREA
- DEMOLISHED BUILDING

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

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|---|---|---|---|
| MICKI MAKI | – | | |
| SHEET TITLE: SITE PLAN | | TASK/PHASE NUMBER: 01301 | DRAWN BY |
| | | PROJECT NUMBER: B0064410.2012 | DRAWING NUMBER: ADD#1-SHEET1 |

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**MEMO**

To:
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Copies:
Chris Peters, ARCADIS
Edward Cote, ARCADIS
Grant Trigger, RACER
Dave Favero, RACER

From:
Micki M. Maki

Date:
December 13, 2012

ARCADIS Project No.:
B0064410.2012.01301

Subject:
Outfall 002 and 005 Storm Sewer Bulkheading Work Plan:
Addendum No. 1 – Outfall 003 and 007 Storm Sewer Bulkheading
Buick City Site, Flint, MI

---

## Introduction

This Addendum No. 1 to the Outfall 002 and 005 Storm Sewer Bulkheading Work Plan (the Work Plan) was prepared by ARCADIS on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Buick City Site (Site) located in Flint, Michigan. The Work Plan was approved by the United States Environmental Protection Agency (U.S.EPA) on November 10, 2012. This Addendum No.1 to the Work Plan (Addendum) includes installing bulkheads and plugs at select laterals along the Outfall 003 storm sewer and the Outfall 007 storm sewer main. The purpose of the Outfall 003 bulkheading activities is to minimize oil contribution to the sewer. The purpose of the Outfall 007 bulkheading is to eliminate the Sites contribution of impacted groundwater/storm sewer water to the outfall.

The activities included in this Addendum will be completed using the same approach presented in the approved Work Plan. The proposed bulkhead/plug locations for Outfalls 003 and 007 are presented on Drawings 1A and 1B.

**Manhole Locations Requiring Bulkheading**

Based on the 2012 boom study, oil infiltration was observed at multiple locations along the Outfall 003 storm sewer system. This Addendum proposes installing bulkheads and plugs in all laterals entering manholes MH 3-10, MH 3-22, and MH 3-48 which will eliminate their contributions to the Outfall 003 storm sewer. These manhole locations are shown on Drawing 1A.

The boom study identified additional infiltration locations along the Outfall 003 sewer main, which serves upgradient off-Site drainage. Solutions for addressing the infiltration locations along the main are being evaluated. Currently permanent booms and absorbent booms are maintained at Outfall 003 to contain and collect the oil. In addition absorbent booms are also maintained in select manholes along the Outfall 003 storm sewers to minimize the amount of oil reaching the discharge point.

As part of the NPDES Plus Monitoring Program (NPMP) samples were collected on a monthly basis from manhole MH 7-1 or Outfall 007. The majority of the samples collected from the Outfall 007 storm sewer detected total mercury at concentrations exceeding Groundwater/Surface water Interface (GSI) Criteria. In order to eliminate the Sites contribution to Outfall 007 a plug will be installed at manhole MH 7-1. This manhole location is shown on Drawing 1B.

**Outfall 003 Storm Sewer Bulkheading Installation**

All activities associated with bulkheading along Outfall 003 will be completed in accordance with the processes and procedures presented in the Work Plan.

Sewer Bulkheading

At manhole MH 3-10 a bulkhead will be installed in the 42-inch lateral where it enters MH 3-10 (Drawing 1A). Typical details and specifications are presented in Drawings 2 and 3 of the Work Plan.

Pipe Plugging

The lateral pipes entering the storm sewer main at manholes MH 3-22 and MH 3-48 shall be plugged as indicated on Drawing 1A. At MH 3-22 concrete plugs will be placed in the one 18-inch, one 24-inch, and two 4 to 6-inch laterals entering the manhole. At MH 3-48 a concrete plug will be placed in the one 20-inch lateral entering the manhole. Typical details and specifications are presented in Drawings 2 and 3 of the Work Plan.

Manhole Gasket Installation

At manhole MH 3-48-1 the existing cover will be removed and a new gasketed manhole cover will be installed. The gasketed manhole cover will allow access if necessary. Typical details and specifications are presented in Drawings 2 and 5 of the Work Plan.

