REMEDIAL INVESTIGATION REPORT ADDENDUM

AMERICAN AXLE PLANT SITE
NYSDEC SITE NO. 915196

Prepared For:
General Motors Corporation
Worldwide Facilities Group
Environmental Services Group - Remediation

DRAFT

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EXECUTIVE SUMMARY

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1.0 INTRODUCTION

This Supplemental Remedial Investigation Report (SRI Report) has been developed by Conestoga-Rovers & Associates (CRA) on behalf of General Motors Corporation (GM) for the American Axle Plant Site (Site) in Buffalo, New York. The Site is listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 915196. This report presents the results of additional investigations performed in response to comments of the New York State Department of Environmental Conservation (NYSDEC) dated February 27, 2007, regarding the "Remedial Investigation (RI), American Axle Plant Site, Buffalo, New York," previously submitted to the NYSDEC in November 2006. This Supplemental Remedial Investigation was conducted in accordance with the NYSDEC-approved Supplemental Remedial Investigation Work Plan prepared by CRA dated January 2008, and the subsequent Supplemental Remedial Investigation Work Plan Addendum dated December 2008. The Work Plan and Addendum were approved by the NYSDEC in correspondence dated March 31, 2008, January 7, 2009, and February 4, 2009.

The remediation program is being performed in accordance with an Order on Consent (Order) between GM, American Axle & Manufacturing, Inc. (AAM) and the New York State Department of Environmental Conservation (NYSDEC) signed on August 31, 2006. The report contained herein summarizes the activities and data collected during interim remedial measures implemented since submittal of the RI Report in November 2006 and supplemental remedial investigations conducted in 2008 and 2009.

1.1 OBJECTIVE AND SCOPE

The objective of the Supplemental Remedial Investigation was to gather additional data to address NYSDEC comments on the initial RI submittal and further define the nature and extent of Site-related chemical presence in soil and groundwater beneath the Facility to the extent necessary to complete the Feasibility Study (FS). The scope of work for this additional investigation is described in the Supplemental Remedial Investigation Work Plan dated January 2008. Based on the findings of the 2008 investigation activities, the scope of work was expanded as described in the Supplemental Remedial Investigation Work Plan Addendum dated December 2008.

The scope of work is summarized below:

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- Installation of 48 soil borings, 8 fill monitoring wells, 17 clay monitoring wells, 10 shallow bedrock wells, and 1 deep bedrock well to further define the nature and extent of groundwater impact at the Site and Facility.

- Completion of groundwater sampling following installation and development of the additional monitoring wells.

- Collection of sediment and water samples from the Scajaquada Creek Drain.

- Collection of grab water samples from the Buffalo Sewer Authority (BSA) 5x9 Sewer upstream and downstream of the Facility.

- Completion of a survey limited tracing of laterals to the BSA 5x9 Sewer to aid in preparation of the FS.

A complete description of the investigation methodology is included as Section 3.

1.2 DEFINITIONS

The following key terms are used in this report to describe and define the Site:

- "Property" refers to the parcels of land formerly owned by GM and AAM and now owned by East Delavan Property, LLC that are located at and in proximity to 1001 East Delavan Avenue in the City of Buffalo, Erie County, New York. The location of the property is shown on Figure 1.1.
- "Facility" means the portion of the property bounded by Delavan Avenue on the north, Cornwall Avenue on the west, Scajaquada Street on the south, and the CSX Corporation railroad right-of-way on the east. The boundary of the Facility is shown on Figure 1.2.
- "Site" means the boundaries as defined in the Order dated August 31, 2006, which were established based on the source areas of PCB-impacted oil beneath the manufacturing floor slab of the Facility that had been identified at that time. The boundaries of the Site are shown on Figure 1.3.

1.3 REPORT ORGANIZATION

This report is organized as follows:

- Section 1 - The purpose and organization of the report is presented in Section 1;

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- Section 2 – The background and history of the Facility and summary of the initial RI are presented in Section 2;
- Section 3 - A detailed summary of the Supplemental RI activities is presented in Section 3;
- Section 4 – The definition of the nature and extent of contamination is presented in Section 4; and
- Section 5 – The conclusions for the data presented in this report are presented in Section 5.

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2.0 SITE HISTORY

2.1 SITE BACKGROUND AND OWNERSHIP

GM owned the Property and operated the Facility from its inception in the 1920s until February 1994 when it was sold to AAM. AAM ceased operations in December 2007 and sold the Property and structures to East Delavan Property, LLC (EDP) in October 2008. EDP is in the process of completing selective decommissioning/demolition and rehabilitation at the facility in an effort to attract industrial tenants.

2.2 PREVIOUS INVESTIGATIONS

Numerous environmental and geotechnical investigations have been conducted at the Facility. These investigations were associated with the design of structural additions, property sale, and/or petroleum spills. A list of investigations conducted at the Facility, including the approximate dates conducted, the purposes of the investigations, and summaries of the work completed, is presented in Table 2.1.

The current remedial investigation began in 2001 in response to an exceedance of AAM's Buffalo Pollutant Discharge Elimination System (BPDES) discharge limit for oil and grease. An Administrative Order on Consent was signed in August 2006 and the initial RI report was submitted in November 2006. Since that time, additional activities have been conducted including construction and operation of a groundwater treatment system and completion of an Interim Remedial Measure (IRM) by AAM to close the G-29 Buhr Pit.

2.3 REMEDIAL INVESTIGATION SITE CHARACTERIZATION

An investigation of the Site was implemented in 2001 with the overall objective of determining the nature and extent of subsurface PCB and oil contamination at the Site and impacts to the BSA 5x9 Sewer. The investigation consisted of soil boring and monitoring well installation, hydraulic monitoring, groundwater sampling and analysis, and sewer investigation/monitoring. The data generated during the RI were used to prepare a qualitative risk assessment. The results of the initial RI are presented in detail in the November 2006 RI Report. The site characterization is summarized below and is updated as necessary based on new data.

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2.3.1 GEOLOGY

The overburden at the Facility generally consists of fill materials underlain by clay with till intermittently underlying the clay. The overburden ranges in thickness from 6.5 feet in the northeast corner of the Facility to 20.7 feet along the southern boundary of the Facility. The thickness of the overburden materials is generally consistent in the east-west direction; however, the thickness of the overburden increases from north to south following the contour of the bedrock which also dips southward.

The average depth to bedrock beneath the Facility is 15.8 feet below ground surface (bgs). Bedrock cores collected during various investigations indicate a light to dark gray cherty limestone characteristic of the regional Onondaga Formation.

2.3.2 HYDROGEOLOGY

The major regional aquifer in the area of the Facility is the bedrock Onondaga Formation. Recharge occurs through precipitation-induced infiltration into the bedrock. The groundwater discharge point in this region is likely the Niagara River. Groundwater is not used as a source of potable water in the portion of Erie County in which the Facility is located.

Groundwater flow at the Facility is divided into three zones: fill; clay; and bedrock.

2.3.2.1 FILL

On the basis of the additional data obtained through the IRM field activities and the Supplemental RI, there is little to no presence of groundwater in fill within the Site to allow for groundwater flow. The existing facility structure covers the Site, limiting infiltration of precipitation and inhibiting recharge of the fill unit. Across the Facility, there are too few groundwater data points to adequately interpret groundwater flow in the fill unit.

2.3.2.2 CLAY

Groundwater flow in the clay unit is affected by several factors, including limited recharge of the clay unit beneath the facility structure, although to a lesser degree than in the fill unit; subsurface pits that extend through the clay unit and into the top of

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bedrock; and operation of the former B-26 Coolant Pit collection system. Where the potentiometric surface elevations in the clay unit beneath the Facility are lower than the water level or invert elevations in the sewer, groundwater flow in the clay unit passes beneath the sewer. This is particularly true in the vicinity of the former B-26 Coolant Pit where potentiometric surfaces are additionally depressed through the operation of the collection system.

Groundwater flow in the clay immediately adjacent to the sewer near the southern limits of the Site is inward toward the 5x9 Sewer. The invert elevations of the 5x9 Sewer in this area are lower than the potentiometric surface elevations. Therefore, in this area, there is potential for migration of groundwater or oil from the clay unit into the 5x9 Sewer.

Additional discussion of groundwater flow in the clay unit based on the recent data will be discussed in Section 3.2.3.

2.3.2.3 BEDROCK

During the initial RI, characterization of groundwater flow in the bedrock unit was limited to the shallow bedrock in the central portion of the Facility. Groundwater flow in this area was from west to east. Operation of the former B-26 Coolant Pit collection system influences shallow bedrock groundwater flow within the Site. The installation of an additional 10 shallow bedrock wells since 2006 allows for better interpretation of groundwater flow across the Facility and will be discussed in Section 3.2.3.

2.3.3 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of contamination presented in the following subsections is summarized from the initial RI and is presented for completeness. The conclusions drawn as a result of the supplemental investigations may differ based on the new data obtained and will be presented after discussion of supplemental investigations in Section 4.0.

2.3.3.1 SUBSURFACE OIL

The nature and extent of PCB-containing oil beneath the Site is summarized as follows.

i) oil presence in the fill unit within the Site is primarily east of the 5x9 Sewer;

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ii) oil is present in the clay unit within the Site on both the east and west sides of the 5x9 Sewer;

iii) based on the API model, the estimated volume of theoretically recoverable oil in the overburden materials beneath the Site ranges between 50,000 and 110,000 gallons (50,000 to 110,000 gallons in the fill and 1,000 gallons in the clay);

iv) oil is present in the shallow bedrock within the Site on both the east and west sides of the 5x9 Sewer and within the area of oil presence in the clay unit;

v) PCBs are present in the subsurface oil in all units;

vi) the highest concentration of PCBs in subsurface oil (440,000 parts per million [ppm] in MW-406) was detected in the clay unit west of the 5x9 Sewer;

vii) the highest concentration of PCBs in oil in the fill unit (3,850 ppm in CP-28) is two orders of magnitude lower than the highest concentration detected in the clay unit;

viii) the highest concentration of PCBs in oil in the shallow bedrock (4,350 ppm in CP-23B) is two orders of magnitude lower than the highest concentration detected in the clay unit; and

ix) based on the data developed and presented in the RI Report, the presence of oil and PCBs beyond the boundaries of the Site is limited.

2.3.3.2 5X9 SEWER

The characterization of the presence of PCBs within the 5x9 Sewer beneath the Site is summarized as follows:

i) PCBs are present in influent flow to the 5x9 Sewer from some incoming laterals beneath the Facility;

ii) PCBs are present in stained areas on the 5x9 Sewer structure; and

iii) standing oil contaminated with PCBs is present in the 5x9 Sewer in an area where infiltration of oil through the sewer structure was also noted.

2.3.3.3 GROUNDWATER

The characterization of the presence of PCBs in groundwater beneath the Site is summarized as follows:

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i) PCBs are present in groundwater in the fill and clay units within the Site at concentrations exceeding the standard for Class GA (potable) groundwater;

ii) PCBs are present in groundwater in the shallow bedrock within the Site at concentrations exceeding the standard for Class GA (potable) groundwater; and

iii) the extent of groundwater exhibiting PCB concentrations exceeding the standard is significantly less than the extent of presence of PCB-containing oil in all monitored strata.

2.3.3.4 SOIL

The characterization of the presence of PCBs in subsurface soils at the Site is summarized as follows:

i) PCBs are present in subsurface soils in the fill and clay units at concentrations exceeding the NYSDEC soil cleanup objective; and

ii) PCB presence in subsurface soils occurs in the same areas in which oil is observed in the subsurface.

2.3.4 POTENTIAL PATHWAYS OF TRANSPORT AND EXPOSURE

The potential pathways of transport and exposure to PCBs in environmental media from the Site are as follows:

i) construction worker exposure to impacted subsurface soils during sub-slab excavation activities;

ii) transport of PCBs off-Site via the 5x9 Sewer; and

iii) exposure of fish and wildlife to PCBs in the underground portion of the Scajaquada Creek Drain at times of overflow conditions in the 5x9 Sewer.

The current Facility structure, specifically the concrete floor within the manufacturing building, eliminates the opportunity for incidental contact by plant employees with impacted materials located beneath the floor. As a result, risks were evaluated for a potential construction scenario involving excavation work that would require the penetration of the concrete floor. Contact during excavation was assumed to occur in the areas of soil containing the maximum PCB concentrations, where total PCBs ranged

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from non-detect to a high of 440,000 milligrams per kilogram (mg/Kg) (based on current and historical sampling).

Exposure was assumed to occur via direct contact with PCB-impacted soil resulting in incidental ingestion, dermal absorption and inhalation. This exposure pathway is potentially complete; however, commonly available personal protective equipment and other engineering controls can be used to address this potential hazard.

Groundwater, including bedrock groundwater, is not used for potable purposes, as the area is serviced by public water. Furthermore, the overburden groundwater unit that has been impacted is not capable of providing adequate yield for use as a groundwater supply. Bedrock groundwater has shown evidence of contamination associated with the contaminant sources detected at the Site with no off-Site migration. Therefore, the direct groundwater to surface water pathway is not complete and does not present a public health risk.

Ecological risk is negligible due to the limited access to the Site and the absence of wildlife, threatened or endangered species, or sensitive environments in the vicinity of the Site and the Facility. The nearest environmental receptors would be in the Scajaquada Creek Drain, a Class C surface water adjacent to the AAM property. Due to the presence of a Sewer Patrol Point (SPP), the 5x9 Sewer may overflow into the Scajaquada Creek Drain during intense storm events, defined as a 1-month design storm or greater.

Potential concentrations of PCBs in effluent from the 5x9 Sewer entering the Scajaquada Creek Drain were estimated as part of the 2006 RI Report to assess the potential for environmental risk. The assumptions made in the evaluation were:

i) an average PCB concentration in the 5x9 Sewer effluent of 0.175 micrograms per liter (µg/L) (175 parts per trillion [ppt]) based on the results observed at the Colorado Street manhole during the biweekly sampling conducted in Fall 2003;

ii) average flow conditions (water depth = 0.75 foot);

iii) PCB influx to the 5x9 Sewer is assumed to be constant; and

iv) during overflow conditions, total flow within the 5x9 Sewer equals the sum of the predicted overflow and flow to the Scajaquada Interceptor. The flow to the Scajaquada Interceptor is assumed to be a constant 17,500 gpm (calculated based on construction details) during storm events due to the lack of Site-specific flow measurements. The flow to the Scajaquada Interceptor may actually increase

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during storm events resulting in greater total average sewer flow. This uncertainty is conservative and tends to exaggerate the concentration of PCBs.

Using information provided in the report "System-Wide Long Term Control Plan for CSO Abatement" (Malcolm Pirnie, Inc. 2004), the temporal average concentration of PCBs in Scajaquada Creek at Forest Lawn Cemetery due to inflows from the 5x9 Sewer overflow was manually calculated to be 0.0098 ppt. This analysis was updated using recent modeling data and will be discussed in Section 4.8.

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3.0 SUPPLEMENTAL REMEDIAL INVESTIGATION ACTIVITIES

The NYSDEC provided comments to the RI Report in its letter dated February 27, 2007. A response to each comment was provided to NYSDEC in a letter from CRA to the agency on April 10, 2007. The parties met on May 2, 2007 to discuss the response to comments and ultimately, four general areas remained unresolved:

i) further investigation of PCB-containing oil impacts identified at select locations;
ii) further delineation of impacts to bedrock;
iii) investigation of potential impacts to the Scajaquada Creek Drain from the Site; and
iv) more extensive sampling for the target compound list (TCL) suite of parameters to confirm the absence of other contaminants of concern.

These four areas were the basis for the Supplemental RI Work Plan. The work plan was implemented in Spring 2008; however, it was determined that further investigation was needed to delineate the nature and extent of contamination in areas within the Facility beyond the Site. A meeting was held with the NYSDEC on November 12, 2008 and an addendum to the Supplemental RI Work Plan was submitted to NYSDEC on December 23, 2008. This addendum called for:

i) installation of fill and clay borings around the perimeter of the Site to delineate the extent of contamination due to Site sources;
ii) installation of additional bedrock wells north of the Site in the portion of the Facility known as the Carrier Job Area to delineate the extent of PCBs and oil in the bedrock in this area;
iii) installation of additional soil borings to the base of the clay unit and installation of monitoring wells to delineate the extent of impacts in the South Yard of the Facility;
iv) installation of an additional deep bedrock monitoring well at the south end of the Facility to confirm that PCBs are not migrating though the bedrock toward the Scajaquada Interceptor;
v) completion of additional sampling within the Scajaquada Creek Drain further downstream of SPP #337 to determine water and sediment quality within the Drain; and
vi) further study of the BSA 5x9 Sewer to determine what inputs to the Sewer might be eliminated due to the change in use of the Property. This information has been gathered to assist with the Feasibility Study for the Site.

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The investigation activities completed in 2008/2009 are discussed in the following sections.

3.1 SUBSURFACE DRILLING AND SAMPLING

Drilling activities were completed in April/May 2008 and February 2009. A total of 49 borings, 32 for the installation of monitoring wells across the Facility and 17 investigative borings, were advanced during the supplemental investigation rounds. The borings are listed in Table 3.1 and the locations of the borings are shown on Figure 3.1.

3.1.1 BOREHOLE INSTALLATION PROCEDURES

Borings installed for the purpose of monitoring well installation were advanced using a drill rig and hollow stem augers of 4-1/4 or 6-1/4 inch inside diameter or, where the density and dryness of the clay necessitated it, a roller-bit. Split spoon samples were collected continuously in advance of drilling. When the roller bit was used to advance the boring, the cuttings were flushed from the borehole using recirculated water prior to sampling the next interval. All solid wastes and drilling and purge waters were handled as described in Section 3.4. Soil borings installed for soil logging and sampling only were backfilled with a bentonite-grout mixture.

3.1.2 SOIL SAMPLE HANDLING

The soil samples collected during the investigation were logged in accordance with the Unified Soils Classification System. A stratigraphic log of each boring was prepared and these logs are presented in Appendix A. Where multiple borings were advanced at a single location (as for clusters of monitoring wells), typically only the deepest of the borings was logged.

3.2 GROUNDWATER INVESTIGATION

Field activities associated with the groundwater investigation included: monitoring well installation, hydraulic monitoring, phase measurement, and groundwater/oil sampling for chemical analyses.

Summaries of each of these activities are presented in the following subsections.

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3.2.1 MONITORING WELL INSTALLATION

A total of 32 monitoring wells were installed during the 2008/2009 field investigations. Seven of the 32 wells are located around the Carrier Job Area north of the Site, nine wells are located around the Site perimeter, nine wells are located around the South Yard south of the Site, and seven wells are located around the perimeter of the Facility. The locations of all monitoring wells installed at the Facility are shown on Figure 3.1.

Fill wells are designated by a number only (e.g., CP-29), clay wells have an 'A' in their designation (e.g., MW-801A) and bedrock wells have a 'B' in their designation (e.g., MW-1B). Wells ending in 'R' are replacements of previously installed wells that were damaged. The original wells were abandoned and new well installed to the same specifications and labeled with the same well numbers plus the 'R' designation.

Overburden wells were installed such that they were screened at either the base of the fill (7 wells) or at the base of the clay unit (14 wells). With the exception of one bedrock well, MW-2B, bedrock wells (10) were constructed to monitor the uppermost water-bearing interval of the bedrock. Monitoring well MW-2B was extended through the upper 15 feet of bedrock to evaluate groundwater quality in bedrock at depth.

Well installation details for all wells at the Facility are presented in Table 3.2. Stratigraphic and instrumentation logs for the wells installed between 2008 and 2009 are presented in Appendix A. Logs for wells installed as part of original RI and during historical investigations are included in the November 2006 RI Report as Appendix B.

3.2.1.1 OVERBURDEN MONITORING WELL INSTALLATION

Shallow overburden borings for fill unit monitoring wells were advanced through the fill to the top of the clay unit. Borings for clay unit monitoring wells were advanced through both the fill and underlying soil units to auger/roller-bit refusal, assumed to be the top of the bedrock. When the bottom of the clay was breached during sampling, bentonite was placed in the bottom of the boring to eliminate the potential for a migration pathway from the clay to the bedrock.

Overburden wells were constructed of 2-inch diameter polyvinyl chloride (PVC) riser pipe typically fitted with a 5-foot long 10 slot screen. Screen lengths were ultimately determined based on the thickness of the monitored formation resulting in some lengths

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less than 5 feet (i.e., CP-30 and CP-33) and some lengths longer (CP-34, CP-32A, CP-34A, and MW-809A through MW-812A). MW-807 was originally intended to be a bedrock installation; however due to the presence of oil continually from 2 feet below grade to the top of bedrock, installation of a bedrock well at this location was abandoned. The borehole was backfilled with cement-bentonite grout from the top of rock to 7 feet below grade and a 4-inch diameter fill well was installed as a possible oil recovery point.

The general installation procedure for the monitoring wells consisted of lowering the assembled riser pipe and screen inside the completed boring to the desired depth; generally, the bottom of the boring. The annular space between the screen and the borehole wall was then backfilled with quartz sand to approximately 1 foot above the top of the well screen. The screen and sand pack were isolated by placing bentonite pellets on top of the sand pack. A cement/bentonite grout was then placed above the bentonite seal to approximately 1 foot below grade. All wells were completed by installing flush-mount casings for protection.

3.2.1.2 BEDROCK MONITORING WELL INSTALLATION

Bedrock monitoring wells were completed as open coreholes. Borings for bedrock wells were advanced to the top of the bedrock using an auger/rollerbit. After bedrock was encountered, a core barrel was used to drill approximately 2 feet into the bedrock, enabling the placement of a 4-inch diameter steel casing sealed into the top of the bedrock unit. The installation of these casings effectively sealed off the overburden ensuring no transport between the overburden and bedrock units. This method was used at all bedrock locations with the exception of CP-1B and CP-4B. Wells CP-1B and CP-4B were installed by grouting the 4-inch steel casing directly on top of the bedrock surface. Both methods of casing installation will effectively seal off the shallow and deep overburden ensuring no transport between the overburden and bedrock units. The latter method was used at CP-1B and CP-4B to allow for core recovery and inspection of the upper two feet of bedrock.

The bedrock was cored in 5-foot runs. Upon completion of each 5 feet of coring, the water producing characteristics of the open interval were determined by conducting "bail-down" and recovery tests. Coring was terminated when the first interval producing sufficient water recharge for sampling was encountered.

Bedrock cores were logged noting the rock description, the core run, depth of the run, percent recovery, and the rock quality designation (RQD). Lithologic logs of the cored bedrock are presented in Appendix A.

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3.2.1.3 BEDROCK CONTOUR

The top of bedrock has been contoured using observations of bedrock depth from installation of bedrock monitoring wells and from observations noted on the original construction drawings of the 5x9 Sewer from 1893. Figure 3.2 presents the top of bedrock contours across the Facility.

The bedrock surface generally slopes to the south-southwest across the Facility. The surface is not flat, but tends to undulate, with localized mounds and depressions. These features could impact local groundwater flow in the shallow bedrock.

Other features which affect the top of bedrock contour and could impact groundwater flow in the shallow bedrock include:

i) subgrade pits within the Facility that extend into the top of rock;
ii) the 5x9 Sewer at the northern end of the Facility where it extends into the top of rock; and
iii) the abandoned siphon associated with the 5x9 Sewer located in what is now the South Yard.