**Outfall 007 Storm Sewer Bulkheading Installation**

All activities associated with bulkheading along Outfall 007 will be completed in accordance with the processes and procedures presented in the Work Plan.

Pipe Plugging

The influent pipe entering the storm sewer main at manhole MH 7-1 shall be plugged as indicated on Drawing 1B. At MH 7-1 a concrete plug will be placed in the 24-inch pipe entering the manhole. Typical details and specifications are presented in Drawings 2 and 3 of the Work Plan.

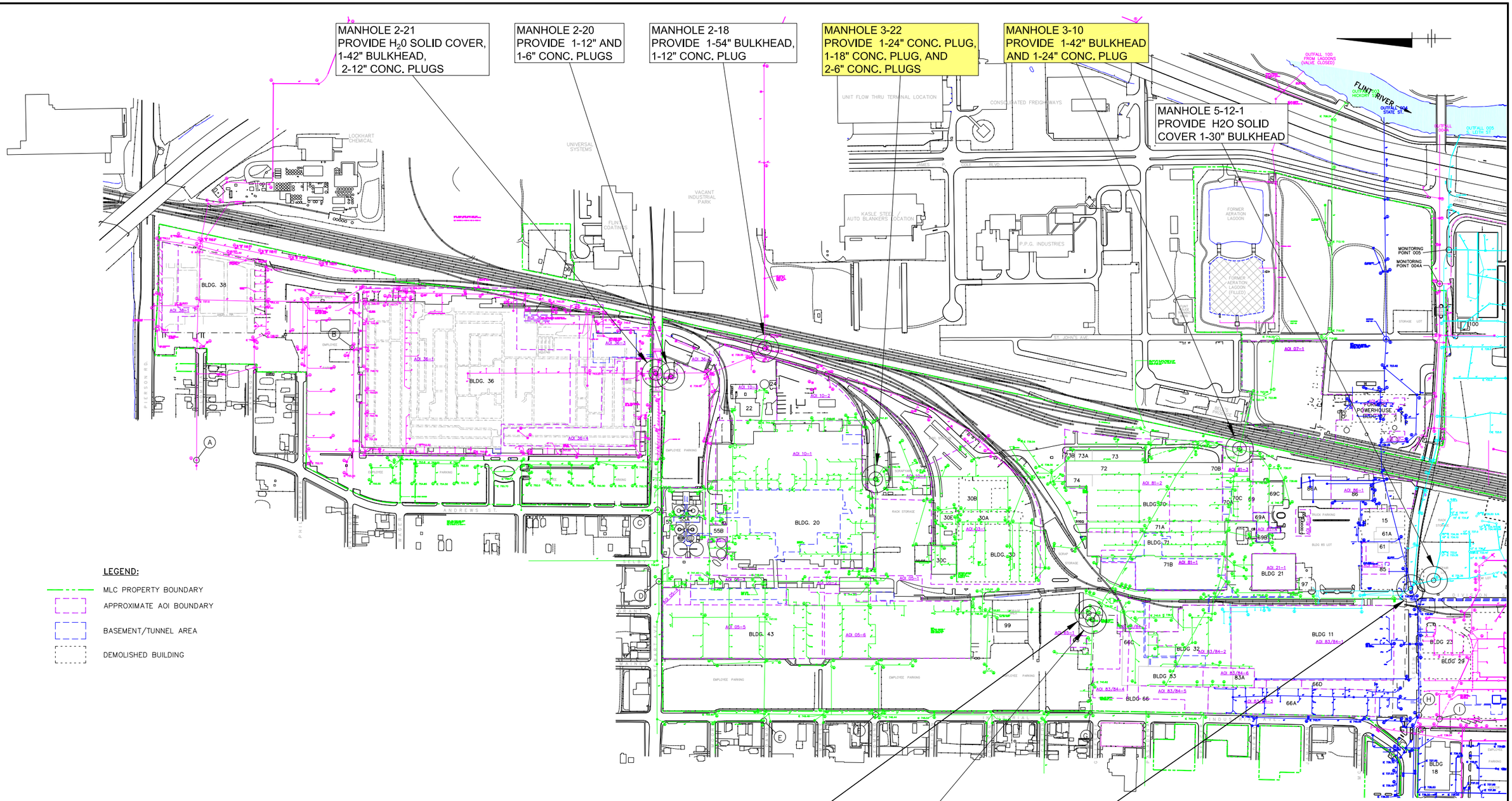
**Manhole Capping**

Upgradient manhole grates located along each of the laterals being bulkheaded or plugged shall be capped in accordance with the Work Plan. Typical details and specifications are presented in Drawings 2 and 5 of the Work Plan.

**Next Steps**

Upon approval of this Addendum No. 1, ARCADIS will begin scheduling this work.

Following completion of this work additional evaluation will be completed to determine whether additional bulkheads or oil minimization activities are necessary.




NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ INC., DATED APRIL 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.

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FORMER GENERAL MOTORS CORPORATION NORTH AMERICAN OPERATIONS FACILITY (OTHERWISE KNOWN AS BUICK CITY)

**SITE PLAN**

ARCADIS

FIGURE
**1A**

CITY: SYRACUSE, NY DIV/GROUP: ENVCAD DB: G. STOWELL K.DAVIS LD: G. STOWELL L. FORAKER PM: M. MAKI LYR: ON=*;OFF=*REF*, *IRFI_SS_PIEZ, |HY_LAKE_POND-FILLED, |PROPERTY, |SHD-BUILDING, , |NAPL_EVID, |NAPL_OBS, |NAPL_OBS-HIST, |LNAPL-SHD
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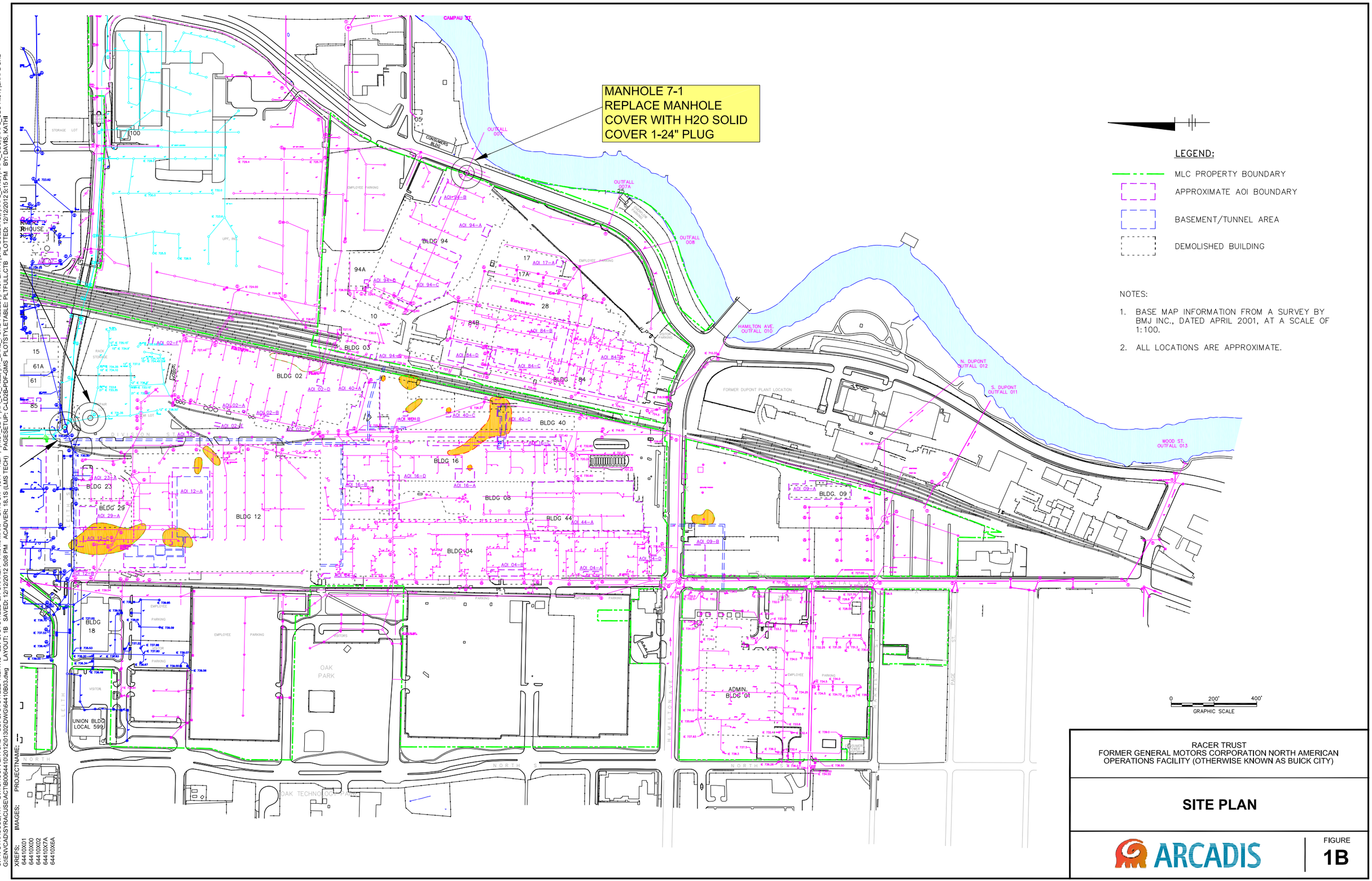