The siphon was built as part of the original construction of the 5x9 Sewer to convey sewage across/below Scajaquada Creek. When the 5x9 Sewer was constructed in 1893, Scajaquada Creek was an open channel running through what is now the South Yard of the Facility, roughly through the area currently occupied by the substation and powerhouse. In order to continue the sewer beyond the creek, a siphon was built to convey sewage below the level of the creek. The siphon consisted of a 27-inch cast iron pipe installed 9 feet below the base of the creek channel in the upper 5 to 6 feet of bedrock. Based on conversations with persons knowledgeable with sewer construction practices at that time, the likely construction method would have been to temporarily block the creek, excavate the creekbed and surrounding banks to the top of bedrock, blast the bedrock to the appropriate depth, install the siphon pipe, and finally backfill with the excavated and blasted material. In 1923, Scajaquada Creek was rerouted underground below what is now Scajaquada Street. The siphon was abandoned and the sections of the 5x9 Sewer north and south of the siphon were connected with a concrete sewer section. Those portions of the siphon and the associated manholes, chambers, and overflow structure that obstructed construction of the new sewer section would have been removed as noted on the 1923 construction drawing, although it is likely that structures below the level of the 5x9 Sewer still remain. The former creek bed was filled

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with concrete from the level of the top of bedrock to the base of the new 5x9 Sewer section.

3.2.2 WELL DEVELOPMENT

The monitoring wells installed during the 2008/2009 field investigation were developed following installation and prior to monitoring. Monitoring wells with sufficient groundwater recharge were developed by purging 10 volumes of standing water. The remaining wells were purged dry on three consecutive working days. All wells were developed using well-dedicated, precleaned, disposable, bottom-loading Teflon® bailers or dedicated/disposable Teflon® tubing attached to a peristaltic pump. Well development logs are presented in Appendix B.

3.2.3 PHASE AND HYDRAULIC MONITORING

Phase checks and hydraulic monitoring were performed on all accessible monitoring wells at the Facility on two occasions and on partial sets of wells on 11 occasions since November 2006. All phase checks were accomplished by use of an interface probe with periodic manual verification of data. Phase check and hydraulic monitoring data for the period November 3, 2006 through May 18, 2009 are presented in Appendix C. Figures 3.3 and 3.4 present potentiometric surface contours for the clay and bedrock groundwater units, respectively. The most recent and comprehensive set of groundwater measurements (May 18, 2009) were utilized for the drawings.

As discussed is Section 2.3.2.2, groundwater flow in the clay unit is affected by several factors, including limited recharge of the clay unit beneath the facility structure, although to a lesser degree than in the fill unit; subsurface pits that extend through the clay unit and into the top of bedrock; and operation of the former B-26 Coolant Pit collection system. Additionally, the presence of a vertical gradient in the clay complicates the contours, which assumes horizontal flow direction. Variations in well screen interval can exaggerate differences in potentiometric surface between wells due to the vertical gradient. The increased number of clay wells installed since 2006 adds to the complexity of interpretation. Consequently, there is no distinct groundwater flow direction across the Facility. Interpretation of groundwater flow is best addressed in localized sections.

Where the potentiometric surface elevations in the clay unit beneath the Facility are lower than the water level or invert elevations in the sewer, groundwater flow in the

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clay unit passes beneath the sewer. This is particularly true within the Site in the vicinity of the former B-26 Coolant Pit where potentiometric surfaces are additionally depressed through the operation of the collection system.

Groundwater flow in the clay immediately adjacent to the sewer near the southern limits of the Site is inward toward the 5x9 Sewer. The invert elevations of the 5x9 Sewer in this area are lower than the potentiometric surface elevations. Therefore, in this area, there is potential for migration of groundwater or oil from the clay unit into the 5x9 Sewer.

In the South Yard, the presence of active and abandoned pits, building foundations, active and abandoned sewers, and the former channel of Scajaquada Creek impact groundwater flow in this area of the Facility. Groundwater flow direction appears to be inward toward the 5x9 Sewer. The two depressions in the vicinity of MW-404/MW803A and MW-2A/MW-813A are in the approximate locations of the ends of the abandoned siphon that ran below the former Scajaquada Creek channel.

As discussed in Section 2.3.2.3, characterization of groundwater flow in the bedrock unit during the initial RI was limited to the shallow bedrock in the central portion of the Facility. The installation of ten additional shallow bedrock wells as part of the Supplemental RI allows for better interpretation of groundwater flow across the Facility.

Groundwater flow in the shallow bedrock across the Facility is generally to the south-southeast. Within the central portion of the Facility and west of the Site, there is a localized west to east flow component. Migration of groundwater in the bedrock unit from the west to the east beneath the 5x9 Sewer is possible. Operation of the former B-26 Coolant Pit collection system influences shallow bedrock groundwater flow in this area of the Site.

3.2.4 MONITORING WELL SAMPLING AND ANALYSES

Monitoring wells that exhibited oil during the phase monitoring were sampled for oil only and analyzed for PCBs. Typically, wells with less than 0.25 foot product had insufficient volume to generate an oil sample.

Wells exhibiting only groundwater were sampled using low-flow sampling protocols per GM's Field Sample Guidelines provided with the January 2008 "Supplemental Remedial Investigation Work Plan." Prior to sampling, wells were purged until water quality parameters stabilized. Stabilization was considered achieved when turbidity was below 5 nephelometric turbidity units (NTUs) and water quality parameters did not

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deviate more than 10 percent from previous readings. All wells were purged and sampled using well-dedicated/disposable Teflon® tubing attached to a peristaltic pump. The well purging logs are presented in Appendix D. In many instances, fill wells and to a lesser degree clay wells were either dry or went dry during stabilization resulting in no sample being obtained.

Analyses of groundwater and oil samples were performed at TestAmerica Laboratories in North Canton, Ohio (formerly Severn Trent Laboratories).

Quality assurance analyses performed in conjunction with the sample analyses included field duplicate samples, laboratory surrogate analyses, method blanks, blank spikes, and matrix spike/matrix spike duplicate samples. Prior to use in this report, analytical data were reviewed by an independent third party (CRA) for quality assurance. Data validation reports are provided in Appendix E.

All groundwater samples were analyzed for PCBs and oil and grease. Groundwater samples from select perimeter monitoring wells were also analyzed in June 2008 for Target Compound List (TCL) and Target Analyte List (TAL) parameters to establish water quality at the perimeter of the Facility.

Results will be discussed in Section 4.0.

3.3 SURVEY

All newly installed monitoring wells and borings were surveyed to obtain accurate horizontal location and vertical elevations of ground surface and tops of well casings. All elevations are based on the GM/BSA datum. Elevations can be converted to AMSL by adding 575.45.

3.4 WASTE HANDLING, STORAGE, AND DISPOSAL

Soil cuttings from the 2008/2009 drilling activities were collected and placed directly into 55-gallon drums. These drums were then labeled and stored on Site pending characterization/disposal. All soils were disposed off Site at the Chemical Waste Management (CWM) facility in Model City, New York.

Purged oil or oil/water mixtures were containerized for off Site disposal. Recovered oil containing PCBs was shipped to Veolia Environmental Services for incineration at

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Veolia's Port Arthur, Texas facility. Certificates of Destruction were received from Veolia and are on file documenting incineration of PCB-containing oils.

Groundwater or groundwater/oil mixtures were shipped to CWM for treatment.

3.5 SCAJAQUADA CREEK DRAIN INVESTIGATION

Sampling of the Scajaquada Creek Drain required sampling personnel to enter the structure for sample collection. Access to the Drain is controlled by BSA and approval for entry was granted by BSA prior to implantation of sampling activities.

Sampling events were completed in April 2008 and in March 2009. Sampling was subject to weather conditions as entry could only be completed during dry weather. Entry to the Drain was made through a manhole along Scajaquada Street near the intersection of Colorado Street, south of the Facility, and nearest to the location of the 5x9 Sewer SPP (overflow).

In April 2008, the Drain was inspected 25 feet upstream and 25 feet downstream of the SPP for the presence of sediment. Samples of water and sediment were collected at these locations. During the March 2009, the Drain was again inspected 25 feet upstream and downstream of the SPP, as well as 100 feet and 400 feet downstream. Sediment and water samples were collected at these four locations.

Analyses of water and sediment samples were performed at TestAmerica Laboratories in North Canton, Ohio. All samples were analyzed for PCBs by USEPA Method 608 (water) and USEPA Method SW-846 8082 (sediment). Data validation reports are provided in Appendix E.

Results will be discussed in Section 4.0.

3.6 5X9 SEWER INVESTIGATION

Semiannual entry/inspection of the section of the 5x9 Sewer beneath the Site footprint was instituted in September 2007. Water samples were collected from those laterals that exhibited flow at the time of the entry. The sampling program was expanded in April 2008 to include sampling of water from the 5x9 Sewer upstream and downstream of the Facility. In addition to collection of water samples from laterals, grab samples of water were collected from two upstream manholes and one downstream manhole as follows:

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i) monitoring station 002 located to the north of the Facility at Delavan Avenue (upstream location);
ii) monitoring station 003 located to the west of the Facility near the intersection of Cornwall Avenue and Northland Avenue (upstream location); and
iii) monitoring station 004 located to the south of the Facility on Colorado Street (downstream location).

Analyses of water samples were performed at TestAmerica Laboratories in North Canton, Ohio. Water samples were analyzed for PCBs by USEPA Method 608. Data validation reports are provided in Appendix E.

Results of the semiannual lateral and manhole sampling will be discussed in Section 4.0.

Due to the shutdown of active manufacturing operations at the Facility, many of the connections to the BSA 5x9 Sewer are likely no longer necessary. A survey of the laterals was completed in Spring 2009 to identify open laterals and determine which of those are obsolete and could potentially be abandoned. A log summarizing the observations from the 2007-2008 sampling events and the 2009 inspection is presented in Appendix F. Figure 3.5 provides a layout of the 5x9 Sewer and contributing laterals beneath the Facility.

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4.0 NATURE AND EXTENT OF CONTAMINATION

Samples of groundwater, oil, and sewer water and sediments were collected from within the Site and surrounding areas of the Facility during semiannual sampling activities conducted since November 2006 and during the Supplemental Investigations conducted in 2008-2009. A complete sample summary is presented in Table 4.1. Figures depict the average sample results obtained between November 2006 and April 2009.

Discussion of nature and extent will be presented by the following areas:

i) the Site proper, as defined in the Order;
ii) the Carrier Job Area, generally off-Site and located to the north;
iii) the South Yard, located off-Site and to the South;
iv) the Facility Perimeter; and
v) the 5x9 Sewer and Scajaquada Creek Drain.

Figure 4.1 shows the locations of the above investigation areas.

4.1 APPLICABLE REGULATORY STANDARDS

The current regulatory standards applicable to the Facility are:

i) Remedial Program Soil Cleanup Objectives, 6 NYCRR Part 375-6
ii) Water Quality Standards for Toxic and Other Deleterious Substances, 6 NYCRR Part 703.5
iii) Technical Guidance for Screening Contaminated Sediments, NYSDEC, January 1999

4.2 SITE

The Site, as defined in the August 31, 2006 Order, is based on the source areas of PCB-impacted oil beneath the manufacturing floor slab of the Facility that had been identified at the time of the Order. The Site boundaries are shown on Figure 4.1.

The majority of investigation conducted under the original RI was completed within the Site and around the Site perimeter. Based on comments received from the NYSDEC on the original RI Report and subsequent Supplemental Remedial Investigation Work Plan, additional soil borings and monitoring wells were installed within and around the Site

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perimeter in 2009. A total of six fill monitoring wells and three clay monitoring wells were installed to confirm the assumed limits of contamination as presented in the original RI Report. The locations of existing and newly installed monitoring wells associated with the Site are shown on Figure 3.1.

4.2.1 FILL

4.2.1.1 OIL PRESENCE

A complete round of phase checks was completed on all Facility monitoring wells in May 2009. Of 31 fill monitoring wells associated with the Site, 13 exhibited the presence of oil, with thicknesses ranging from 0.03 (CP-26) to 3.98 feet (M-1). The thickness of oil measured in the fill monitoring wells in May 2009, in-well oil thickness contours, and estimated limits of the presence of oil within the Site fill unit are presented on Figure 4.2.

The data presented on Figure 4.2 show that the presence of oil in the fill is primarily centered on the east side of the 5x9 Sewer, with the greatest in-well oil thickness being around CP-14 and M-1 (approximately 4 feet). Oil thickness diminishes radially moving outward from this area.

Oil has also been observed in fill wells T-1 (3.06 feet) and MW-103 (0.15 feet) located west of the 5x9 Sewer. Both wells are installed within the excavation for a former underground storage tank, Tank No. 11, which was closed in place in 1991. Fill monitoring wells surrounding the former excavation either do not exhibit oil or are dry. The oil observed in wells T-1 and MW-103 is believed to be residual oil from former Tank No. 11, is isolated to this location, and is not the result of migration of oil from the main fill source area located east of the 5x9 Sewer.

Overall, observations of oil presence are consistent with those made in the November 2006 RI Report, although in-well oil thickness has diminished since that time. This is likely the result of the bi-weekly oil recovery program that was instituted as an IRM between November 2005 and August 2008. Over 1,900 gallons of oil was removed from fill monitoring wells during that period. Oil volume estimates completed in February 2008 showed a decrease in the estimated volume of theoretically recoverable oil of 25 to 40 percent over a three-year period. This data was previously provided to the NYSDEC as part of the "Supplemental Interim Remedial Measures Work Plan," dated August 1, 2008.

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4.2.1.2 PCB PRESENCE

PCBs were detected in oil samples collected from 12 of the 13 fill wells that exhibited oil between 2006 and 2009. Oil sampling results are provided on Table 4.2. The remaining 18 fill monitoring wells either were dry, had such little oil present that there was insufficient volume to generate a sample, or exhibited only groundwater.

Average detected PCB concentrations in samples of subsurface oil ranged from 3.55 parts per million (ppm) at CP-8 to 292 ppm at CP-26. CP-26 is located east of the 5x9 Sewer between bays D-35 and E-36. Well CP-8 is located east of the 5x9 Sewer in Bay C-28. The difference in PCB concentrations is likely indicative of different sources of PCB presence in the subsurface. The area around CP-26 was historically occupied by heat treating operations, a process that historically employed quench oils that had high concentrations of PCBs. The next highest concentration of PCBs was 54 ppm at CP-28, located in the same general vicinity as CP-26. All other PCB concentrations in oil within the Site were less than 20 ppm. The results observed between 2006 and 2009 are consistent with historical results, with the exception of CP-28 which has shown a decrease in PCB concentration since the initial sampling result of 3,850 ppm in December 2004.

As discussed in Section 4.2.1.1 and shown on Figure 4.2, the greatest volume of oil is observed in the fill unit in wells CP-14 and M-1. The average concentrations of PCBs in oil sampled from these wells are 4.40 ppm and 5.70 ppm, respectively. The highest concentrations of PCB in oil do not occur in the area of greatest oil thickness, but rather around CP-26 (0.03 foot of oil) and CP-28 (1.98 feet of oil). Average concentrations of PCBs in samples of oil and groundwater collected from the Site fill unit from 2006 to 2009 are shown on Figure 4.3.

Groundwater is typically absent from the fill wells within the Site. The Facility structure limits infiltration of precipitation and inhibits recharge of the fill unit. Where groundwater is present, limited volume is available and is often insufficient for sampling. Only 5 fill monitoring wells within the Site have exhibited sufficient volume of groundwater for sampling during at least one event between 2006 and 2009. Results for monitoring wells CP-25, CP-31, and M-2 were non-detect for PCBs in groundwater. CP-23 and CP-24 exhibited average PCB concentrations in groundwater of 0.8 µg/L and 5.0 µg/L, respectively. CP-23 and CP-24 are typically either dry or exhibit only groundwater, although both wells have had limited oil present during one (CP-23) and two (CP-24) historical quarterly phase check measurement(s) obtained since 2006. Phase check data is provided in Appendix C. The presence of PCBs in groundwater at

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these locations is likely due to the historical oil presence. PCB results in groundwater are provided on Table 4.3.

4.2.2 CLAY

4.2.2.1 OIL PRESENCE

Phase measurements were collected from 30 clay monitoring wells associated with the Site in May 2009. Of these 30 wells, 23 exhibited the presence of oil with thickness ranging from 0.01 foot (MW-406, CP-11A, CP-17A, and CP-25A) to 3.58 feet (MW-305R). The thicknesses of oil measured in the clay monitoring wells in May 2009, in-well oil thickness contours, and an estimated limit of the presence of oil within the clay unit of the Site are presented on Figure 4.4. Although significant oil thickness was observed in monitoring well MW-400 (11.79 feet), this well is not included in the evaluation of the clay unit due to concerns that the well construction is compromised allowing oil from the fill unit to seep into the well.

The data presented on Figure 4.4 show that the presence of oil in the clay is primarily centered on the east side of the 5x9 Sewer, but does extend beneath the sewer to the west side. The greatest in-well thickness east of the 5x9 Sewer is observed at MW-305R (3.58 feet) and CP-14A (2.97 feet), while the greatest in-well thickness west of the 5x9 Sewer is observed at MW-19A (1.55 feet). The remaining wells west of the 5x9 Sewer all exhibit less than three inches of in-well free product thickness. The presence of oil in the clay unit is consistent with what was presented in the November 2006 RI Report.

Oil presence in the clay unit is observed in the upper clay, immediately below the fill/clay interface (addressed as part of the fill unit) and at the base of the clay formation extending to the clay/bedrock interface. As discussed in Section 2.3.1, a till layer appears intermittently between the clay and bedrock units. The deeper clay is also characterized by small silt-filled microfractures. It is likely that downward vertical migration occurs:

i) along the exterior of pits/tanks acting as preferential pathways and extending to the clay /bedrock interface;
ii) directly from deeper sources such as pits/tanks; or
iii) a combination of these scenarios.

Once oil reaches the more permeable till layer and clay/bedrock interface, migration will occur horizontally, with some upward vertical migration (i.e., absorbtion) into the

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clay. This theory is supported by the increasing presence of oil with depth within the microfractures present within the clay unit.

4.2.2.2 PCB PRESENCE

PCBs were detected in the 24 clay monitoring wells that exhibited oil between 2006 and 2009. Oil sampling results are provided on Table 4.2. Oil samples from CP-11A and CP-25A from June 2008 had insufficient oil volume for extraction and were analyzed as oil/water mixtures. The results are presented on Table 4.4, but are not discussed due to the lack of correlation with either the oil or groundwater matrix.

The average concentrations of PCBs detected in samples of subsurface oil ranged from 4.1 ppm at MW-400 to 19,600 ppm at CP-15A. Monitoring wells CP-11A, CP-17A, and MW-406 are in the same vicinity as CP-15A, located west of the 5x9 Sewer and in an area of the Site that was once part of historic heat treating operations. These wells had average PCB concentrations in oil ranging from 12,200 ppm to 13,850 ppm. Although the PCB concentrations at these locations are significant, there is little measured oil presence (less than or equal to 0.21 foot in May 2009). The concentrations of PCBs at CP-15A and the neighboring clay wells west of the 5x9 Sewer were two orders of magnitude higher than the next highest results of 323 ppm at CP-26A and 155 ppm at CP-19A. CP-19A and CP-26A are respectively located at the northern and southern limits of the historic heat treating operations. All remaining average PCB concentrations in oil are less than 20 ppm. Analytical results for PCBs in oil are consistent with historical results.

Only two clay monitoring wells within the Site exhibited sufficient volume of groundwater for sampling. Results for CP-12A and CP-25A had average concentrations of 0.132 µg/L and 2.3 µg/L, respectively. Four additional wells to the south and east of the Site exhibit only groundwater, but to date, have not produced sufficient groundwater to allow for sampling. Groundwater sampling results are provided on Table 4.3.

Average concentrations of PCBs in oil and groundwater samples collected from the Site clay unit between 2006 and 2009 are shown on Figure 4.5.

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4.2.3 BEDROCK

4.2.3.1 OIL PRESENCE

Phase measurements were collected from 18 bedrock wells within the Site in May 2009. Of the 18 wells, 8 exhibited the presence of oil with thicknesses ranging from less than 0.01 foot (MW-401B) to 3.8 feet (CP-11B). The thickness of oil measured in the bedrock monitoring wells in May 2009, in-well oil thickness contours, and estimated limits of the presence of oil within the Site bedrock unit are presented on Figure 4.6.

The data presented on Figure 4.6 shows that the presence of oil in the bedrock is primarily centered on the east side of the 5x9 Sewer, with the greatest thickness at CP-4B (3.56 feet), located at the northern edge of the Site where the Site and Carrier Job Area overlap. The oil plume appears to follow the slope of the bedrock from the Carrier Job Area southward toward the Site. The data suggests the presence of other sources of bedrock contamination to the north of the Site. A second area of oil presence is centered around CP-11B and CP-16B (3.8 feet and 2.04 feet, respectively) on the west side of the 5x9 Sewer. Oil presence surrounding these wells is limited in areal extent as evidenced by the absence of oil in wells CP-18B, CP-20B, CP-21B, and CP-22B, all within approximately 60 feet of CP-11B.

Oil presence within the Site bedrock appears to have decreased as evidenced by reduced in-well oil thickness observations when compared to the November 2006 RI Report. Since submission of the report in 2006, improvements have been made in the collection ability of the B-26 Coolant Pit Recovery System. Additionally, oil was regularly removed from CP-11B as part of the bi-weekly oil recovery IRM. Approximately 180 gallons of product was removed from CP-11B between November 2005 and August 2008, while over 1,450 gallons of oil has been recovered from the B-26 Coolant Pit Recovery System.

4.2.3.2 PCB PRESENCE

PCBs were detected in seven of the eight bedrock monitoring wells that exhibited oil between 2006 and 2009. Although CP-28B exhibits oil, PCB results in oil are non-detect. Oil sampling results are provided on Table 4.2. Oil samples from CP-14B, CP-18B, CP-20B CP-21B, and CP-23B during the June 2008 sampling event had insufficient oil volume for extraction and were analyzed as oil/water mixtures. The results are presented on Table 4.4, but are not discussed due to the lack of correlation with either

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the oil or groundwater matrix. The remaining bedrock wells within the Site exhibit only groundwater.

The average concentrations of PCBs detected in samples of subsurface oil ranged from 2.1 ppm at MW-401B to 15,500 at CP-20B. Monitoring wells CP-11B and CP-16B are in the same vicinity as CP-20B, located west of the 5x9 Sewer and within the area occupied by former heat treating operations. PCB concentrations at CP-11B and CP-16B were 5,150 ppm and 3,500 ppm, respectively. Beyond the former heat treating area, detected concentrations of PCBs in oil within the Site range from 8.7 ppm at CP-9B to 450 ppm at CP-4B.

Groundwater samples were obtained from 11 Site bedrock wells between 2006 and 2009. Average PCB concentrations ranged between non-detect at 0.065 µg/L at three locations (CP-14B, CP-23B, CP-27B) and 6.4 µg/L (CP-20B). Groundwater sampling results are provided on Table 4.3. Of the five bedrock wells that exhibited oil in June 2008 and were analyzed as oil/water mixtures, four of these wells exhibited only groundwater in March/April 2009 and were non-detect for PCBs at a detection limit of 0.065 µg/L (CP-14B, CP-18B, CP-21B, CP-23B). Furthermore, CP-27B historically exhibited oil and PCBs, yet when oil is absent, PCBs in groundwater are non-detect at 0.065 µg/L. The presence of PCBs at these locations appears to be directly related to the presence of oil.

One deep bedrock well is located within the Site. Monitoring well T-1B is installed as a 17-foot open corehole extending 19.5 feet into bedrock. The upper two feet of bedrock is cased to prevent downward migration of contaminants into the rock. Oil has not been observed at this location and oil and grease concentrations have been non-detect, yet PCBs are consistently detected at this location at an average concentration of 5.28 µg/L.

Average concentrations of PCBs in oil and groundwater samples collected from the Site clay unit between 2006 and 2009 are shown on Figure 4.7.

4.3 CARRIER JOB AREA

The Carrier Job Area is located north of the Site as shown on Figure 4.2. A network of floor trenches and subgrade pits, several extending to the top of bedrock, are located at the southern end of the Carrier Job Area and at the north end of the Site. These features are shown on Figure 4.8.

Oil and PCB presence were identified in monitoring wells in the fill, clay, and bedrock that were installed in this area during the initial RI; however, it was unclear whether the

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impacts were the result of migration from the Site or due to a previously unidentified source. A total of 15 boreholes, 1 fill monitoring well, 1 clay monitoring well, and 5 bedrock wells were installed to assess the extent of contamination associated with the Carrier Job Area.

4.3.1 FILL

4.3.1.1 OIL PRESENCE

Observations made during installation of boreholes in March 2008 in the Carrier Job Area included oil staining at some locations in the fill unit and limited presence of oily soils at the fill/clay interface. Soil observations are summarized on Figure 4.9 and in the boring logs provided as Appendix A. Oily soils were observed at MW-807 and BH-20 extending from immediately below the concrete floor surface to the fill/clay interface. Oil presence at such shallow depth is not the result of migration from the sources within the Site, but rather indicates the presence of a surficial source in the immediate vicinity of the impacted well/borehole.

A complete round of phase checks was completed on all Facility monitoring wells in May 2009. Of the six fill monitoring wells associated with the Carrier Job Area, four were found to be dry and two exhibited only water. Figure 4.10 shows the in-well oil observations for fill unit wells. Although oily soils and staining are present in the fill unit of the Carrier Job Area, free product is not present in the fill monitoring well network. The presence of the network of subgrade trenches and pits could act as preferential pathways for horizontal and vertical migration.

4.3.1.2 PCB PRESENCE

Due to the absence of oil or groundwater in the fill wells within the Carrier Job Area, limited PCB data is available. Although two monitoring wells exhibit groundwater within the Carrier Job Area, only MW-102 has sufficient water volume to sample. Average PCB concentrations at this location for the period from 2006 through 2009 are non-detect at a detection limit of 0.065 µg/L. Average concentrations of PCBs in oil and groundwater samples collected from the Carrier Job Area fill unit between 2006 and 2009 are shown on Figure 4.11.

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4.3.2 CLAY

4.3.2.1 OIL PRESENCE

Phase measurements were collected from five clay monitoring wells associated with the Carrier Job Area in May 2009. Of these five wells, four exhibited the presence of oil with thickness ranging from 0.01 foot (MW-805A) to 2.10 feet (MW-308). The appearance of oil at MW-805A is a new occurrence, only appearing at this location in March and May 2009. Figure 4.12 shows the in-well oil observations for clay unit wells within the Carrier Job Area.

Oil presence in the clay unit is typically observed within silt-filled microfractures present within the clay unit. At some locations, the appearance of oil within the silt microfractures extends from the fill/clay interface vertically through the clay unit to the top of bedrock, while at other locations, the appearance of oil within the silt microfractures is at the base of the clay unit above the bedrock. Vertical migration from the fill unit is indicated where oil-filled microfractures appear vertically throughout the entire clay unit, such as at BH-9, BH-11, BH-20 and CP-4B. The presence of a deep source (e.g., subgrade pit) or horizontal migration along the clay/bedrock interface is indicated where oil-filled microfractures appear at the base of the clay unit, such as at BH-12 and BH-14. The subgrade pits extending to the clay/bedrock interface and into the top of bedrock in the Carrier Job Area could serve as preferential pathways for oil to migrate through the clay unit. Once oil reaches the more permeable clay/bedrock interface, migration could occur horizontally, with some upward vertical migration (i.e., absorbtion) into the clay. This theory is supported by the increasing presence of oil with depth within the microfractures present within the clay unit.

4.3.2.2 PCB PRESENCE

PCBs were detected in three of the four clay monitoring wells that exhibited oil within the Carrier Job Area between 2006 and 2009. Oil sampling results are provided on Table 4.5. The average concentrations of PCBs detected in samples of subsurface oil ranged from 10.3 ppm at MW-308 to 70 ppm at CP-2A. PCBs were not detected in an oil sample collected from MW-805A in March 2009.

Average concentrations of PCBs in oil and groundwater samples collected from the Carrier Job Area clay unit between 2006 and 2009 are shown on Figure 4.13. Analytical results for PCBs in oil are consistent with historical results.

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Clay monitoring wells within the Carrier Job Area either exhibit oil or are dry, so groundwater samples were not obtained; however, groundwater samples from clay unit wells surrounding the Carrier Job Area to the north and east have been collected. Average PCB concentrations are either non-detect at a detection limit of 0.065 µg/L or indicate low-levels of PCBs in groundwater (0.083 µg/L at MW-107R). Groundwater sampling results are provided on Table 4.6. MW-805A to the west of the Carrier Job Area was either dry or had insufficient volume of groundwater to sample during the two sampling events after installation of the well in March 2008. During the March/April 2009 sampling event, oil was observed in the well, but PCBs were not detected in the oil.

4.3.3 BEDROCK

4.3.3.1 OIL PRESENCE

Phase measurements were collected from seven bedrock wells associated with the Carrier Job Area in May 2009. Of the seven wells, four exhibited the presence of oil with thicknesses ranging from 0.07 foot (MW-102B) to 3.56 feet (CP-4B). Figure 4.14 shows the in-well oil observations for bedrock wells within the Carrier Job Area. During the Supplemental RI activities in 2009, a bedrock well was proposed north of CP-1B at MW-807 to delineate the extent of oil presence to the north in the bedrock; however, due to the continuous presence of oil staining and oily soils in the overburden to the top of bedrock, installation of a bedrock well at this location was abandoned since it was determined that bedrock at this location would likely be impacted. Furthermore, there was limited access for a drill rig between the location of MW-807 and the north wall of the Facility structure. Consequently, it was determined that MW-6B, located approximately 135 feet northeast of MW-807 would serve as the northernmost monitoring point for the Carrier Job Area. MW-6B is part of the perimeter monitoring well network as discussed later in Section 4.5.3.

The data presented on Figure 4.14 shows that the presence of oil in the bedrock is primarily centered on the east side of the 5x9 Sewer, with the greatest thickness at CP-4B (3.56 feet), located at the southern end of the Carrier Job Area where the Carrier Job Area and the Site overlap. Significant in-well oil thickness is also observed at CP-1B (2.72 feet). As shown on Figures 3.2 and 3.4, both the slope of the bedrock and the groundwater gradient are generally southward. Migration of free product from the Site to the northern end of the Carrier Job Area would oppose both the slope of the bedrock and the bedrock groundwater gradient and therefore is deemed unlikely. The presence of oil at CP-1B is more likely due to a source area in the vicinity of this well. This theory

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is further supported by the presence of oil staining and oily soils from below the floor slab through the fill and clay units to the top of bedrock at MW-807. MW-807 is located approximately 115 feet north (upgradient) of CP-1B.

Oil presence in the bedrock has been delineated by wells MW-6B, MW-806B, and MW-808B to the north, west, and east, respectively, which do not exhibit the presence of oil.

4.3.3.2 PCB PRESENCE

PCBs were detected in the four bedrock monitoring wells within the Carrier Job Area that exhibited oil between 2006 and 2009. Oil sampling results are provided on Table 4.5. The average concentrations of PCBs detected in samples of subsurface oil ranged from 2.3 ppm at MW-102B to 450 ppm at CP-4B.

There are three perimeter bedrock wells surrounding the Carrier Job Area to the north (MW-6B), east (MW-808B) and west (MW-806B). MW-6B was installed in 2008, while MW-806B and MW-808B were installed in 2009. Groundwater samples were obtained from the three bedrock wells in 2009. PCB concentrations at all three locations are non-detect at 0.065 µg/L. Groundwater sampling results are provided on Table 4.6. The data indicates that oil and PCBs are delineated to the north, east, and west of the Carrier Job Area.

Average concentrations of PCBs in oil and groundwater samples collected from the Carrier Job Area bedrock unit between 2006 and 2009 are shown on Figure 4.15.

4.4 SOUTH YARD

The South Yard is located south of the Site and outdoors as shown on Figure 4.3. Oil and PCB presence were identified in clay monitoring well MW-404 within the South Yard. A neighboring fill well, MW-405, does not exhibit oil and PCB concentrations in groundwater are consistently non-detect at a detection limit of 0.065 µg/L. Due to the distance between the Site and MW-404, it was suspected that impacts at this well were unrelated to the Site. A total of two boreholes and nine clay monitoring wells were installed to assess the extent of contamination in the South Yard.

Four soil borings were installed surrounding MW-404 in April 2008. The borings were extended to the base of the clay unit. Oil, oily soils, or oil staining were not observed at

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any of the locations, so monitoring wells were installed (MW-801A through MW-804A). During development of the newly installed wells, oil was observed entering the wells at locations MW-802A and MW-803A. Due to the appearance of oil at these locations, additional soil boring and monitoring well installation was proposed for February 2009. Two boreholes and five monitoring wells were installed at that time to delineate the extent of contamination at the base of the clay unit.

4.4.1 FILL

There are two fill wells installed in the South Yard. MW-4 is located just north of the scrap pits, while MW-405 is located in the center of the yard adjacent to clay well MW-404. Neither MW-4 nor MW-405 exhibits oil. Groundwater samples from both wells are continually non-detect for PCBs at a detection limit of 0.065 µg/L. Groundwater data is summarized on Table 4.7 and depicted on Figure 4.16. Based on the absence of oil and PCBs in the fill unit, historical industrial activities in the South Yard have not impacted groundwater within the fill.

4.4.2 CLAY

4.4.2.1 OIL PRESENCE

As stated in Section 4.4, four soil borings were originally installed around MW-404 in 2008 to delineate the extent of oil presence in that well. Although oil was not observed in fill or clay soils during drilling, oil was observed entering MW-802A and MW-803A during well development. During the 2009 field activities, oil was observed at the clay bedrock interface at soil boreholes BH-09-1 and BH-09-5. The locations of these boreholes are shown on Figure 4.1. Monitoring wells were not installed at these locations as the goal of the investigation was to delineate the extent of oil contamination. The boreholes were abandoned and relocated further to the west (MW-812A) and south (MW-813A).

Silt-filled microfractures are present within the clay unit in the South Yard, although oil was not observed in these features. Only two locations SB-09-1 and SB-09-5, had oil observed during drilling and these observations were made at the clay/bedrock interface. Phase measurements were collected from 14 clay monitoring wells associated with the South Yard in May 2009. Of the 14 wells, 3 exhibited the presence of oil with thickness ranging from 0.5 foot (MW-803A) to 0.89 foot (MW-404 and MW-802A). Figure 4.17 shows the in-well oil observations for clay unit wells in the South Yard. Both

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boreholes SB-09-1 and SB-09-5, as well as the three monitoring wells that exhibit oil are all located within the same area of groundwater depression as shown on Figure 3.3.

The data shown on Figure 4.17 indicates the extent of oil presence within the South Yard has been delineated. Oil appears within the cluster consisting of 3 monitoring wells and two soil borings. Points to the north (MW-4A, MW-811A, and MW-810A), east (MW-801A, MW-804A), west (MW-809A, MW-812A), and south (MW-2A, MW-813A) of this cluster do not exhibit oil. Furthermore, due to the presence of clean clay wells between the Site and the South Yard, the presence of oil in the impacted wells is likely from a source area more proximate to the South Yard and not due to migration from the Site.

4.4.2.2 PCB PRESENCE

PCBs were detected in the three clay monitoring wells that exhibited oil within the South Yard between 2006 and 2009. Oil sampling results are provided on Table 4.8. The average concentrations of PCBs detected in samples of subsurface oil ranged from 3.9 ppm at MW-802A to 240 ppm at MW-803A. In addition, a sample of oil was collected from SB-09-1 prior to abandoning the borehole. PCBs were observed at a concentration of 122 ppm.

Groundwater samples were obtained from the 11 clay wells associated with the South Yard that exhibited only groundwater between 2006 and 2009. Average PCB concentrations ranged between non-detect at 0.065 µg/L at seven locations and 0.067 µg/L (MW-811A). Three monitoring wells were non-detect at a detection limit of 0.32 µg/L due to the need for dilution of the samples to overcome interference. One sample for MW-2A from June 2008 was excluded from the average calculation due to the inconsistency of this result with previous and subsequent sampling rounds. Typically, groundwater from MW-2A is non-detect for PCBs at a detection limit of 0.065 µg/L; however, the June 2008 event saw a significant detection of 3.3 µg/L. Because the result is so disparate from the other results for this monitoring well and has not been duplicated, the result is assumed to be in error. Groundwater sampling results are provided on Table 4.7.

Average concentrations of PCBs in oil and groundwater samples collected from the South Yard clay unit between 2006 and 2009 are shown on Figure 4.18.

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4.4.3 BEDROCK

4.4.3.1 OIL PRESENCE

Monitoring well MW-4B was installed in April 2008 to serve as the southernmost perimeter monitoring point in bedrock. Oil was observed entering the well during the recovery test, so MW-1B was installed further to the south. In February 2009, MW-2B was installed to confirm that oil is not migrating through the bedrock toward the Scajaquada Interceptor. MW-2B is cased through the upper 15 feet of bedrock and is installed as a 5-foot open corehole from 27.9 to 32.9 feet below grade.

Phase measurements were collected from the three bedrock wells associated with the South Yard in May 2009. Only MW-4B exhibited oil at a thickness of 0.69 foot. Figure 4.19 shows the in-well oil observations for bedrock wells associated with the South Yard.

4.4.3.2 PCB PRESENCE

PCB samples were collected from monitoring well MW-4B on three occasions since installation of this well. Concentrations of PCBs for these three events were non-detect at 10 ppm, 390 ppm and 6.1 ppm. Oil sampling results are provided on Table 4.8. The detection of 390 ppm is inconsistent with the results of the other sampling events.

Groundwater samples were obtained from bedrock wells MW-1B and MW-2B. Average PCB concentrations at MW-1B were non-detect at a detection limit of 0.065 µg/L. MW-2B was installed in February 2009, so only one groundwater sample has been collected to date. PCBs were detected in this sample at a concentration of 0.14 µg/L; however, oil is not present. MW-2B will continue to be monitored to determine if this result is valid. Groundwater sampling results are provided on Table 4.7.

Average concentrations of PCBs in oil and groundwater samples collected from the South Yard bedrock unit since installation of the bedrock wells are shown on Figure 4.20.

4.5 FACILITY PERIMETER

One additional clay monitoring well and six additional bedrock monitoring wells were installed around the Facility perimeter in 2008/2009 to supplement the existing

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perimeter monitoring well network and ensure that impacts from the Site and Facility are not leaving the property. Perimeter monitoring wells are shown on Figure 4.21. Select perimeter monitoring wells were sampled in June 2008 for TCL/TAL parameters.

4.5.1 FILL

The perimeter fill monitoring well network consists of monitoring wells MW-408R to the east; MW-205, MW-204, and MW-3 to the west, and MW-4 and MW-405 to the south. A fill well was not installed to the north of the Facility at the MW-6A/6B cluster during the 2008 drilling program due to the absence of fill in this direction.

Historically, the perimeter fill monitoring network has not exhibited oil. Average PCB concentrations in groundwater have ranged from non-detect at five of the six locations to 0.075 µg/L at MW-3. The data indicates that Site contaminants above groundwater criteria are not migrating from the Property through the fill unit. Groundwater data for the perimeter wells is presented on Table 4.9. Figure 4.22 depicts the average PCB concentrations in perimeter fill wells between 2006 and 2009.

In March 2009, free product was observed at MW-205 located in the northwest corner of the Facility in a maintenance garage. The product was red in appearance and had a distinct diesel-like odor. Historically, MW-205 had never exhibited free product. A sample of the product was collected and analyzed for PCBs and petroleum fingerprint. PCBs were non-detect in the sample at a detection limit of 1 ppm. The fingerprint identified the product as a diesel range organic. An inspection of the maintenance garage identified a floor trench and two pits, one along the east wall and one along the south wall, which also contained product. The layout of the maintenance garage is shown on Figure 4.23. Samples were collected from each of these structures. Results for the product samples from the floor trench and south pit were consistent with the results for the product from MW-205, while the results for the product from the east pit indicated a petroleum product with higher viscosity than that observed for the other samples from the maintenance garage. Results of the free product testing are presented on Table 4.10. The presence of free product at MW-205 is attributable to a historical release of diesel fuel in the vicinity of the monitoring well, possibly from the pit along the south wall of the maintenance garage. The presence of diesel fuel in this area of the Facility is unrelated to the Site and the RI/FS program.

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4.5.2 CLAY

The perimeter clay monitoring well network consists of monitoring wells MW-6A to the north; MW-106, MW-107R, and MW-408R to the east; MW-300A; to the west, and MW-4A, MW-1A, MW-2A, and MW-3A to the south. None of the perimeter clay monitoring wells exhibits oil. Average PCB concentrations in groundwater range from non-detect at eight of the nine locations to 0.083 µg/L at MW-107/MW-107R. The data indicates that Site contaminants above groundwater criteria are not migrating from the Property through the clay unit. Groundwater data for the perimeter wells is presented on Table 4.9. Figure 4.24 depicts the average PCB concentrations in perimeter clay wells between 2006 and 2009.

As noted in Section 4.4.2.2, one sample for MW-2A from June 2008 was excluded from the average calculation due to the inconsistency of this result with previous and subsequent sampling rounds. Typically, groundwater from MW-2A is non-detect for PCBs at a detection limit of 0.065 µg/L; however, the June 2008 event saw a significant detection of 3.3 µg/L. Because the result is so disparate from the other results for this monitoring well and has not been duplicated, the result is assumed to be due to cross contamination.

4.5.3 BEDROCK

The perimeter bedrock monitoring well network is shown on Figure 4.25 and is made up of MW-6B to the north; MW-808B and MW-409B to the east; MW-5B to the west; and MW-1B and MW-2B to the south. Oil is not present in any of the perimeter bedrock wells.

Average PCB concentrations in groundwater range from non-detect at five of the six locations to 0.14 µg/L at MW-2B. As discussed in Section 4.4.3.2, MW-2B was installed in February 2009 and has only been sampled once since installation. A duplicate sample collected from MW-5B in June 2008 indicated a PCB concentration of 0.56 µg/L, although the original sample was non-detect at a detection limit of 0.065 µg/L. Because of the disparity, the samples were flagged as estimated and are questionable. PCB concentrations for the two groundwater monitoring rounds since June 2008 have been non-detect at a detection limit of 0.065 µg/L. Groundwater data for the perimeter wells is presented on Table 4.9. Figure 4.25 depicts the average PCB concentrations in perimeter clay wells between 2008 and 2009.

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4.5.4 TCL/TAL RESULTS

Analyses for the Target Compound List (TCL) of organic compounds and the Target Analyte List (TAL) of inorganic compounds were conducted on groundwater samples from select perimeter monitoring wells during the June 2008 sampling event. TCL/TAL analyses were run for fill wells MW-4, MW-204, and MW-409; clay wells MW-4A, MW-300A, and MW-408; and bedrock wells MW-1B, MW-5B, and MW-409B. A summary of the TCL/TAL data is provided on Table 4.11.

Results for volatile and semivolatile parameters were non-detect at all locations with the exception of MW-409B. Cis-1,2-Dichloroethene and vinyl chloride were detected in the groundwater sample at concentrations of 11 µg/L and 31 µg/L, respectively. These compounds are breakdown products from the degradation of trichloroethene (TCE), although no TCE was detected. Chlorinated solvents are a class of compounds that were eliminated from concern for the Site in the early stages of investigation associated with the sale of the property to AAM. Discussion on the early investigation of the Site and the basis for establishing the contaminants of concern was provided to the NYSDEC in the "Summary of Historical Confidential Documents," dated September 2006.

PCBs were detected at only one location, MW-5B, in the duplicate sample, but not in the original sample, as discussed in Section 4.5.3. PCB results since June 2008 have been non-detect at a detection limit of 0.065 µg/L for MW-5B.

Some metals parameters were observed above applicable New York State groundwater criteria; however, the parameters and concentrations are not uncommon for industrial facilities.

4.6 5X9 SEWER

Semiannual inspections of the 5x9 Sewer beneath the Site footprint have been conducted since September 2007. The observations noted among these inspections were consistent. Oil infiltration is present intermittently between Manholes E-24 and E-37 below the footprint of the Site, primarily along the east wall of the sewer. Infiltration is not continuous below the entire site, but rather occurs sporadically along the seams between the brick arch/floor and the stone bench; through individual points in the brick mortar, typically within one foot above the stone bench; and from around laterals. The area of most pronounced infiltration is below Bays E-28, E-29, and E-30. Limited oil infiltration occurs along the west wall of the Sewer below Bay E-30.

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Oil has been observed in laterals from the east below Bay 28 (identified as #41 on Figures 3.5 and 4.26) and Bay 34 (identified as #45 on Figures 3.5 and 4.26) and in blind stubs along the east wall below Bays E-27 and E-32. It is suspected that the presence of oil in laterals is due to infiltration from surrounding soils into the laterals through joints or damaged areas. The laterals noted are both fed by roof conductors.

The most notable change between the inspections completed since 2007 and those reported in the 2006 RI Report was the absence of standing oil between BaysE-34 and E-36 within the Site footprint. Recent observations have noted the presence of sheen or staining, but not the small pools of standing oil as observed during the 2004 sewer entries. Since issuance of the RI Report in November 2006, the following factors are notable:

i) removal of oil from Site monitoring wells was conducted between November 2005 and August 2008. Over 2,350 gallons of oil were removed from Site monitoring wells.

ii) improvements were made in the operation of the B-26 Coolant Pit recovery system including optimization of the float mechanisms to maintain a consistent and lower water level and separation of the effluent from the system for treatment for PCBs. Improvements were completed in 2007. As of July 1, 2009, 1,480 gallons of recovered oil have been removed from the B-26 sump.

iii) manufacturing operations at the Facility ceased in December 2007 resulting in decreased flow/discharges to the 5x9 Sewer.

The entire length of the 5x9 Sewer below the Facility was inspected in March/April 2009. Oil infiltration is not present south of the Site. The section of the 5x9 Sewer from Manhole E-37 to the Colorado Street manhole is observed to be in good condition with no infiltration of oil and little to no groundwater infiltration.

Limited oil infiltration is present north of the Site. The section of 5x9 Sewer from Manhole E-24 to Manhole E-11 is in good condition with no oil infiltration through the brick mortar or seams. Traces of oil were observed within blind stubs along the east wall of the 5x9 Sewer below Bays E-16 and E-17. Oil was also observed within an open lateral coming from the west below Bay E-12, although no flow was present at the time of the entry. North of Manhole E-11, seepage of what appeared to be coolant, a whitish mixture of water-soluble oil, was observed at the base of the sewer wall in Bay E-3 along both the east and west walls of the 5x9 Sewer and in Bays E- 6 and E-9/10 along the east wall of the 5x9 Sewer. In addition, oil infiltration was observed along the east wall of the 5x9 Sewer below Bays E-6 and E-7. The inspection log is provided as Appendix F.

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Water samples were collected from active laterals that exhibited flow at the time of the sewer entries. Table 4.12 presents a summary of this data. The sample locations are noted on Figure 4.26. Beginning in April 2008, water samples were also collected from three manholes along the 5x9 Sewer: two upstream of the Facility at Delavan Avenue (north) and Cornwall Avenue (west); and one downstream of the Facility at Colorado Street (south). The data from the manhole sampling is also summarized on Table 4.12.