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**SITE PLAN**

ARCADIS

FIGURE
**1B**

CITY: SYRACUSE, NY DIV/GROUP: ENVCAD DB: G. STOWELL K.DAVIS LD: G. STOWELL L. FORAKER PM: M. MAKI LYR: ON=*;OFF=*REF*,*IHIST_SB*,*IRFI_SS_PIEZ,IHY_LAKE_POND-FILLED,IPROPERTY,ISHD-BUILDING,,INAPL_EVID,INAPL_OBS,INAPL_OBS-HIST,ILNAPL-SHD
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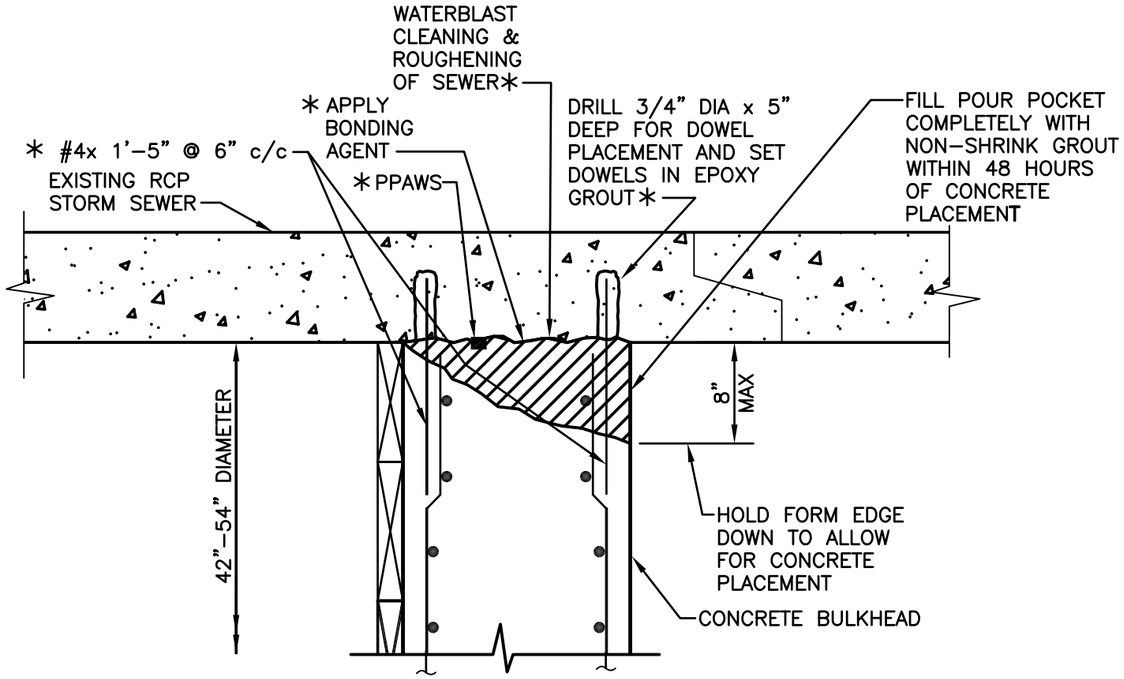
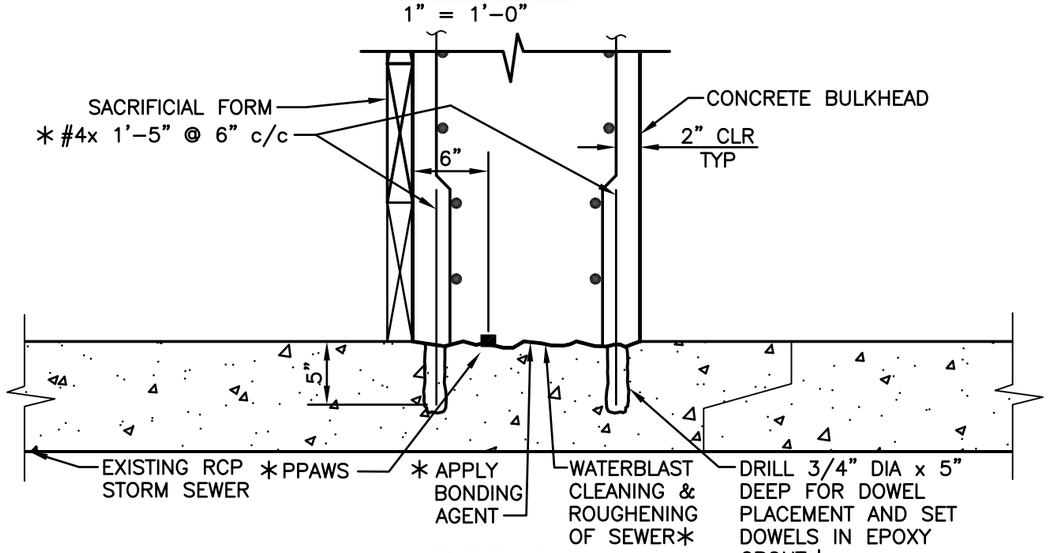