PCBs have been detected in water samples collected from four laterals within the Site between 2007 and 2009. Average PCB concentrations range from non-detect at a detection limit of 0.065 µg/L (discharge from the former industrial waste treatment plant at Bay E-36) to 1.5 µg/L (discharge from roof conductors at Bay E-34). Analysis for oil and grease is also performed and is typically detected in samples exhibiting PCBs. The coincident detections of PCBs and oil and grease suggest that the presence of PCBs in water within the 5x9 Sewer may be due to the presence of PCB-containing oils.

The average concentration of PCBs in sewer water leaving the Facility since April 2008 is 0.131 µg/L. This concentration is based on the concentrations observed in the semiannual sewer sampling conducted since the cessation of manufacturing operations. The average PCB concentration reported in the 2006 RI Report was higher (0.175 µg/L); however, this was while the facility was operating and prior to implementation of the improvements noted earlier in this section.

4.7 SCAJAQUADA CREEK DRAIN

Sampling of water and sediment from the Scajaquada Creek Drain was completed on two occasions. The first event was conducted in April 2008 and consisted of sampling at two locations: 25 feet upstream of the 5x9 Sewer overflow to the drain and 25 feet downstream of the overflow. PCBs were not detected in the upstream sediment or water samples, or in the downstream sediment sample. The downstream water sample exhibited PCBs at a concentration of 0.083 µg/L; however, overflow was not occurring at the time of the sampling. The water and sediment results are summarized on Tables 4.13 and 4.14, respectively.

The second sampling event was conducted in March 2009. Water and sediment samples were collected from four locations: 25 feet upstream of the overflow, 25 feet downstream, 100 feet downstream, and 400 feet downstream. The locations are shown on Figure 4.27. PCBs were not detected in the upstream water and sediment samples, or in the water and sediment samples collected at the 100 feet downstream location. PCBs were detected in the water sample collected 400 feet downstream at a concentration of

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0.091 µg/L. PCBs were also detected in the duplicate sediment sample collected at the 25 feet downstream location at a concentration of 0.62 ppm; however, the results were non-detect in the original sample at a detection limit of 0.53 ppm. PCBs were not detected in the sediments collected at 100 feet and 400 feet downstream. Overflow was not occurring at the time of the sampling.

The absence of PCBs in the sediment samples from 2008 and 2009 suggests that the potential presence of PCBs in the overflow from the 5x9 Sewer is not having a deleterious impact on sediments within the Scajaquada Creek Drain. Although PCBs were detected in water samples collected downstream of the overflow, the presence cannot be attributed to the 5x9 Sewer since overflow conditions were not occurring at the time of sampling. Furthermore, sampling cannot be conducted during an overflow event at locations representative of the 5x9 Sewer overflow due to the limited access for remote sampling and the safety concerns associated with having personnel enter the drain structure during significant storm events. Due to the number of contributing sewers to the Scajaquada Creek Drain, sampling further downstream than 400 feet of the 5x9 Sewer overflow would not be representative of impacts from the 5x9 Sewer.

4.8 IMPACTS TO SCAJAQUADA CREEK

Model simulations of overflow conditions for the 5x9 Sewer and Scajaquada Creek Drain were performed as part of the RI/FS using the XP-SWM version 10.6.2 model engine. In 2006, calculations of PCB concentration were performed manually; however, CRA recently received a copy of the Long Term Control Plan (LTCP) model from BSA. The model has the capability to simulate the transport of conservative substances such as PCBs from a point of origin to an endpoint in the system. Utilizing the model provides the most accurate means available to estimate PCB loading and temporal concentrations in Scajaquada Creek at Forest Lawn Cemetery (BSA CSO #053). The model simulates operation of the entire BSA system on an annual basis and has been calibrated based on extensive flow monitoring by BSA. It is used as the basis for determining system improvements for compliance with the USEPA LTCP for BSA.

In addition to using the model to predict downstream concentrations, other changes since 2006 include:

i) use of an average PCB concentration in the 5x9 Sewer effluent of 0.131 micrograms per liter (µg/L) (131 parts per trillion [ppt]) based on the results observed at the Colorado Street manhole during semiannual sampling conducted since April 2008. This concentration is lower that the average concentration

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observed in 2003 (175 ppt) and reflects changes made to improve conditions at the Site as well as the cessation of manufacturing operations at the Facility.

ii) improved data on dry weather flows. The dry weather flows in the 2006 RI Report were calculated based on an approximate depth measurement during a single day that was believed to be a dry weather day. The Manning equation was used to convert depth to flow; however, this method does not statistically calculate dry weather flow per USEPA and NYSDEC recommendations. A published report from 1976 (Leonard S. Wegman, Inc.) provides the dry weather flow based on a service population of 7,800 people. Because the population of Buffalo has decreased from 463,000 in 1970 to a current estimate of 282,000, the dry weather flow from the 1976 report was adjusted accordingly. Based on this data, a dry weather flow of 3.36 cubic feet per second (cfs) is estimated for the 5x9 Sewer. The LTCP uses a dry weather flow of 2.78 cfs, which is calibrated based on post-2000 flow data. Discussions with BSA indicate that the 5x9 Sewer service area may have an even greater population drop; therefore, use of the lower number (2.78 cfs) appears reasonable.

iii) the original version of XP-SWMM used to run the BSA model for the "System-Wide Long Term Control Plan for CSO Abatement" (Malcolm Pirnie, Inc. 2004), is no longer available. The latest version of XP-SWMM (10.6.2) was used; however, when using a different modeling engine, the results may be different from those reported in the 2004 LTCP. Use of the newer modeling engine results in an increase in total flow at SPP 337 of 2.6 percent when compared to flows published in 2004, and an increase in total flow at CSO #053 of 2.2 percent compared to the 2004 published data.

The percentage of PCB load conveyed to BSA via the Scajaquada Interceptor was calculated and compared with the load conveyed to the Scajaquada Creek Drain. BSA's XP-SWMM model was used to predict total load and flow. Using the model results for flow and loading, 99.55 percent of the total PCB load from the 5x9 Sewer is conveyed to BSA via the Scajaquada Interceptor. Less than 1 percent of the total load within the 5x9 Sewer (0.45 percent) is conveyed to the Scajaquada Creek Drain through overflow events. The full calculations and a summary of the model outputs are provided in Appendix G.

In addition, the temporal concentration of PCBs in Scajaquada Creek were calculated. The temporal concentration represents the average annual concentration to Scajaquada Creek based on total load and total volume of flow. BSA's XP-SWMM model was used to predict total load and flow. Total flow was adjusted to account for periods of dry weather since the model only predicts wet weather flow equivalent to 3,867 hours per year. The total flow and loading were adjusted to account for 8,760 hours per year and

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incorporated a dry weather flow within the Scajaquada Creek Drain of 2.33 cfs. The baseline conditions were modeled assuming a dry-weather PCB concentration within the 5x9 Sewer of 0.131 µg/L. The resulting temporal concentration in Scajaquada Creek at Forest Lawn Cemetery is 3.24 x 10^{-5} µg/L (0.0324 ppt). The limits for PCBs in a Class C waterway are 1.2x10^{-4} µg/L (0.12 ppt) for protection of wildlife and 1x10^{-6} µg/L (0.001 ppt) for the protection of human consumption of fish. The water in the Scajaquada Creek Drain meets the wildlife criterion, but exceeds the human health criterion.

For comparison purposes, the temporal concentration in Scajaquada Creek at Forest Lawn Cemetery was calculated assuming a concentration equal to or less than 0.065 µg/L, the generally accepted analytical instrument detection limit for PCBs in water. At a concentration equal to or less than 0.065 µg/L in the 5x9 Sewer, the temporal concentration in Scajaquada Creek would be equal to or less than 1.61 x 10^{-5} µg/L (0.0161 ppt). Even at a non-detectable concentration of PCBs, there would still be the potential for exceedance of the human health criterion.

There are several very conservative factors built into the analysis above. First, the temporal average PCB concentration calculated above assumes that the bioaccumulation rate of PCBs by fish is the same, irrespective of flow. In fact, fish bioaccumulation of PCBs is almost entirely (i.e., 90 percent to 95 percent) via the food chain and fish do not feed or feed very little during major spates. The bioaccumulation potential during the infrequent overflow periods is 10 to 20 times less than estimated by the simple temporal average. Secondly, New York State's PCB water quality criteria are not applicable to turbid CSO water. These criteria are based on assumptions that pertain to the extremely dilute, particle poor Great Lakes. For example, New York State's water quality criteria for PCBs assume water concentrations of particulate organic carbon concentrations of only 0.04 mg/L. Under this assumption, two thirds of the PCBs measured in the water column were assumed to be dissolved and bioavailable. However, urban CSO water is generally turbid with suspended sediments and organic carbon. Bioavailability of PCBs in the CSO water is likely to be orders of magnitude lower than the assumption underlying the water quality criteria, meaning the criteria are orders of magnitude too low. Lastly, the more restrictive human health criterion assumed daily consumption of 33 grams of fish per day over a lifetime. The affected area - Scajaquada Creek downstream of Forest Lawn Cemetery - is simply too small and too unproductive for this assumption to be realistic, even as a worst-case assumption. The impacts of these three conservative factors would be expected to compound, and consequently, the potential risks to humans and wildlife would be remote.

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Therefore, under these conditions with the conservative assumptions made, the 5x9 Sewer presents no impact to the Scajaquada Creek Drain.

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5.0 SUMMARY AND CONCLUSIONS

The characterization of the nature and extent of the subsurface presence of PCB-containing oil and impacted environmental media is summarized in the following subsections.

5.1 SITE

The nature and extent of impacts to the Site are summarized as follows:

- Oil presence in the fill unit within the Site occurs primarily east of the 5x9 Sewer and in a limited area west of the 5x9 Sewer around the location of former Tank 11.
- Measured in-well oil thickness in the fill unit has diminished since November 2006 and is attributed to recovery efforts conducted from 2005 through 2008.
- Oil presence in the fill unit within the Site has been defined.
- PCB concentrations in oil within the fill unit are typically less than 50 ppm.
- PCB concentrations greater than 50 ppm in oil are present in a small area east of the 5x9 Sewer surrounding monitoring wells CP-26 and CP-28.
- Groundwater is typically absent within the fill unit.
- Oil is present in the clay unit within the Site on both the east and west sides of the 5x9 Sewer.
- Oil presence in the clay unit is typically encountered in small, silt-filled microfractures in the lower portion of the clay unit.
- Oil presence in the clay unit is defined to the east, south, and west, but merges with the plume within the Carrier Job Area to the north.
- PCBs are present in oil within the clay unit with the highest concentrations in wells located in portions of the Site that were once part of historic heat treating operations.
- Within the clay unit, the highest concentrations of PCBs are found in wells with the least oil presence, minimizing the remedial efforts anticipated.
- Groundwater presence within the Site clay unit is limited, although PCBs are present at concentrations exceeding the standard for Class GA (potable) groundwater.
- Oil is present in the bedrock within the Site on both the east and west sides of the 5x9 Sewer.
- Oil presence in the bedrock is defined to the east, south, and west, but merges with the plume within the Carrier Job Area to the north.

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- Measured in-well oil thickness in the bedrock unit has diminished since November 2006 and is attributed to recovery efforts conducted from 2005 through 2008, as well as improvements to the B-26 Coolant Pit Recovery System.
- PCBs are present in oil within the bedrock unit with the highest concentrations in wells located in portions of the Site that were once part of historic heat treating operations.
- PCBs are present in bedrock groundwater at some locations within the Site at concentrations exceeding the standard for Class GA (potable) groundwater.

5.2 CARRIER JOB AREA

The nature and extent of impacts in the Carrier Job Area are summarized as follows:

- Oily soils are present in the fill unit of the Carrier Job Area, although free product is not present in the fill monitoring well network.
- Oil and groundwater are absent within fill monitoring wells within the Carrier Job Area, so PCB data is unavailable.
- Groundwater in a fill well east of the Carrier Job Area does not exhibit PCBs.
- Oil is present in the clay unit within the Carrier Job Area on both the east and west sides of the 5x9 Sewer.
- Oil presence in the clay unit is typically encountered in small, silt-filled microfractures in the lower portion of the clay unit.
- Subgrade pits extending to the clay/bedrock interface and into the top of bedrock in the Carrier Job Area could serve as preferential pathways for migration through the clay unit.
- PCBs are present in oil within the clay unit east of the 5x9 Sewer.
- Neither oil nor PCBs were detected in groundwater wells located north and east of the Carrier Job Area indicating that impacts are bounded in these directions.
- Oil and PCBs are present in bedrock wells within the Carrier Job Area east of the 5x9 Sewer.
- The presence of oil and oily soils at CP-1B and to the north at MW-807 indicates the presence of a secondary source area north of the Carrier Job Area.
- Neither oil nor PCBs were detected in bedrock groundwater wells located north, east, and west of the Carrier Job Area indicating that impacts are bounded in these directions.

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5.3 SOUTH YARD

The nature and extent of impacts in the South Yard are summarized as follows:

- Neither oil nor PCBs are present in fill unit groundwater in the South Yard.
- Oil is present in clay wells within the center of the South Yard on both the east and west sides of the 5x9 Sewer.
- The highest concentration of PCBs in oil within the clay unit was detected west of the 5x9 Sewer (240 ppm at MW-803A).
- Oil and PCB impacts in the clay unit are bounded in all directions.
- Due to the presence of clean clay wells between the Site and the South Yard, the presence of impacts within the South Yard is likely from a proximate source area and not from migration from the Site.
- PCBs are not present in groundwater in the South Yard clay unit at concentrations exceeding the standard for Class GA (potable) groundwater.
- Oil and PCBs are present in bedrock adjacent to the former scrap pits at the northern limit of the South Yard.
- PCBs are present in the deep bedrock groundwater well at the southern limit of the South Yard at a concentration exceeding the standard for Class GA (potable) groundwater.

5.4 FACILITY PERIMETER

The nature and extent of impacts at the facility perimeter are summarized as follows:

- Oil is not present in perimeter fill wells located downgradient of the Site.
- Free product has been detected in a fill well located upgradient of the Site at the northeast corner of the Facility; however this presence is due to a localized release.
- Oil is not present in perimeter clay wells.
- PCBs in groundwater in perimeter clay wells are either non-detect or at concentrations below the standard for Class GA (potable) groundwater.
- Oil is not present in perimeter bedrock wells.
- PCBs are present in groundwater at the deep bedrock perimeter well (MW-2B) at concentrations above the standard for Class GA (potable) groundwater. This is based on data from a single monitoring event and requires further sampling before a conclusion on impacts can be drawn.

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- Low levels of cis-1,2-dichloroethene and vinyl chloride above the standard for Class GA (potable) groundwater were detected in bedrock at the east facility perimeter well (MW-409B).

5.5 5X9 SEWER

The nature and extent of impacts to the 5x9 Sewer are summarized as follows:

- Infiltration of PCB-containing oil occurs sporadically through the sewer walls and around laterals beneath the Site.
- PCBs are present in incoming flow to the 5x9 Sewer from laterals beneath the Site.
- Oil infiltration is not observed south of the Site.
- Limited oil infiltration is present north of the Site through laterals and along the sewer walls.
- The concentration of PCBs in dry weather flow within the 5x9 Sewer has decreased since 2006.

5.6 SCAJAQUADA CREEK DRAIN

The nature and extent of impacts to the Scajaquada Creek Drain and downstream portions of Scajaquada Creek are summarized as follows:

- PCBs were detected in water samples within the Scajaquada Creek Drain downstream of the 5x9 Sewer overflow on two occasions; however, these were not during overflow conditions and are likely not indicative of impacts from the 5x9 Sewer.
- PCBs were not detected in sediment within the Scajaquada Creek Drain.
- Concentrations of PCBs were predicted for water in the downstream portion of Scajaquada Creek at a concentration of 0.0324 ppt, meeting the criterion for protection of wildlife, but exceeding the criterion for protection of human consumption of fish.

5.7 CONCLUSIONS

The results of the investigations performed at the Site demonstrate that PCB-containing oil is present beneath the Site in the fill, clay, and shallow bedrock units. Impacts to the

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subsurface in the Carrier Job Area and South Yard exist, but appear to be unrelated to contamination within the Site. The results further show that impacts to environmental media (soil and groundwater) are limited and are a result of contact between the media and PCB-containing oil. The extent of PCB containing oil has been defined. The 5x9 Sewer could serve as a pathway for off-Site transport of PCBs; however the impacts, if any, would be negligible.

The data collected and presented in this report are sufficient to complete a Feasibility Study to address contamination from the Site. A Feasibility Study has been completed and the results are presented under separate cover.

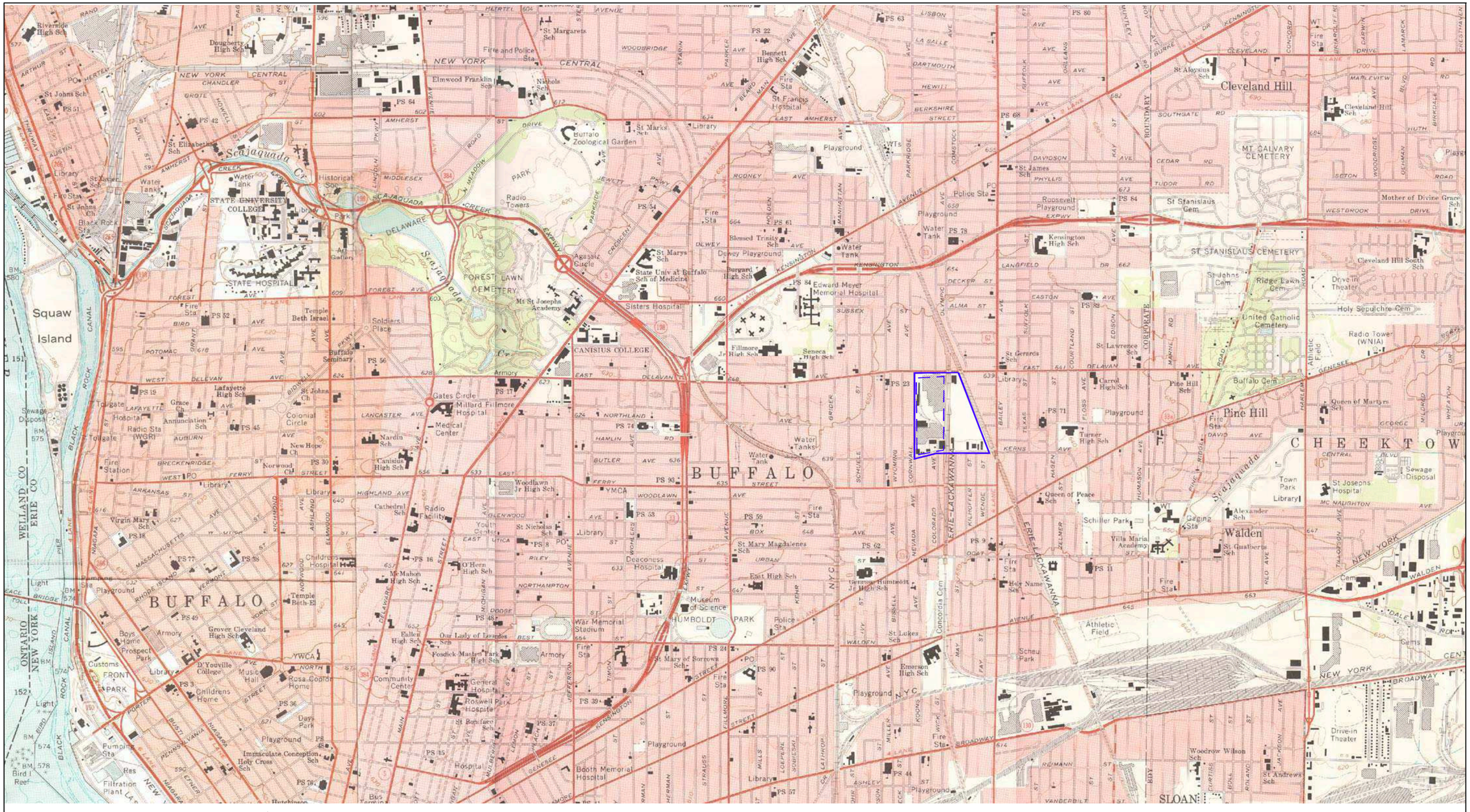
DRAFT

6.0 REFERENCES

- Buffalo Sewer Authority, Profile of the 5 x 9 Sewer, Drawing No. 5619, 1894.
- Buffalo Sewer Authority, Details of the Scajaquada Creek Drain, Sewer Extension and Overflow at Colorado Ave. Drawing No. 20835, 1923.
- Conestoga-Rovers and Associates, Inc., Remedial Investigation Report, American Axle Plant Site, NYSDEC Site No. 915196, November 2006.
- Conestoga-Rovers and Associates, Inc., Supplemental Interim Remedial Measures Work Plan to Address Subsurface Oil, American Axle Plant Site, NYSDEC Site No. 915196, August 2008.
- Malcolm-Pirnie, Inc., System-Wide Long Term Control Plan for CSO Abatement, Buffalo Sewer Authority, Buffalo, New York, 2004.
- New York State Department of Environmental Conservation, Technical Guidance for Site Investigation and Remediation, Draft DER-10, December 2002.

DRAFT

FIGURES



REFERENCE:

UNITED STATES GEOLOGIC SURVEY
BUFFALO NE QUADRANGLE, NY
TOPOGRAPHIC, 7.5 MINUTES SERIES 1965

0 1250 2500ft

LEGEND:

PROPERTY BOUNDARY

figure 1.1

LOCATION MAP
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU050 JUN 10/2009

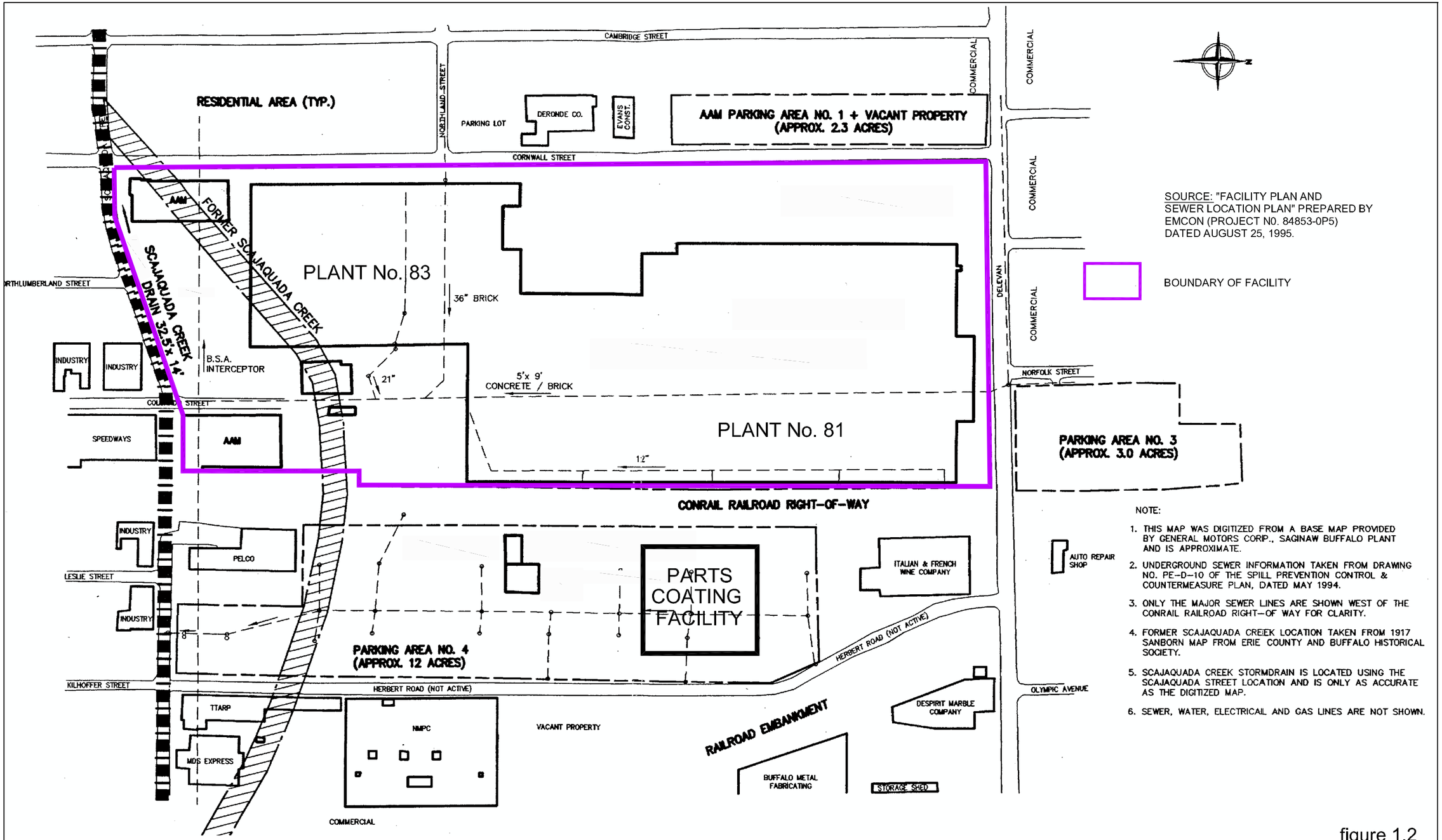


figure 1.2

FACILITY PLAN
AMERICAN AXLE PLANT SITE
BUFFALO FACILITY
Buffalo, New York

0 50 150ft

COLORADO AVENUE

NORTHUMBERLAND AVE.

EAST DELEVAN AVENUE

CORNWALL AVENUE

LEGEND

INVESTIGATIVE SITE BOUNDARIES

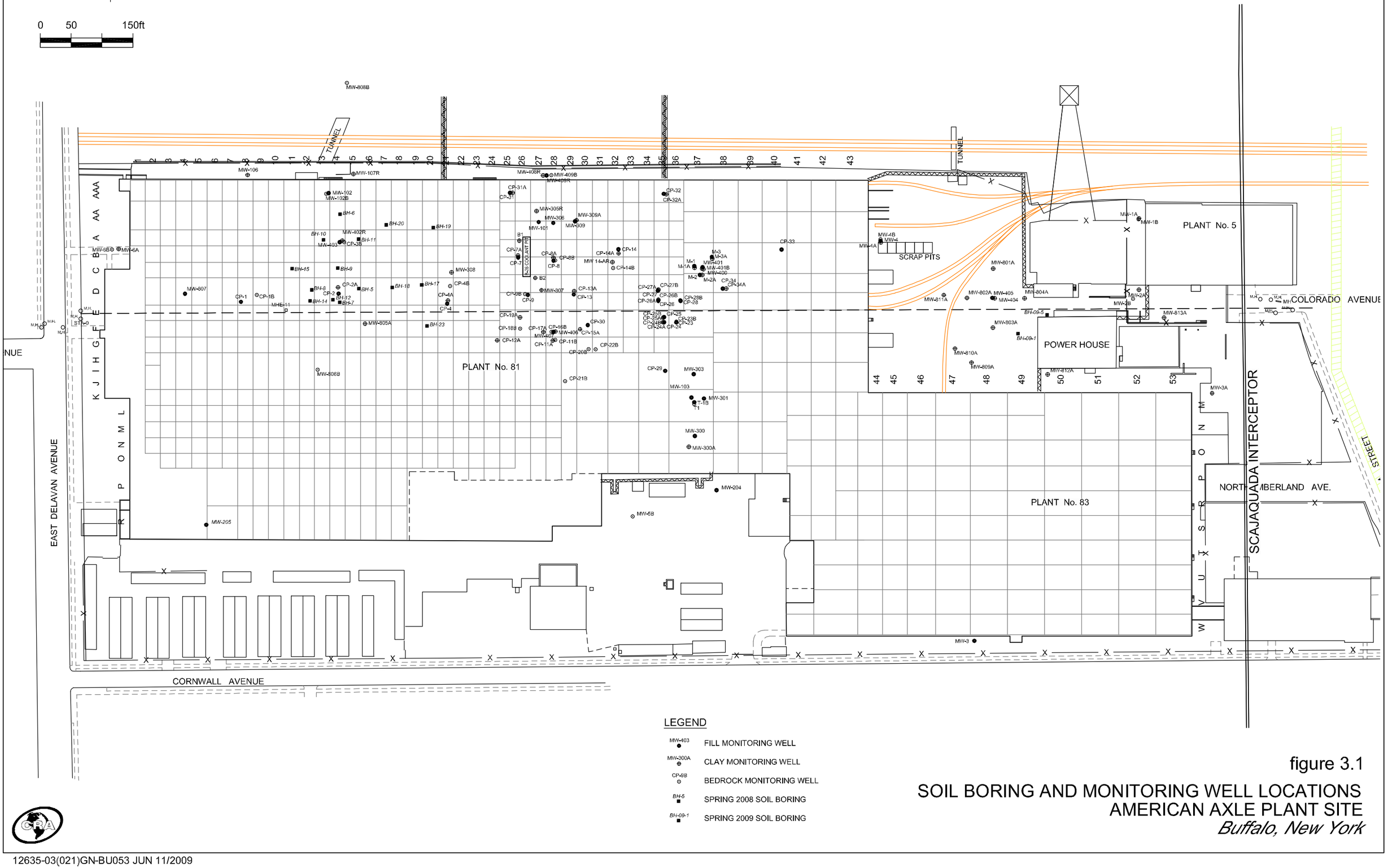
figure 1.3

SITE BOUNDARY
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU052 JUN 11/2009

N

0 50 150ft



LEGEND

MW-403 ●	FILL MONITORING WELL
MW-300A ⊕	CLAY MONITORING WELL
CP-9B ⊙	BEDROCK MONITORING WELL
BH-5 ■	SPRING 2008 SOIL BORING
BH-09-1 ■	SPRING 2009 SOIL BORING

figure 3.1

SOIL BORING AND MONITORING WELL LOCATIONS
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU053 JUN 11/2009

N

0 50 150ft

PLANT No. 81

PLANT No. 5

PLANT No. 83

POWER HOUSE

SCRAP PITS

TUNNEL

TUNNEL

EAST DELAVAN AVENUE

CORNWALL AVENUE

COLORADO AVENUE

NORTHUMBERLAND AVE.

SCAJAQUADA INTERCEPTOR

STREET

MW-808B (55.46)
MW-102B (54.03)
MW-409B (52.43)
MW-6B (56.61)
CP-3B (54.30)
CP-8B (52.00)
CP-14B (50.83)
MW-401B (49.40)
CP-27B (50.82)
CP-28B (48.21)
CP-1B (53.70)
CP-4B (50.43)
CP-9B (51.75)
MW-4B (49.22)
MW-1B (48.92)
MW-5B (48.98)
MW-806B (51.96)
CP-18B (51.55)
CP-16B (51.90)
CP-17B (51.90)
CP-22B (50.80)
CP-20B (50.30)
CP-21B (49.50)
CP-25B (49.20)
CP-24B (49.18)
CP-23B (51.42)
T-1B (48.10)
MW-5B (50.84)

STA-0 STA-1 (57.5) STA-2 (55.8) STA-3 (53.4) STA-4 (53.7) STA-5 (52.4) STA-6 (51.1) STA-7 (50.7) STA-8 (50.9) STA-9 (49.6) STA-10 (49.7) STA-11 (49.99) STA-12 (49.52) STA-13 (50.62) STA-14 (50.22) STA-15 (49.16) STA-16 (45.96) STA-17 (49.66)

58.00 57.00 56.00 55.00 54.00 53.00 52.00 51.00 50.00 49.00 48.00 47.00 46.00 45.00

A AA AAA B C D E F G H J K L M N P O N M L K J H G F E D C B A AA AAA

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54

LEGEND

- CP-9B ⊙ — BEDROCK MONITORING WELL
- 49.00 — BEDROCK CONTOUR LINE
- STA-2 (54.8) — BEDROCK SURFACE BENEATH 5X9 SEWER

NOTES:

(1) SOURCE: "SKETCH OF PROPOSED OVERFLOW AND SIPHON" JANUARY 1894

figure 3.2

TOP OF BEDROCK CONTOUR MAP
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU061 JUN 11/2009

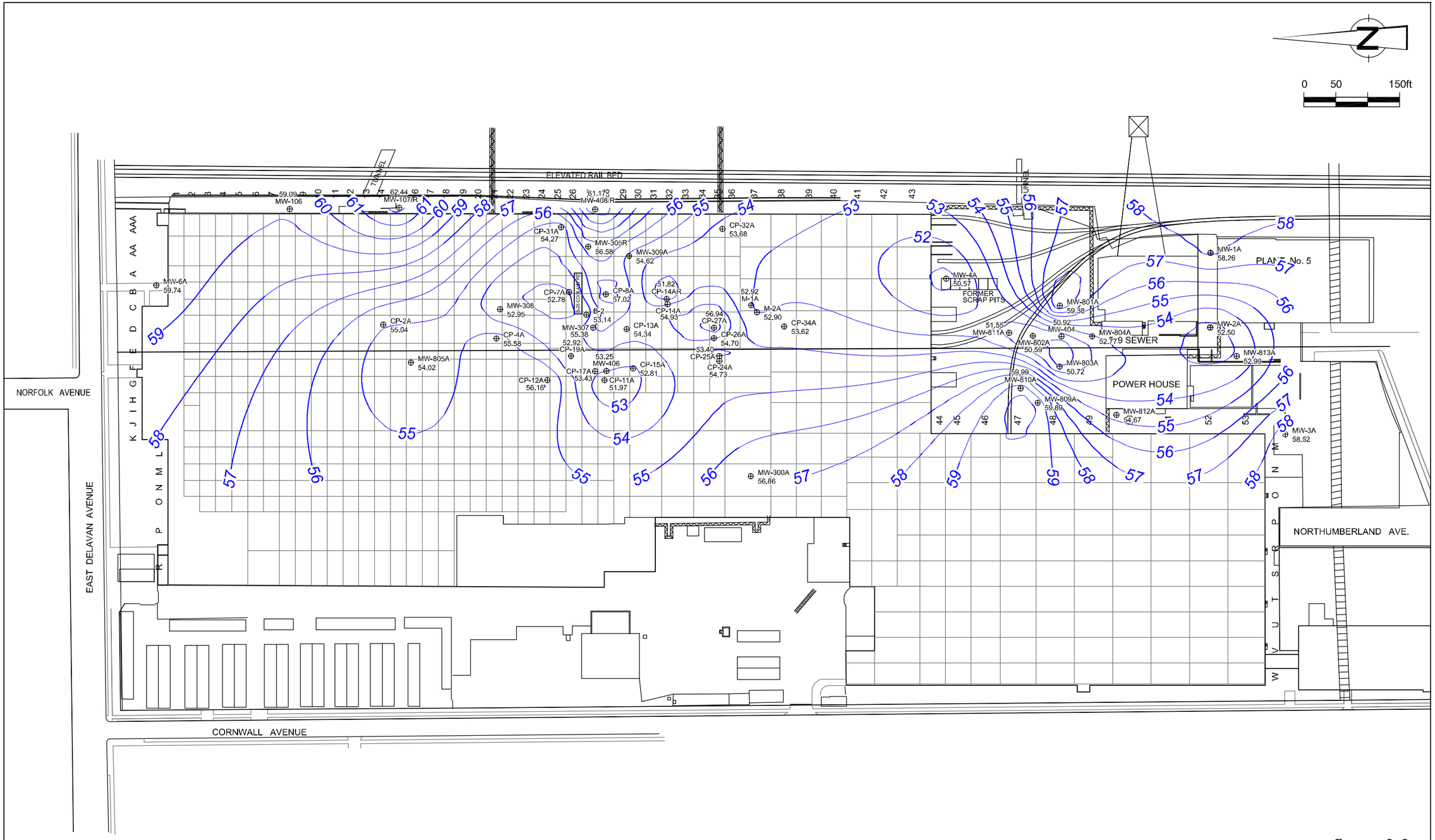


figure 3.3

CLAY GROUNDWATER CONTOUR - MAY 18, 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU080 JUN 24/2009

0 50 150ft

NORFOLK AVENUE

EAST DELAVAN AVENUE

CORNWALL AVENUE

NORTHUMBERLAND AVE.

ELEVATED RAIL BED

TUNNEL

TUNNEL

PLANT No. 5

POWER HOUSE

5x9 SEWER

FORMER SCRAP PITS

MW-808B 54.03

MW-102B 56.22

MW-409B 52.94

MW-6B 59.11

CP-3B 53.84

MW-1B 49.41

MW-4B 50.39

CP-8B 52.36

CP-14B 52.41

MW-401B 52.77

CP-1B 55.78

CP-4B 52.90

CP-9B 52.72

52.36 CP-27B

CP-28B 52.37

52.43

52.87 CP-18B

52.31 CP-25B

CP-26B

CP-24B 52.45

CP-23B 52.46

52.23 CP-16B

CP-11B 52.43

52.50 CP-20B

CP-22B 54.61

MW-806B 57.73

CP-21B 56.44

MW-5B 59.68

LEGEND

CP-1B ⊙ BEDROCK MONITORING WELL

55.78 GROUNDWATER ELEVATION

5 x 9 SEWER

CONTOUR LINE

ASSUMED CONTOUR DUE TO LACK OF DATA POINTS

figure 3.4

BEDROCK GROUNDWATER CONTOUR - MAY 18, 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU081 JUN 24/2009

ID	Feature (L/MH)	Lateral Entering from E/W	Diameter	Type of Pipe
A	MH/Vault			
B	MH/Vault			
C	MH			
D	MH	TDC		Concrete
E	MH			
F	MH			
G	MH			
H	MH			
1	L	W	18"	cor
2	L	W	22"	VCP
3	L	E	6"	VCP
4	L	TDC	6"	Steel
5	L	TDC	6"	VCP
6	L	W	6"	VCP
7	L	TDC	6"	Steel
8	L	E	6"	Steel
9	L	E	10"	VCP
10	L	E	6"	VCP
11	L	E	6"	VCP
12	L	E	6"	VCP
13	L	E	6"	VCP
14	L	W	6"	VCP
15	L	E	6"	VCP
16	L	W	4"	Steel
17	L	W	6"	VCP
18	L	W	14"	Plastic
19	L	E	10"	VCP
20	L	W	10"	VCP
21	L	E	6"	Steel
22	L	W	6"	VCP
23	L	E	6"	VCP
24	L	TDC	10"	Unknown
25	L	NW	36"	Brick
26	L	NW	14"	Steel
27	L	W	8"	Steel
28	L	W	8"	CMP
29	L	E	10"	VCP
30	L	W	6"	VCP
31	L	NE	12"	Steel
32	L	E	6"	Unknown
33	L	E	8"	Steel
34	L	W	6"	Unknown
35	L	W	24"	VCP
36	L	E	6"	Steel
37	L	TDC	8"	Steel
38	L	W	12"	VCP
39	L	SE	4"	Steel
40	L	W	10"	Steel
41	L	E	8"	Steel
42	L	TDC	8"	Steel
43	L	W	10"	Steel
44	L	W	8"	Steel
45	L	E	10"	Steel
46	L	Top W	3"	Steel
47	L	W	10"	Unknown
48	L	W	6"	VCP
49	L	E	10"	VCP
50	L	E	8"	Steel
51	L	W	6"	Steel
52	L	W	10"	Steel
53	L	E	8"	Steel
54	L	E	6"	Steel
55	L	W	10"	Steel
56	L	E	10"	Steel
57	L	W	6"	Steel
58	L	E of TDC	4"	VCP
59	L	E	10"	Steel
60	L	W	10"	Steel
61	L	W	6"	Steel
62	L	W	6"	Steel
63	L	E	8"	Steel
64	L	W	10"	Steel
65	L	E	8"	Steel
66	L	W	6"	Steel
67	L	W	24"	PVC
68	L	E	12"	VCP
69	L	E	14"	VCP

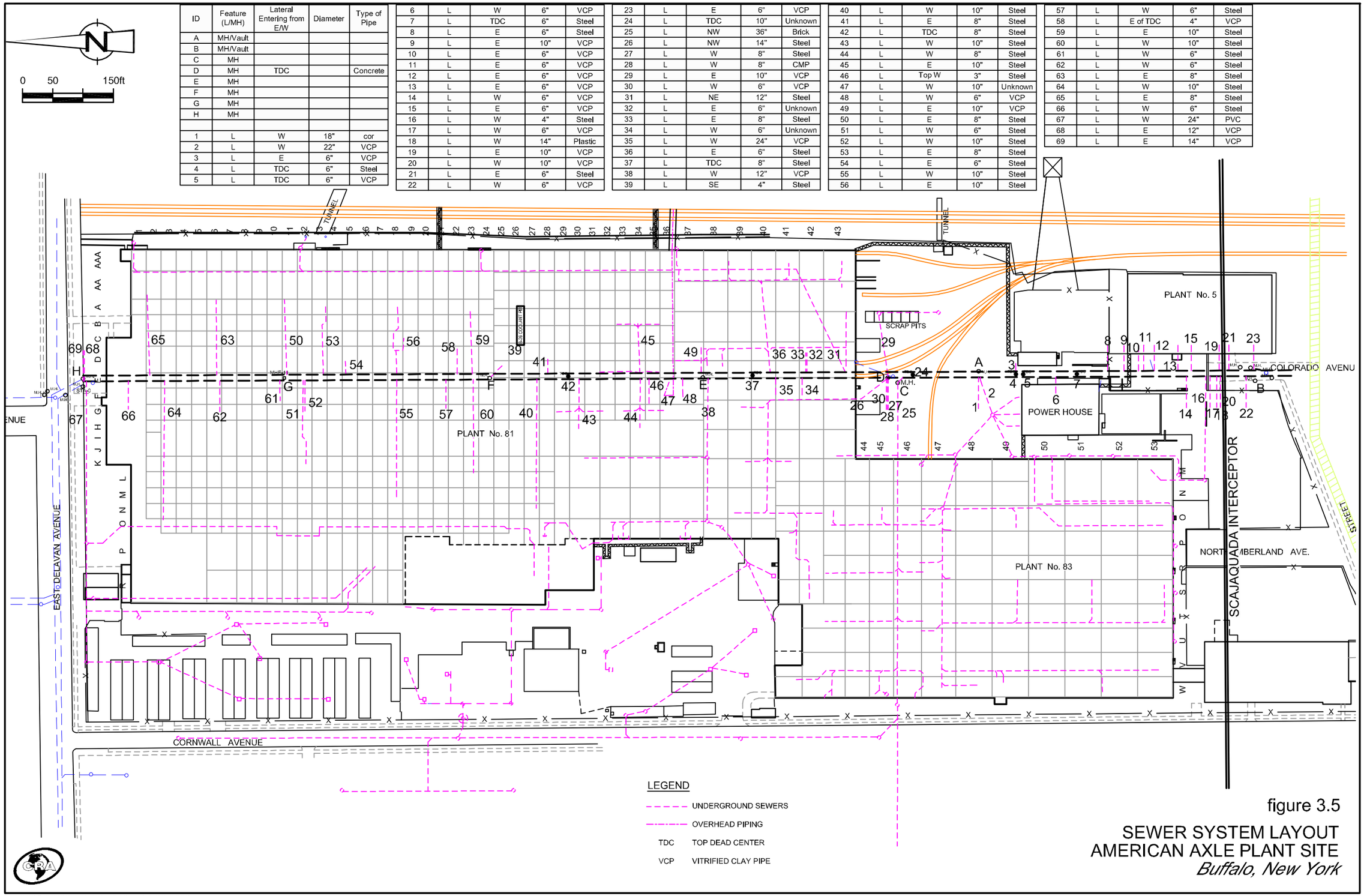


figure 3.5

SEWER SYSTEM LAYOUT
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU043 APR 22/2009

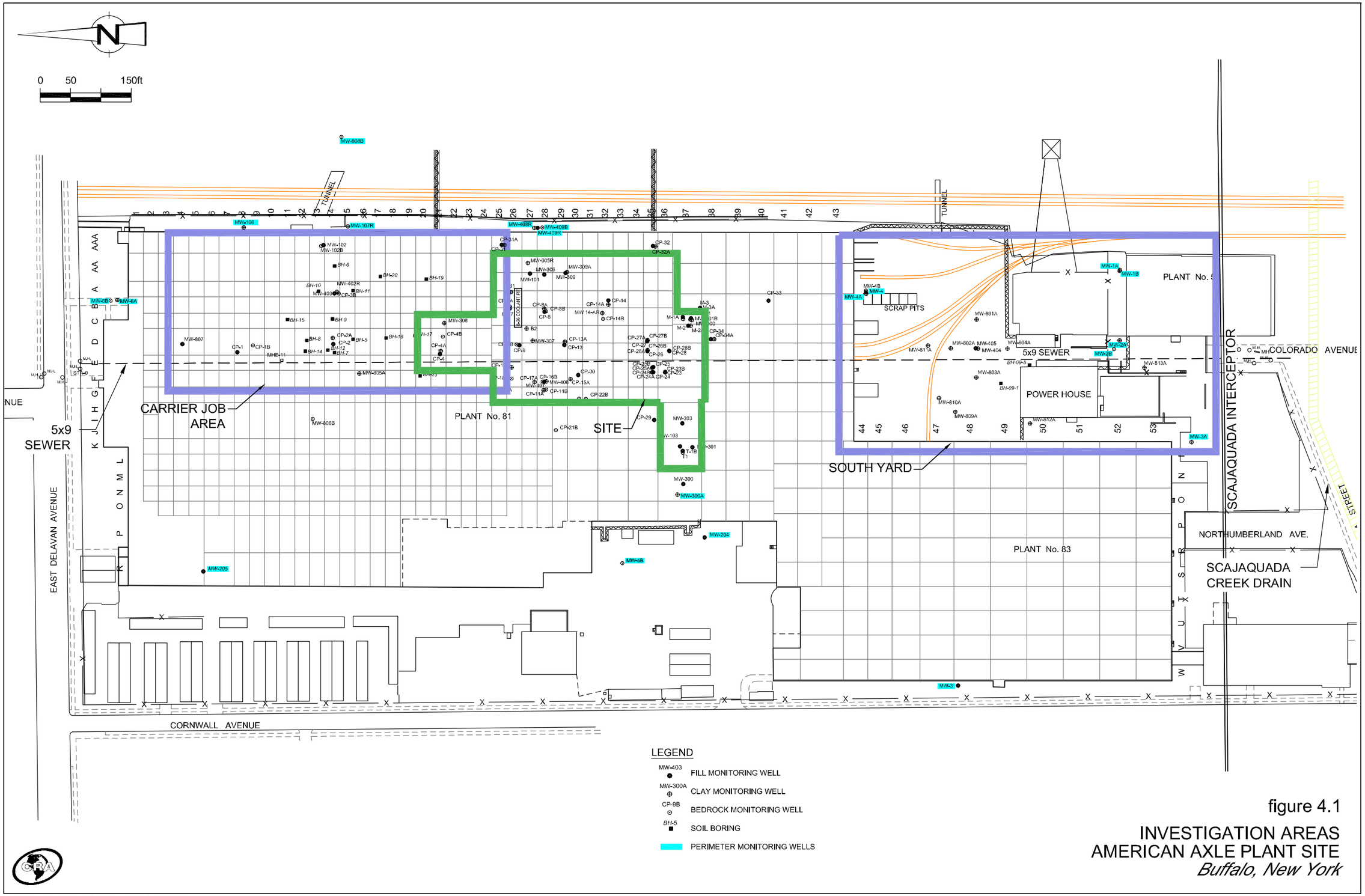


figure 4.1

INVESTIGATION AREAS
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU054 JUN 11/2009

0 50 150ft

PLANT No. 81

PLANT No. 83

PLANT No. 5

POWER HOUSE

SCRAP PITS

TUNNEL

TUNNEL

COLORADO AVENUE

NORTHUMBERLAND AVE.