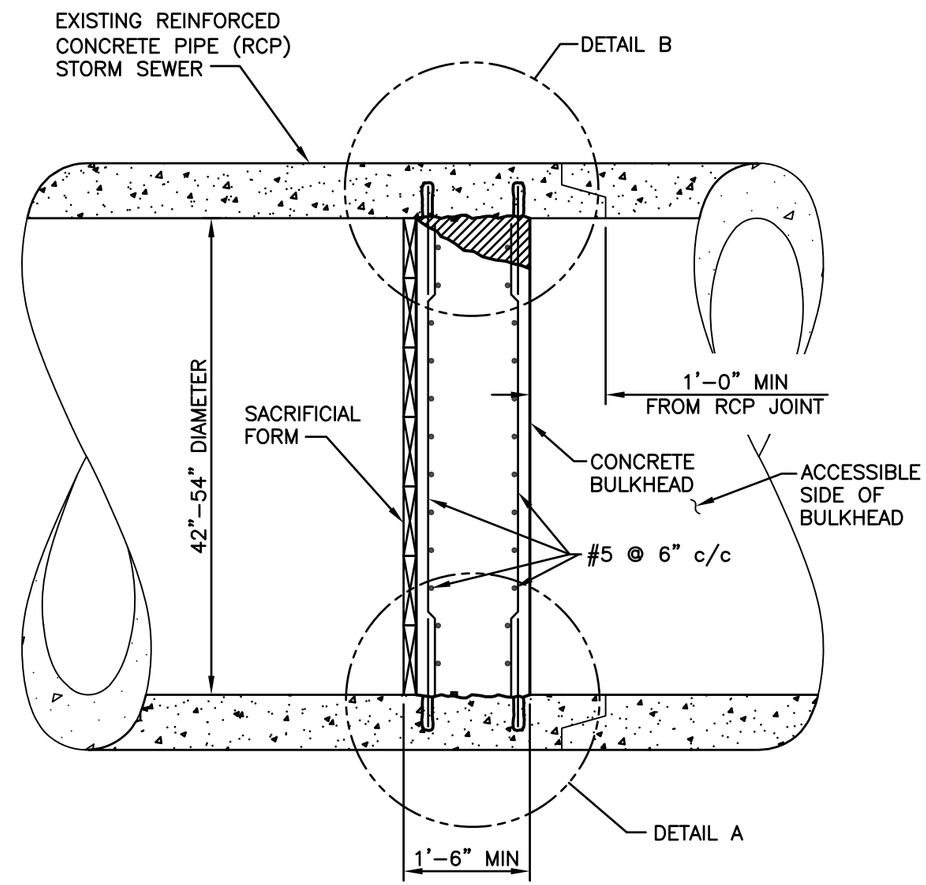

## DETAIL B

1" = 1'-0"




## DETAIL A

1" = 1'-0"




## TYPICAL BULKHEAD SECTION

1/2" = 1'-0"

* FULL CIRCUMFERENCE OF BULKHEAD.

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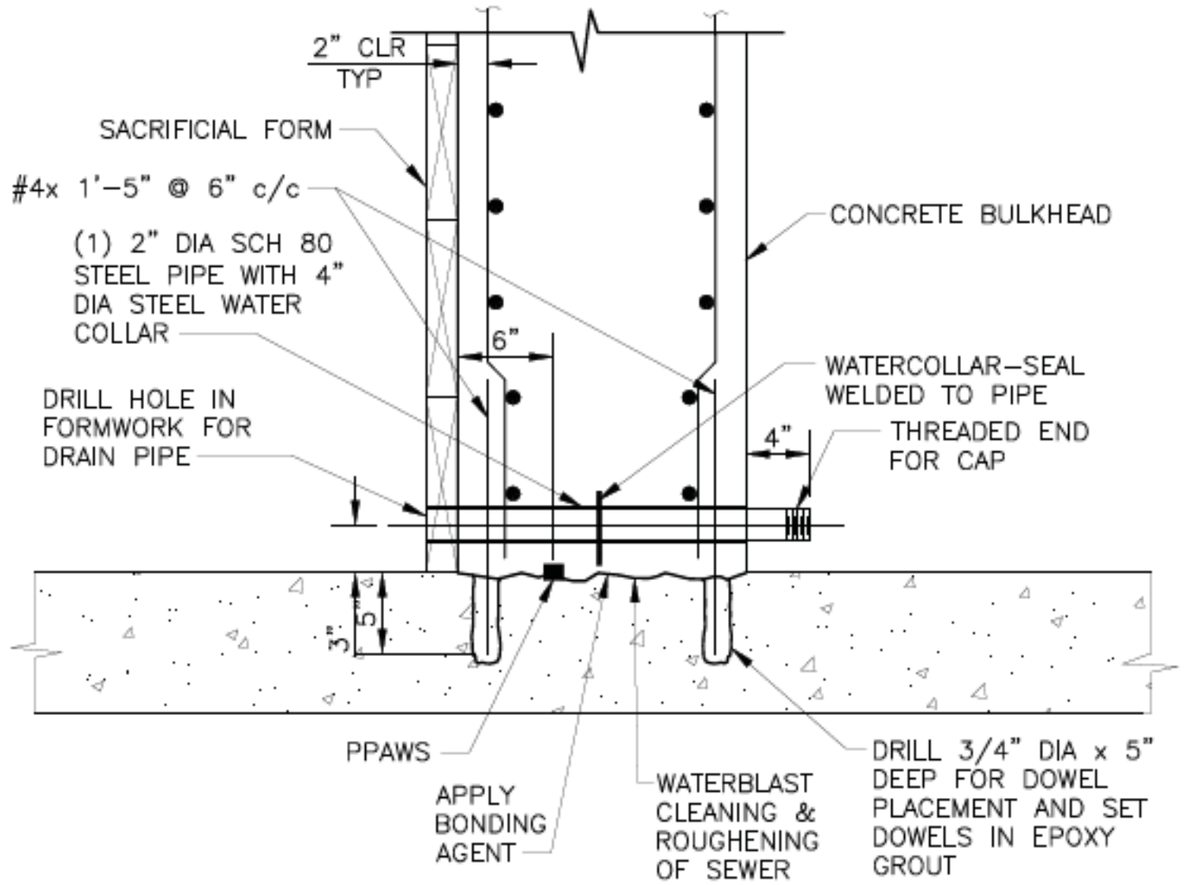
|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
| SHEET TITLE: RCP BULKHEAD SECTION & DETAILS | | TASK/PHASE NUMBER: 01301 | DRAWN BY: JAM |
| | | PROJECT NUMBER: B0064410.2012 | DRAWING NUMBER: 3 |