SCAJAQUADA INTERCEPTOR

SCAJAQUADA STREET

EAST DELAVAN AVENUE

CORNWALL AVENUE

MW-409R (0)
MW-102 (0)
MW-403 (0)
MW-807 (0)
MW-205 (0.6)
MW-204 (0)
MW-3
MW-4 (0)
MW-405 (0)
MW-407 (0)
MW-303 (0)
MW-103 (0)
MW-301 (0)
MW-300 (0)
MW-308 (1)
MW-101 (0)
MW-309 (1.79)
MW-401 (0.43)
CP-1 (0)
CP-2 (0)
CP-3 (0)
CP-4 (0)
CP-5 (0)
CP-6 (0.05)
CP-7 (0)
CP-8 (0.05)
CP-9 (3.14)
CP-10 (0.05)
CP-11 (0)
CP-12 (0)
CP-13 (3.78)
CP-14 (3.78)
CP-15 (0)
CP-16 (0.05)
CP-17 (0)
CP-18 (0)
CP-19 (0)
CP-20 (0)
CP-21 (0)
CP-22 (0)
CP-23 (0)
CP-24 (0)
CP-25 (0)
CP-26 (0.63)
CP-27 (0)
CP-28 (1.98)
CP-29 (0)
CP-30 (0)
CP-31 (0)
CP-32 (0)
CP-33 (0)
CP-34 (0)
M-1 (3.56)
M-2 (0)
M-3 (3.15)
(3.06)

LEGEND

MW-403 FILL MONITORING WELL

(3.78) OBSERVED OIL THICKNESS (FEET)

OIL THICKNESS CONTOUR

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009.

figure 4.2

OIL PRESENCE IN SITE FILL- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU055 JUN 11/2009

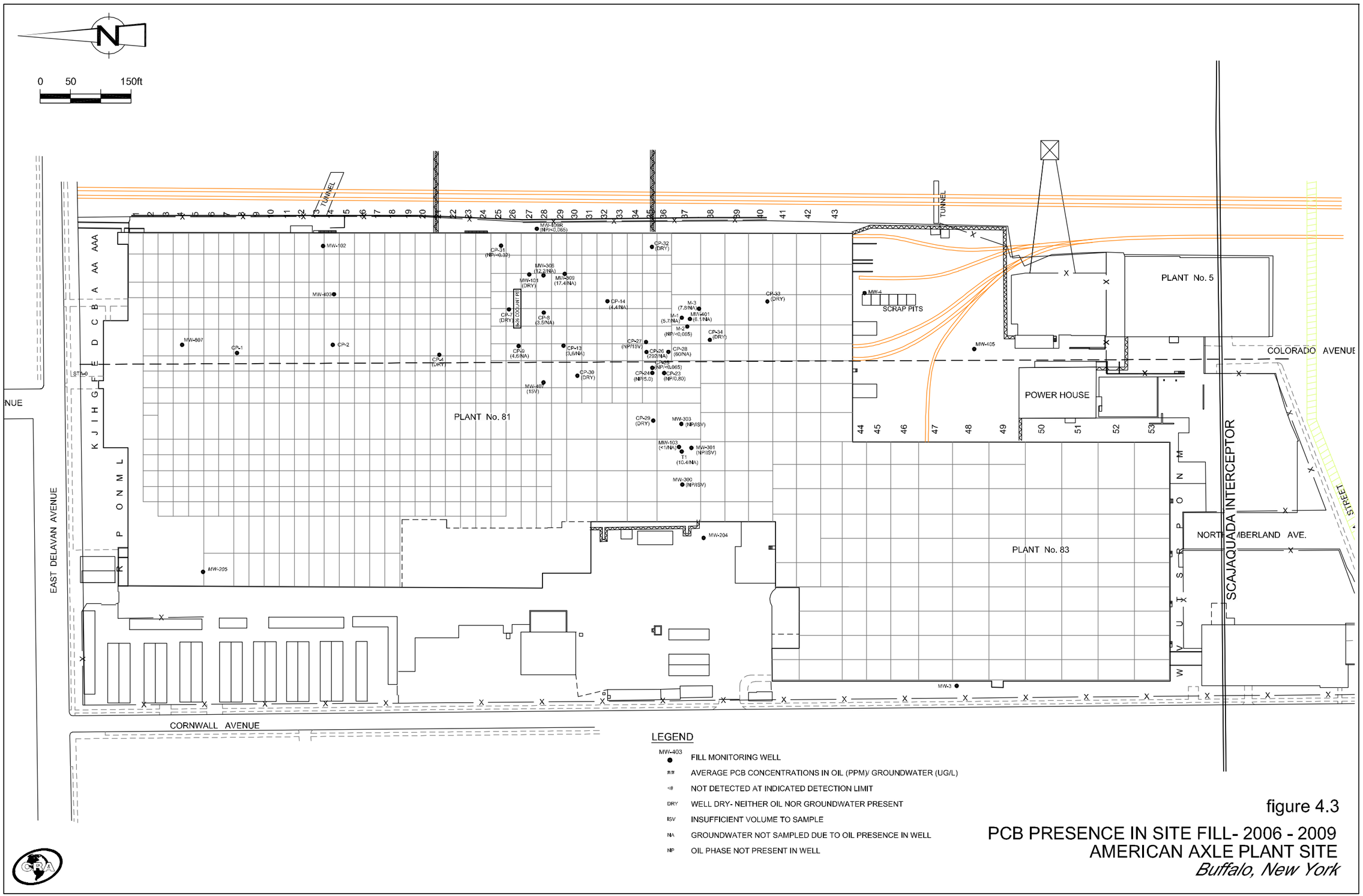
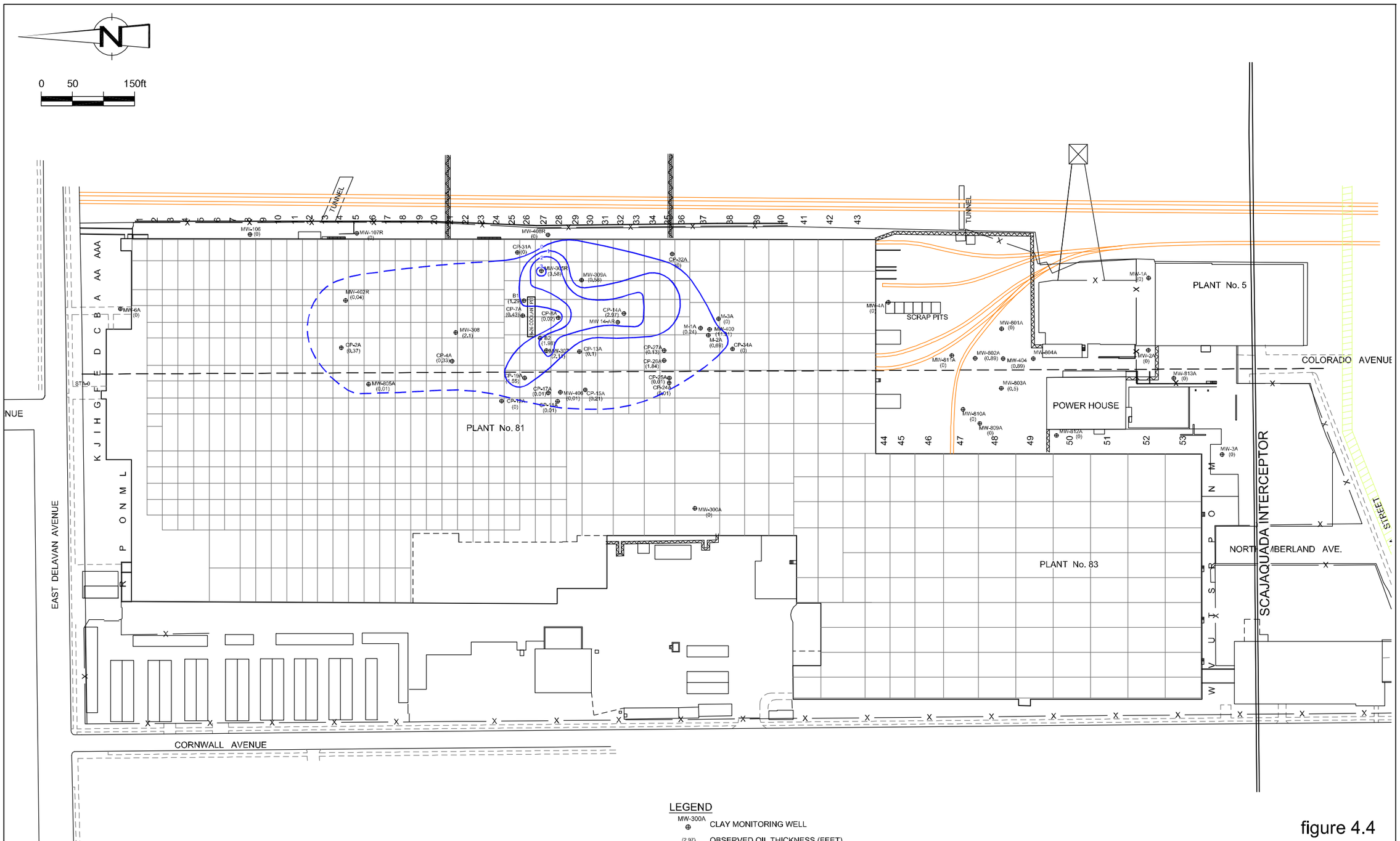


figure 4.3

PCB PRESENCE IN SITE FILL- 2006 - 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU056 JUN 11/2009



LEGEND

- MW-300A ⊕ CLAY MONITORING WELL
- (2.97) OBSERVED OIL THICKNESS (FEET)
- —— OIL THICKNESS CONTOUR

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009.

figure 4.4

OIL PRESENCE IN SITE CLAY- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU057 JUN 11/2009

0 50 150ft

PLANT No. 81

PLANT No. 83

PLANT No. 5

POWER HOUSE

SCRAP PITS

TUNNEL

TUNNEL

EAST DELAVAN AVENUE

CORNWALL AVENUE

COLORADO AVENUE

NORTHUMBERLAND AVE.

SCAJAQUADA INTERCEPTOR

STREET

MW-106

MW-107R

MW-408R (NP/<0.065)

MW-402R

MW-6A

MW-308 (10.3/NA)

CP-2A

CP-4A (19.1/NA)

MW-305R (9.8/NA)

MW-309A (18.5/NA)

CP-31A (NP/ISV)

CP-32A (NP/ISV)

B1 (7.2/NA)

CP-7A (8.3/NA)

CP-3A (9.7/NA)

CP-14A (5.6/NA)

MW 14A/B (5.1/NA)

B2 (4.7/NA)

MW-307 (6.4/NA)

CP-13A (6.4/NA)

CP-27A (5.1/NA)

CP-26A (323/NA)

CP-25A (1.9/3.3)

CP-24A (14/NA)

M-3A (NP/ISV)

M-1A (8.3/NA)

MW-400 (4.1/NA)

M-2A (4.5/NA)

CP-34A (NP/ISV)

MW-4A

MW-1A

MW-2A

MW-801A

MW-802A

MW-804A

MW-404

MW-817A

MW-813A

MW-803A

MW-810A

MW-809A

MW-812A

MW-3A

CP-19A (165/NA)

CP-17A (12600/NA)

MW-405A (<1/NA)

MW-406 (19650/NA)

CP-15A (19600/NA)

CP-12A (NP/0.132)

CP-11A (12200/NA)

MW-300A (NP/<0.065)

LEGEND

MW-300A ⊕	CLAY MONITORING WELL
##	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.5

PCB PRESENCE IN SITE CLAY- 2006 - 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU058 JUN 11/2009

0 50 150ft

MW-808B (0)
MW-409B
MW-102B (0.07)
MW-106B (0)
CP-3B (1.26)
CP-1B (2.72)
CP-4B (3.59)
CP-9B (0.6)
CP-8B (0.06)
CP-14B (0.04)
MW-401B (<0.01)
CP-27B (0)
CP-26B (0)
CP-28B (<0.01)
CP-25B (0)
CP-24B (0)
CP-23B (0)
CP-18B (0)
CP-19B (2.04)
CP-17B (3.8)
CP-20B (0)
CP-22B (0)
MW-806B (0)
CP-21B (0)
T-1B (0)
MW-5B
MW-4B (0.69)
SCRAP PITS
MW-1B (0)
MW-2B (0)
PLANT No. 5
PLANT No. 81
PLANT No. 83
POWER HOUSE
TUNNEL
TUNNEL
EX-S COOLANT PIT
COLORADO AVENUE
NORTHUMBERLAND AVE.
SCAJAQUADA INTERCEPTOR
SCAJAQUADA STREET
EAST DELAVAN AVENUE
CORNWALL AVENUE
STALO
A AA AAA B C D E F G H J K L M N P Q R S T U V W
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53

LEGEND

CP-9B ⊙ BEDROCK MONITORING WELL

(3,76) OBSERVED OIL THICKNESS (FEET)

OIL THICKNESS CONTOUR

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009.

figure 4.6

OIL PRESENCE IN SITE BEDROCK- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU059 JUN 11/2009

0 50 150ft

MW-808B (0)

TUNNEL

MW-409B (NP/<0.065)

MW-102B

CP-3B

MW-2B

CP-8B (170/NA)

CP-14B (NP/<0.065)

MW-401B (2.4/NA)

CP-4B (450/NA)

CP-1B

CP-9B (8.7/NA)

CP-27B (NP/<0.065)

CP-26B (NP/0.074)

CP-28B (<1/NA)

CP-25B (NP/1.23)

CP-24B (NP/1.58)

CP-23B (NP/<0.065)

CP-18B (NP/0.068)

CP-16B (3500/NA)

CP-11B (5150/NA)

CP-20B (15500/6.4)

CP-22B (NP/0.579)

MW-806B

CP-21B (NP/0.104)

T-1B (NP/5.28)

MW-9B

PLANT No. 81

PLANT No. 83

PLANT No. 5

MW-4B

SCRAP PITS

MW-1B

MW-3B

POWER HOUSE

COLORADO AVENUE

NORTHUMBERLAND AVE.

SCAJAQUADA INTERCEPTOR

SCAJAQUADA STREET

EAST DELAVAN AVENUE

CORNWALL AVENUE

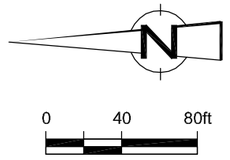
LEGEND

CP-9B ⊙	BEDROCK MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

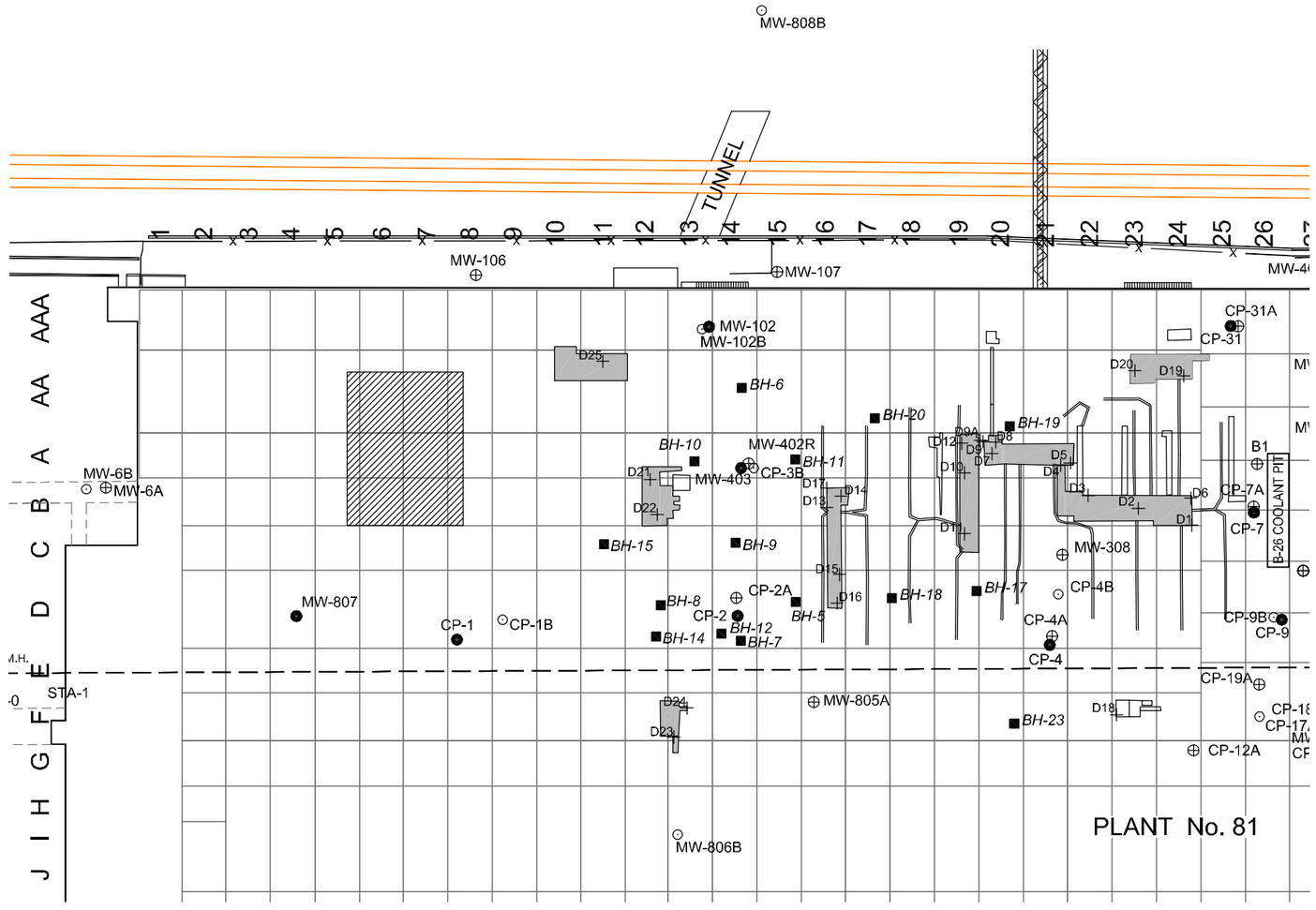
figure 4.7

PCB PRESENCE IN SITE BEDROCK- 2006 - 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU060 JUN 11/2009



DEPTH 1	15.20	DEPTH 11	16.23	DEPTH 22	8.07
DEPTH 2	14.98	DEPTH 12	16.39	DEPTH 23	8.73
DEPTH 3	15.06	DEPTH 13	10.68	DEPTH 24	8.40
DEPTH 4	12.36	DEPTH 14	10.76	DEPTH 25	13.69
DEPTH 5	14.03	DEPTH 15	14.36		
DEPTH 6	17.07	DEPTH 16	14.25		
DEPTH 7	13.69	DEPTH 17	9.35		
DEPTH 8	7.90	DEPTH 18	11.42		
DEPTH 9	8.42	DEPTH 19	15.07		
DEPTH 9A	14.69	DEPTH 20	10.30		
DEPTH 10	16.21	DEPTH 21	8.04		



LEGEND

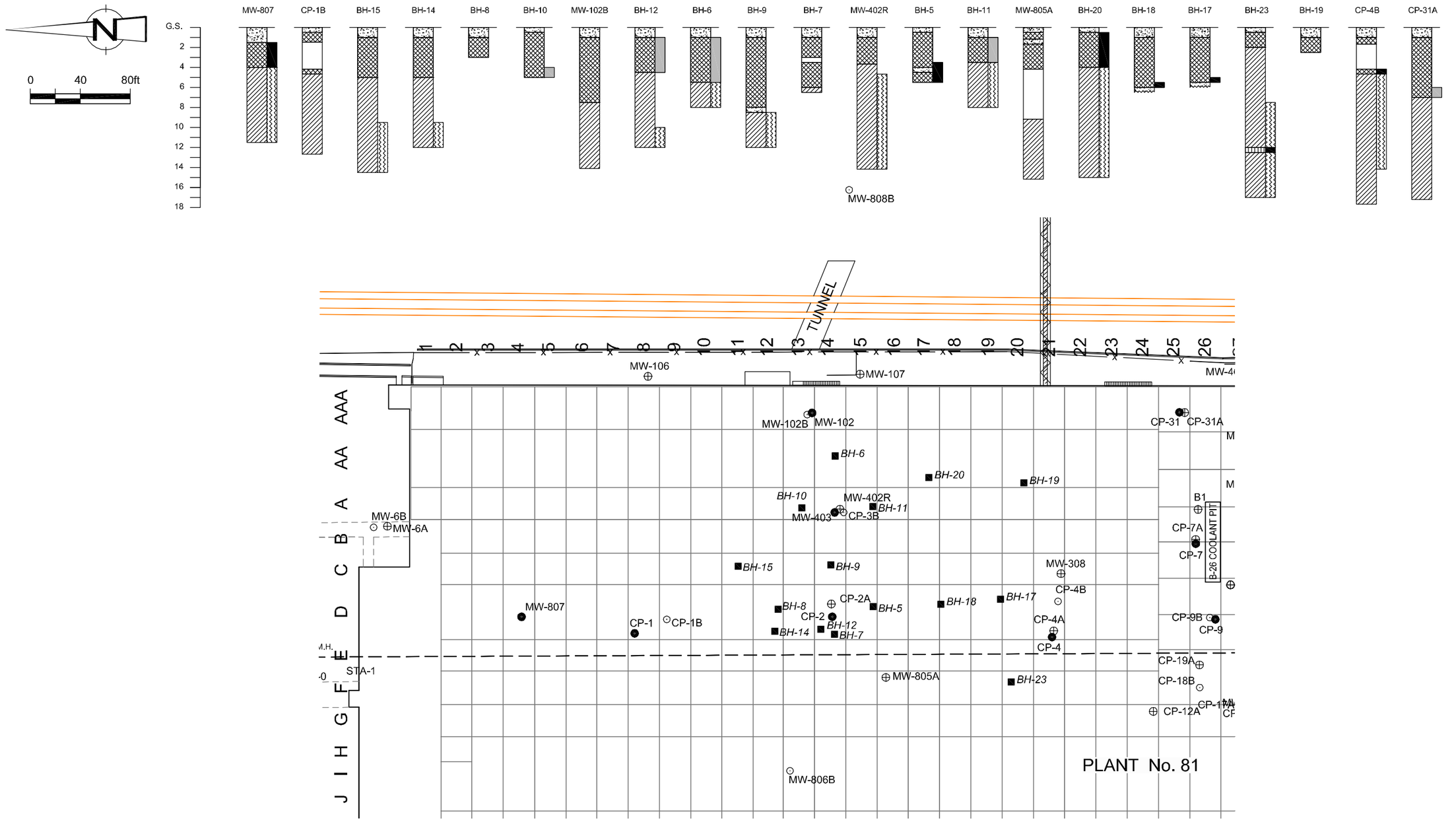
MW-403	FILL MONITORING WELL	D1	DEPTH MEASUREMENT
MW-205	CLAY MONITORING WELL		TOCCO AREA REMEDIATION
CP-9B	BEDROCK MONITORING WELL		PITS / TRENCHES
	SOIL BORING		

NOTE: PLANT FLOOR GRADE ELEVATION GENERALLY 68.00 FEET

figure 4.8

CARRIER JOB AREA FEATURES
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU062 JUN 22/2009



LEGEND

- MW-403 ● FILL MONITORING WELL
- MW-205 ⊕ CLAY MONITORING WELL
- CP-9B ⊙ BEDROCK MONITORING WELL
- BH-8 ■ SOIL BORING SPRING 2008
- SOIL BORING OR TEST PIT

- FILL
- CONCRETE
- NO SAMPLE
- SILT

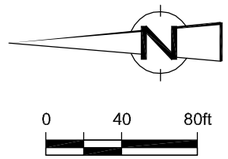
- CLAY
- OILY SOIL OBSERVED
- OIL STAINING OBSERVED
- UN-RECOVERABLE AMOUNT OF OIL OBSERVED IN MICRO-FRACTURE

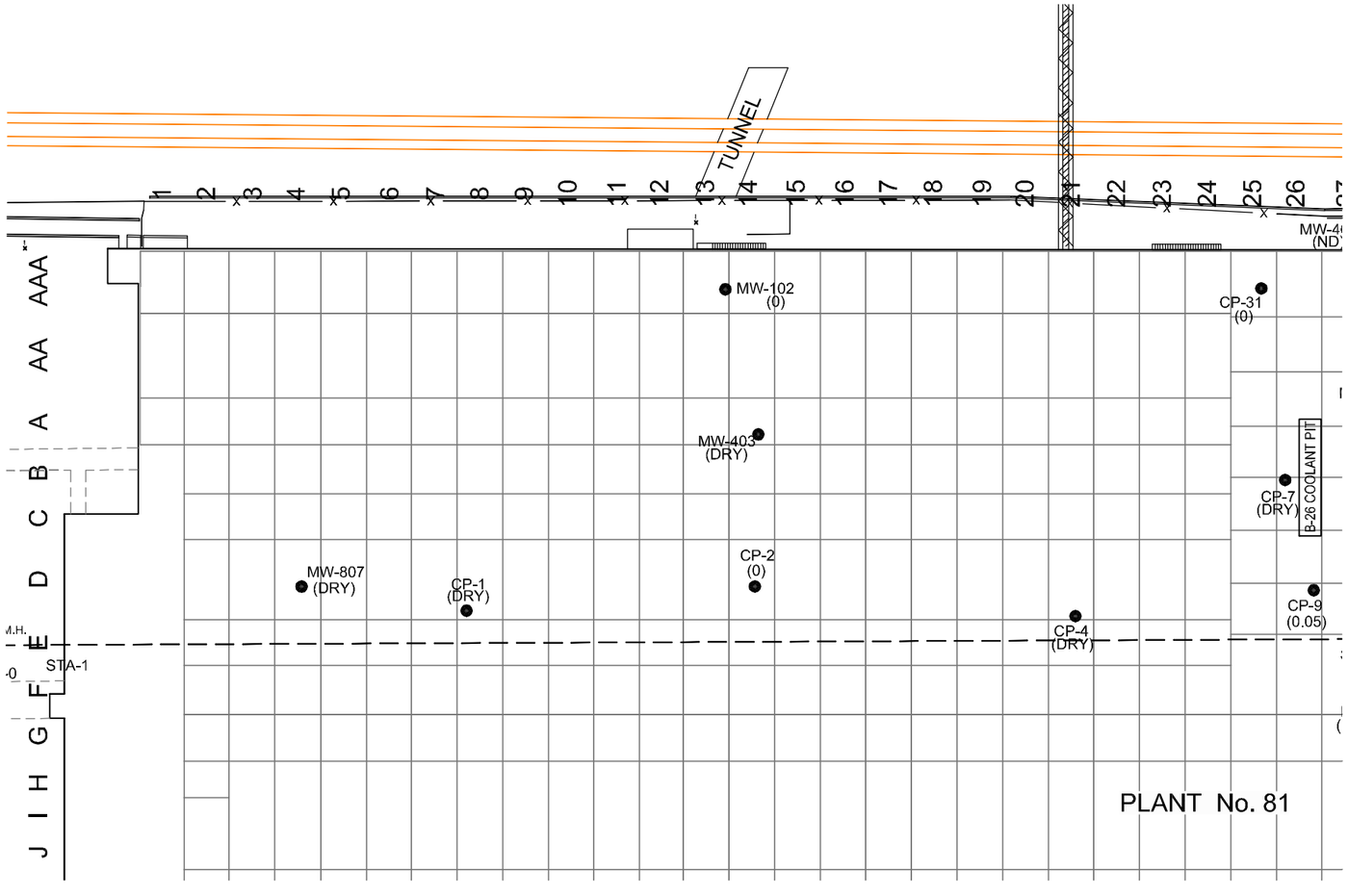
NOTES:
DEPTHS OF UNITS/ OIL OBSERVATIONS ARE APPROXIMATE. SEE STRATIGRAPHIC LOGS FOR COMPLETE DETAILS

figure 4.9

CARRIER JOB AREA SOIL BORING OBSERVATIONS AMERICAN AXLE PLANT SITE

Buffalo, New York





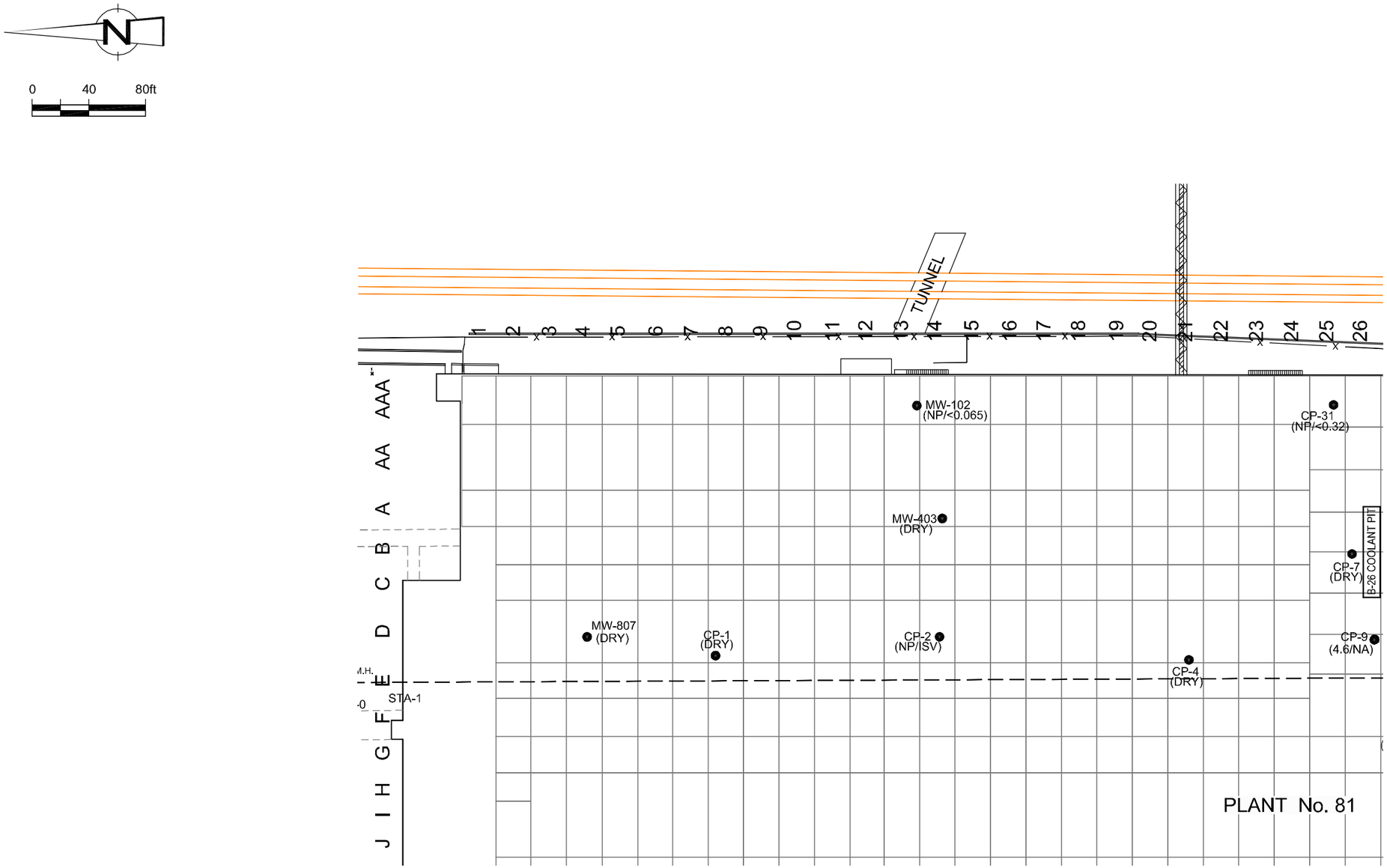
LEGEND

MW-403 ●	FILL MONITORING WELL
DRY	NO OIL OR GROUNDWATER PRESENT IN WELL
(0.05)	IN WELL OIL THICKNESS (FEET)

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009

figure 4.10

OIL PRESENCE IN CARRIER JOB AREA FILL WELLS- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York



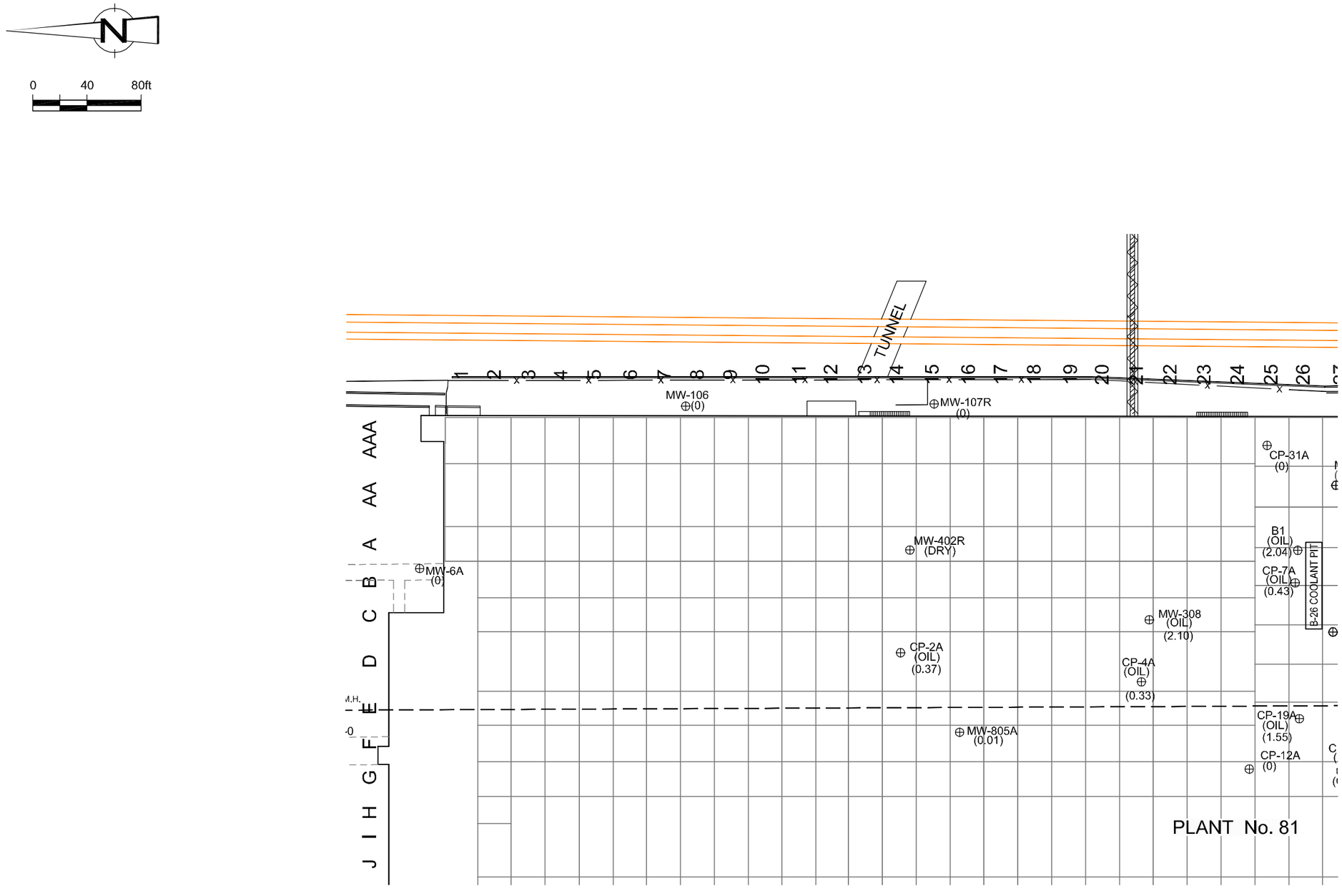
LEGEND

MW-403 ●	FILL MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.11

PCB PRESENCE IN CARRIER JOB AREA FILL- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU065 JUN 22/2009



LEGEND

MW-402R ⊕ CLAY MONITORING WELL

DRY NO OIL OR GROUNDWATER PRESENT IN WELL

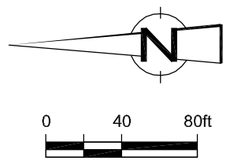
(0.28) IN WELL OIL THICKNESS (FEET)

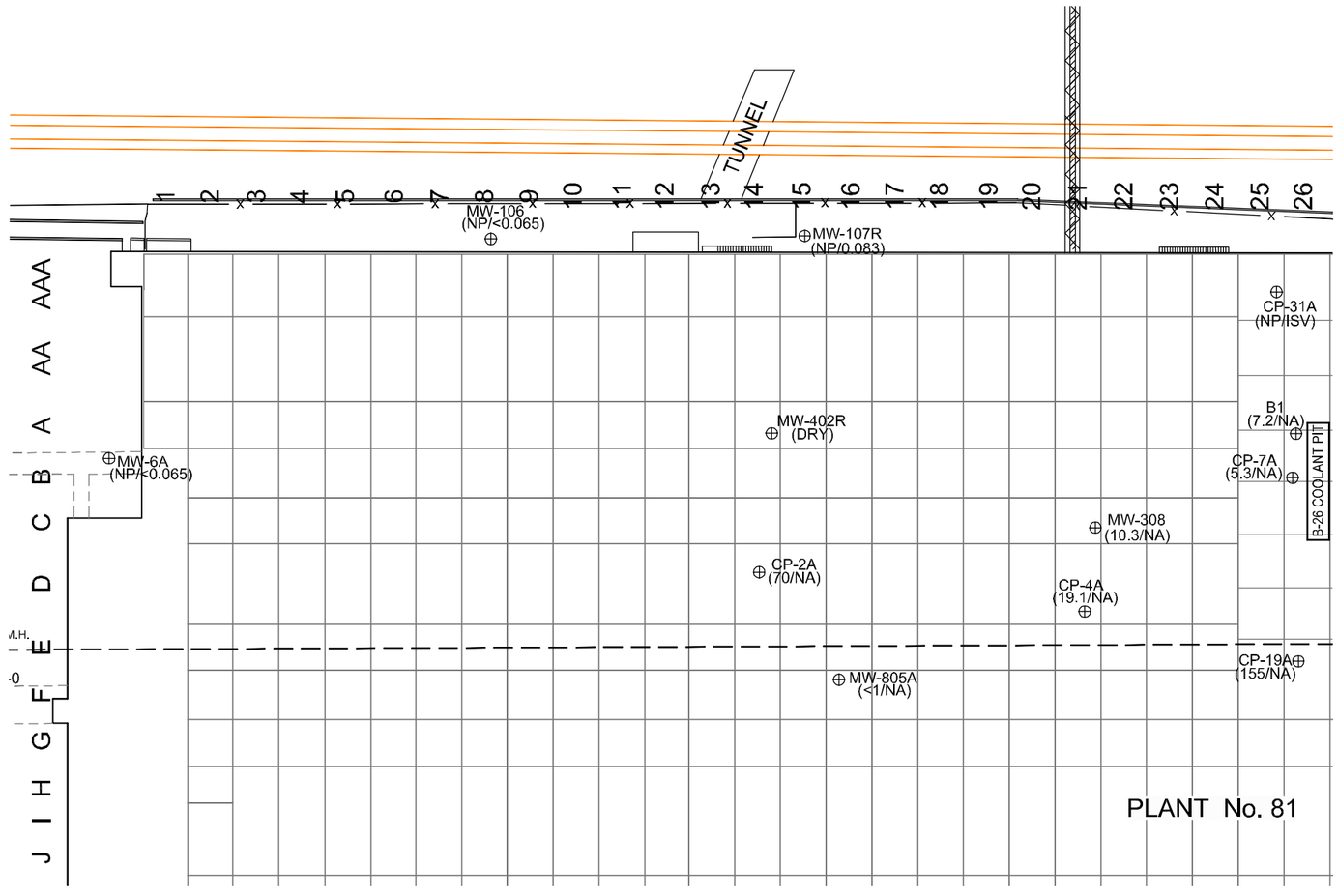
figure 4.12

OIL PRESENCE IN CARRIER JOB AREA CLAY - MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009

12635-03(021)GN-BU066 JUN 22/2009



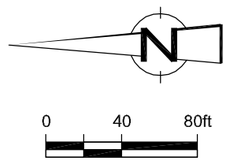


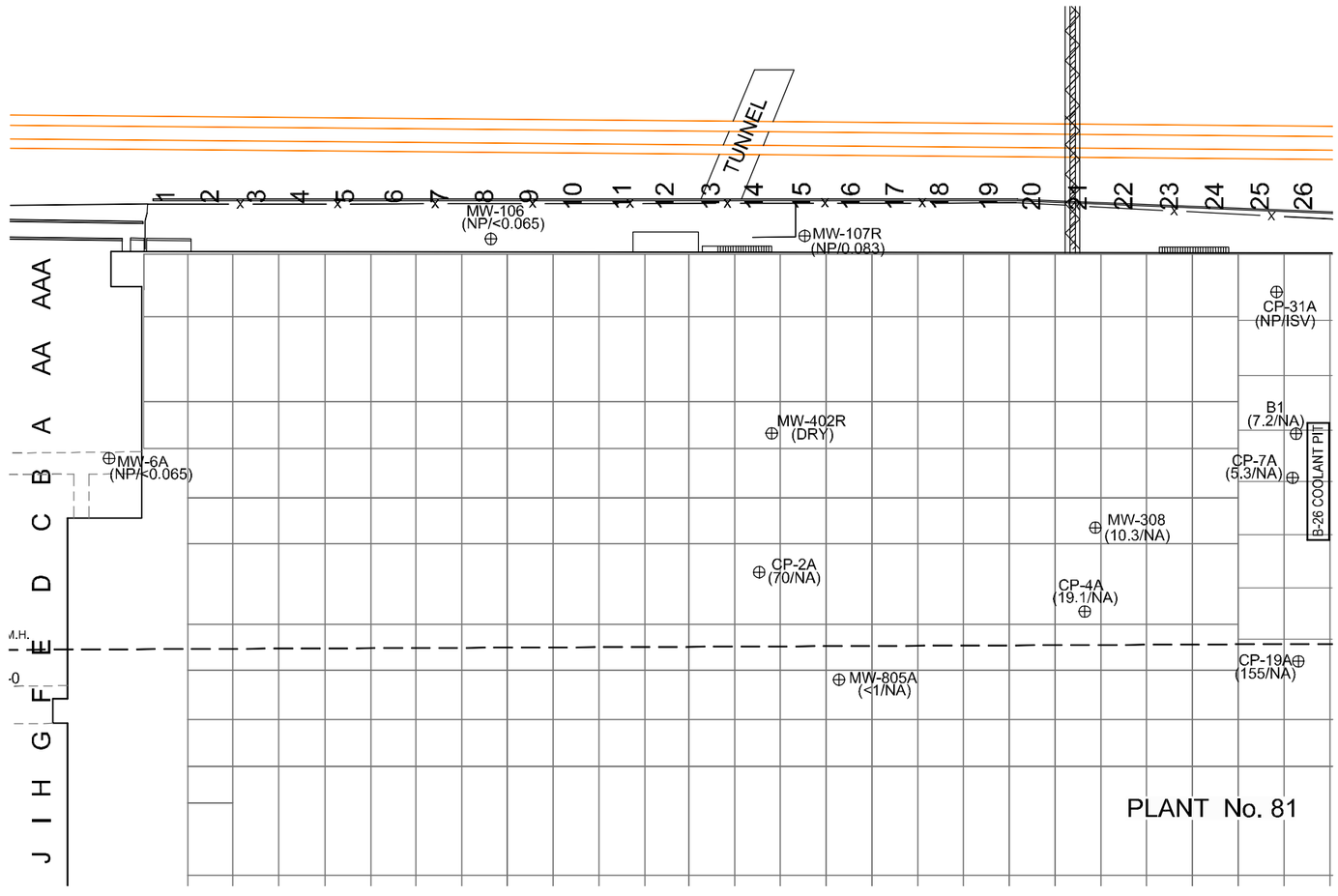
LEGEND

MW-403 ●	FILL MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.13

PCB PRESENCE IN CARRIER JOB AREA CLAY- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York