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|---|---|---|---|
| MICKI MAKI | – | | |
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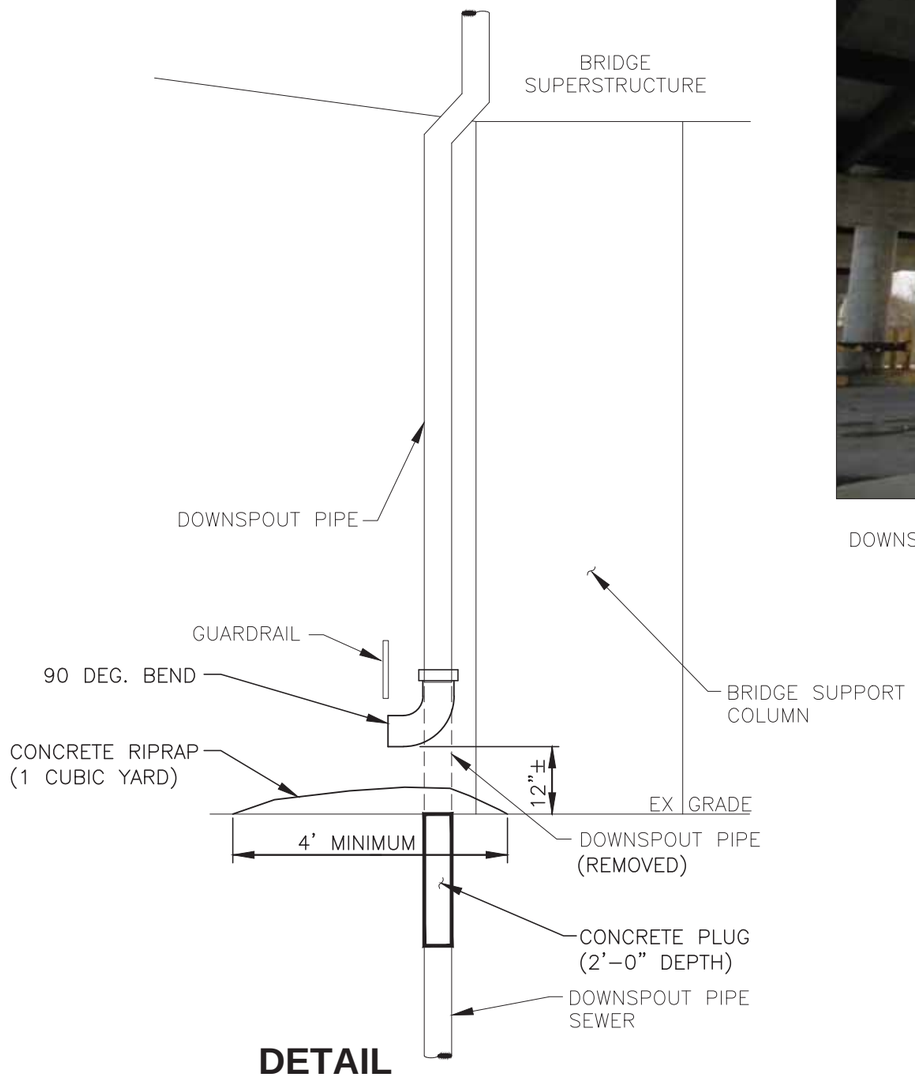


## DETAIL

## STEWART STREET DRAIN

NOTES:

1. CUT DOWNSPOUT PIPE 1'-6" ABOVE GRADE.
2. PLUG DOWNSPOUT PIPE SEWER BELOW GRADE (MIN. 2'-0" CONCRETE).
3. PROVIDE APPROX. 1 CUBIC YARD OF CLEAN BROKEN CONCRETE RIPRAP ABOVE DOWNSPOUT PLUG, ABOVE GRADE.
4. INSTALL 90 DEG. BEND TO BOTTOM OF CUT DOWNSPOUT PIPE AIMED OPPOSITE FROM BRIDGE SUPPORT COLUMN.

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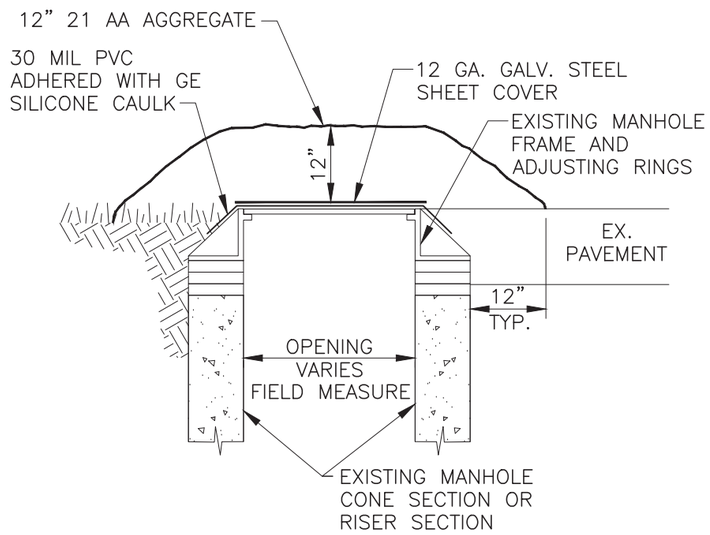
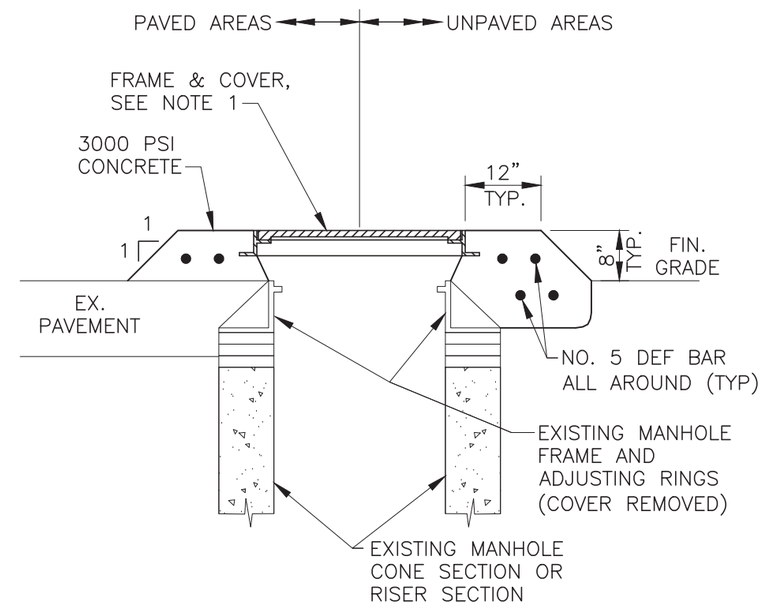



**PROPOSED**
1/2" = 1'-0"

## MANHOLE CAP DETAIL "A"

NOTE 1:
EAST JORDAN IRON WORKS CAST IRON
FRAME W/ COMPOSITE COVER, 32" OPENING,
COM 1480 ASY




**PROPOSED**
1/2" = 1'-0"

## MANHOLE CAP DETAIL "B"

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|---|---|---|---|
| MICKI MAKI | – | ELC | ELC |
| SHEET TITLE: MANHOLE CAP DETAILS | | TASK/PHASE NUMBER: 01301 | DRAWN BY: JAM |
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