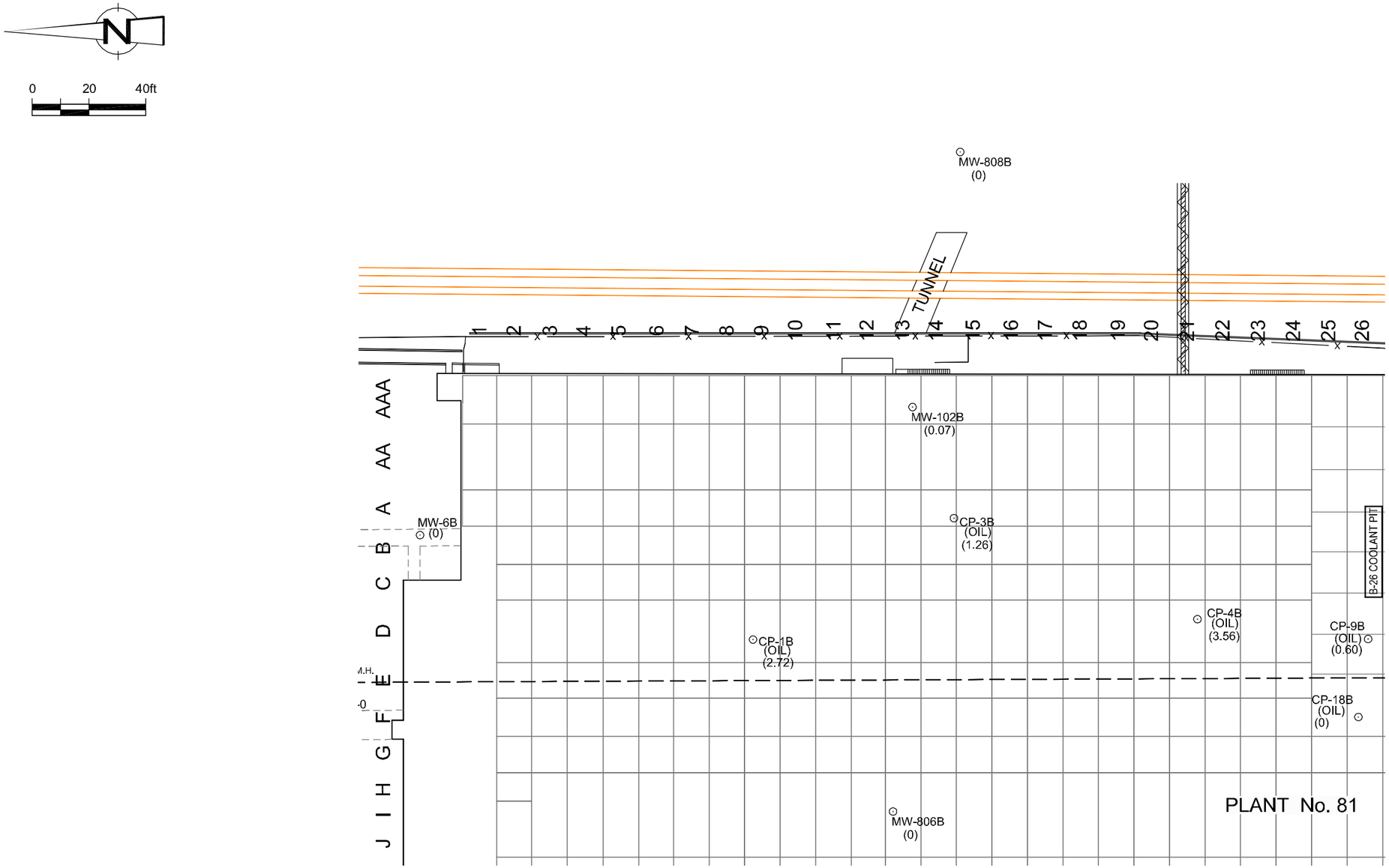


LEGEND

MW-403 ●	FILL MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.13

PCB PRESENCE IN CARRIER JOB AREA CLAY- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York



LEGEND

CP-1B ⊙ BEDROCK MONITORING WELL

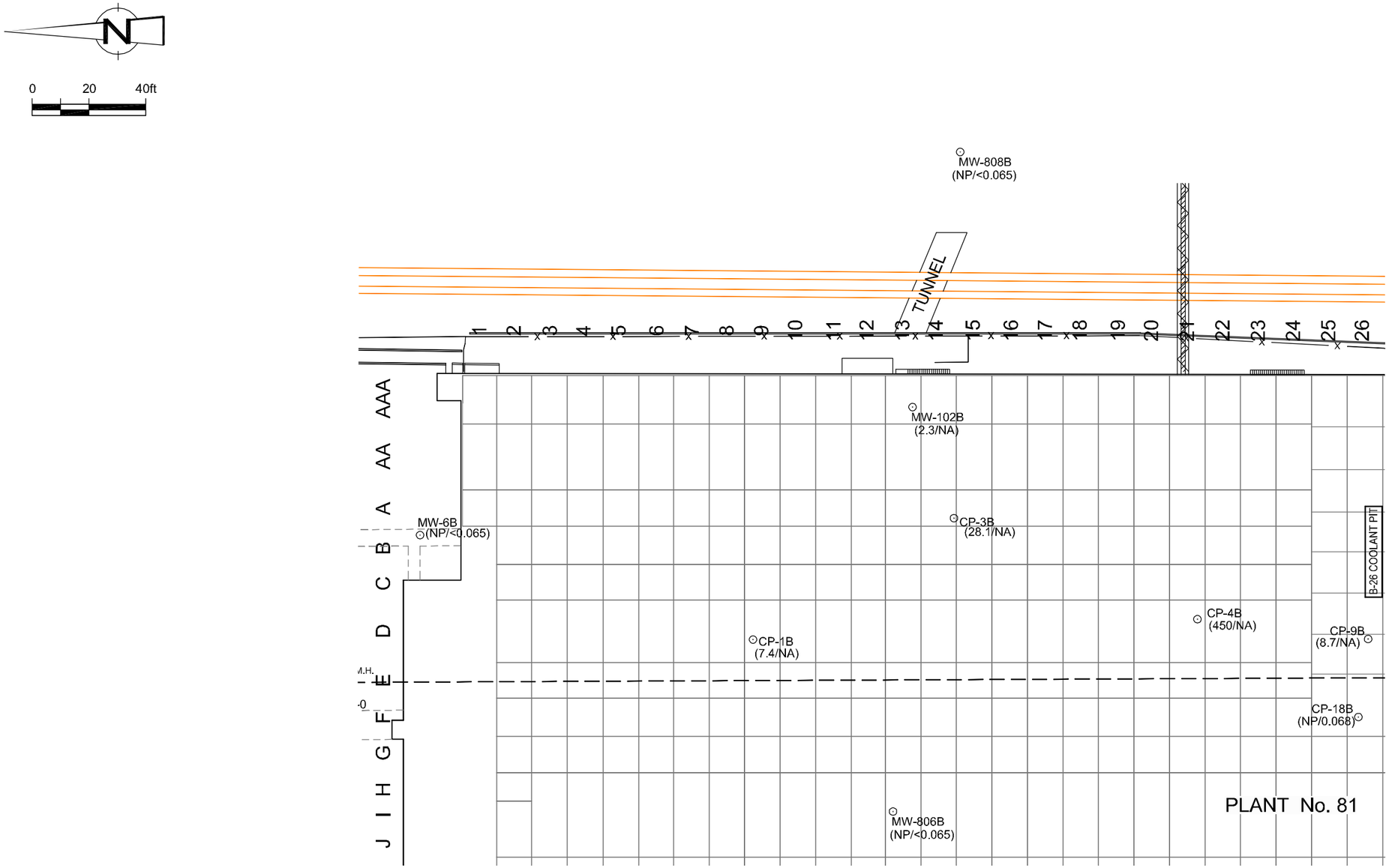
(0.07) IN WELL OIL THICKNESS (FEET)

figure 4.14

OIL PRESENCE IN CARRIER JOB AREA BEDROCK WELLS- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009

12635-03(021)GN-BU068 JUN 22/2009



LEGEND

MW-403 ●	FILL MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.15

PCB PRESENCE IN CARRIER JOB AREA BEDROCK- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009

N

0 20 50ft

MW-4
(NP/<0.065)

SCRAP PITS

MW-405
(NP/<0.065)

5x9 SEWER

PLANT No. 5

POWER HOUSE

M.H.

M.H.

MH

M.H.

M.H.

LEGEND

MW-403 ●	FILL MONITORING WELL
##	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.16

PCB PRESENCE IN SOUTHYARD FILL- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU070 JUN 23/2009

N

0 20 50ft

MW-4A
(0)

SCRAP PITS

MW-801A
(0)

MW-1A
(0)

PLANT No. 5

MW-811A
(0)

MW-802A
(0.89)

MW-404
(0.89)

MW-804A
(0)

5x9 SEWER

MW-2A
(0)

M.H.

M.H.

MH

COLC

M.H.

M.H.

MW-813A
(0)

MW-803A
(0.5)

POWER HOUSE

MW-810A
(0)

MW-809A
(0)

MW-812A
(0)

MW-3A
(0)

LEGEND

MW-801A ⊕ CLAY MONITORING WELL

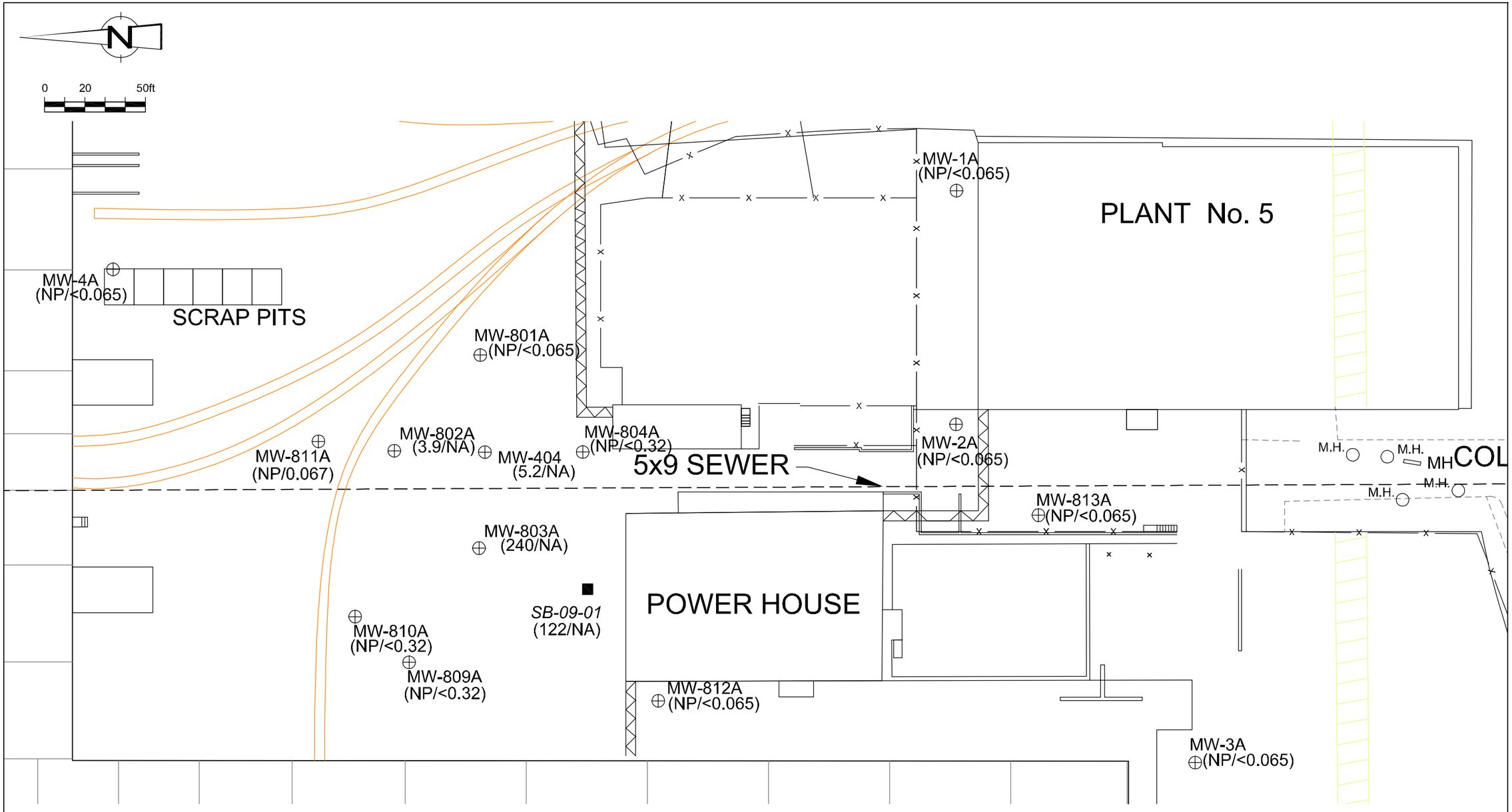
(0.05) IN-WELL OIL THICKNESS (FEET)

figure 4.17

OIL PRESENCE IN SOUTHYARD CLAY- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009

12635-03(021)GN-BU071 JUN 23/2009



LEGEND

MW-801A ⊕	CLAY MONITORING WELL
SB-09-01 ■	SOIL BORING
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.18

PCB PRESENCE IN SOUTHYARD CLAY- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU072 JUN 23/2009

N

0 20 50ft

MW-4B
(0.69)

SCRAP PITS

MW-1B
(0)

PLANT No. 5

5x9 SEWER

MW-2B
(0)

POWER HOUSE

M.H.

M.H.

MH COLO

M.H.

M.H.

LEGEND

MW-1B ⊙ BEDROCK MONITORING WELL

(0.69) IN-WELL OIL THICKNESS (FEET)

figure 4.19

OIL PRESENCE IN SOUTHYARD BEDROCK- MAY 2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

NOTE: OIL OBSERVATIONS COLLECTED MAY 18, 2009

12635-03(021)GN-BU073 JUN 23/2009

N

0 20 50ft

MW-4B
(5.55/NA)

SCRAP PITS

MW-1B
(NP/<0.065)

PLANT No. 5

5x9 SEWER

MW-2B
(NP/0.14)

POWER HOUSE

M.H.

M.H.

MH

M.H.

M.H.

LEGEND

MW-1B ⊙	BEDROCK MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.20

PCB PRESENCE IN SOUTHYARD BEDROCK- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

CBA

12635-03(021)GN-BU074 JUN 23/2009

N

0 50 150ft

MW-808B

TUNNEL

MW-106 MW-107R MW-408R MW-409B MW-409R

TUNNEL

MW-1A MW-1B PLANT No. 5

MW-4 MW-4A SCRAP PITS

MW-6B MW-6A

E-26 COOLANT PIT

MW-405

MW-2A MW-2B

COLORADO AVENUE

POWER HOUSE

MW-3A

PLANT No. 81

PLANT No. 83

MW-300A

MW-204

MW-5B

MW-205

MW-3

NORTHUMBERLAND AVE.

STREET

EAST DELAVAN AVENUE

CORNWALL AVENUE

LEGEND

MW-403 FILL MONITORING WELL

MW-205 CLAY MONITORING WELL

CP-9B BEDROCK MONITORING WELL

figure 4.21

PERIMETER MONITORING WELL LOCATIONS
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU075 JUN 23/2009

N

0 40 120ft

TUNNEL

TUNNEL

MW-409R
(NP/<0.075)

B-26 COOLANT PIT

MW-4
(NP/<0.065)

SCRAP PITS

MW-405
(NP/<0.065)

PLANT No. 81

POWER HOUSE

PLANT No. 83

MW-204
(NP/<0.065)

MW-205
(<1/<0.065)

MW-3
(NP/0.075)

LEGEND

MW-403 ●	FILL MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.22

PCB PRESENCE IN PERIMETER FILL- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU076 JUN 23/2009

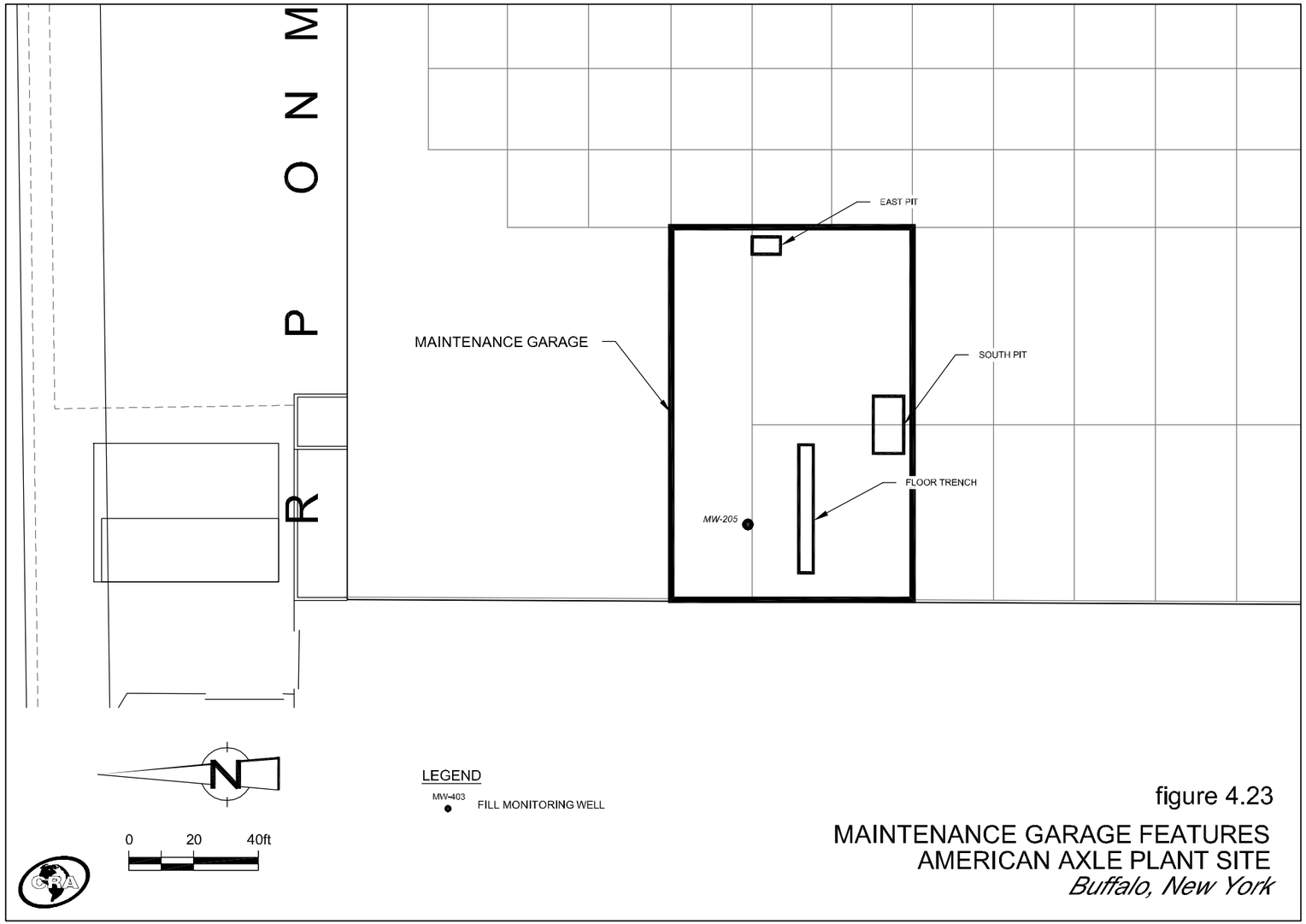


figure 4.23

MAINTENANCE GARAGE FEATURES
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU077 JUN 23/2009

N

0 50 150ft

MW-106 (NP/<0.065)
MW-107 (NP/0.083)
MW-408R (NP/<0.065)
TUNNEL
TUNNEL
MW-6A (NP/<0.065)
8-36 CONCRETE
MW-4A (NP/<0.065)
SCRAP PITS
MW-1A (NP/<0.065)
PLANT No. 5
MW-2A (NP/<0.065)
5x9 SEWER
COLORADO
POWER HOUSE
MW-3A (NP/<0.065)
PLANT No. 81
MW-300A (NP/<0.065)
PLANT No. 83
NORTHUMBERLAND AVE.
EAST DELAVAN AVENUE
CORNWALL AVENUE

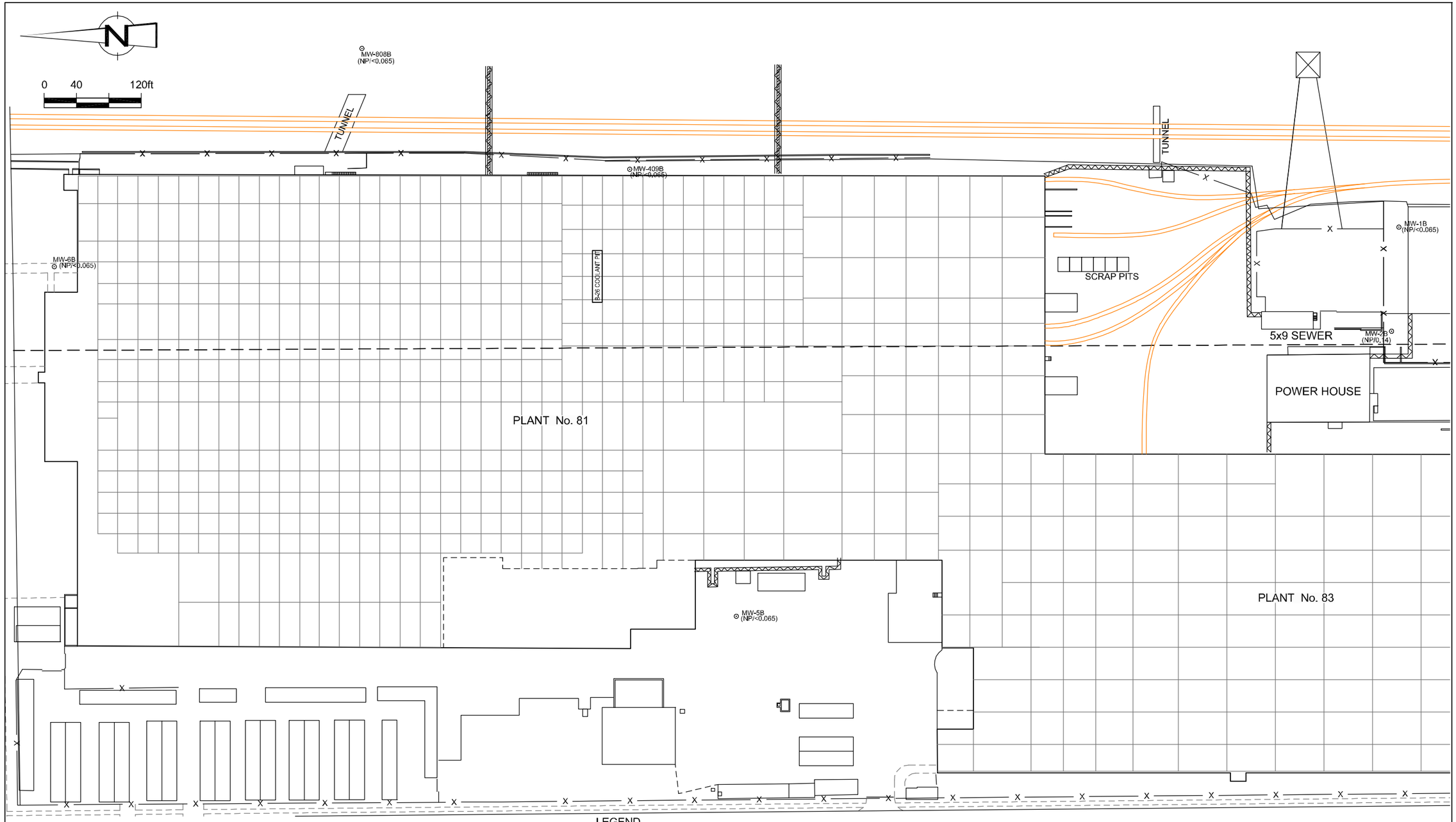
LEGEND

MW-300A ⊕	CLAY MONITORING WELL
#/#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.24

PCB PRESENCE IN PERIMETER CLAY- 2006-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU078 JUN 23/2009



LEGEND

CP-9B ⊙	BEDROCK MONITORING WELL
##.#	AVERAGE PCB CONCENTRATIONS IN OIL (PPM)/ GROUNDWATER (UG/L)
<#	NOT DETECTED AT INDICATED DETECTION LIMIT
DRY	WELL DRY- NEITHER OIL NOR GROUNDWATER PRESENT
ISV	INSUFFICIENT VOLUME TO SAMPLE
NA	GROUNDWATER NOT SAMPLED DUE TO OIL PRESENCE IN WELL
NP	OIL PHASE NOT PRESENT IN WELL

figure 4.25

PCB PRESENCE IN PERIMETER BEDROCK- 2008-2009
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU079 JUN 23/2009

ID	Feature (L/MH)	Lateral Entering from E/W	Diameter	Type of Pipe
A	MH/Vault			
B	MH/Vault			
C	MH			
D	MH	TDC		Concrete
E	MH			
F	MH			
G	MH			
H	MH			
1	L	W	18"	cor
2	L	W	22"	VCP
3	L	E	6"	VCP
4	L	TDC	6"	Steel
5	L	TDC	6"	VCP

6	L	W	6"	VCP
7	L	TDC	6"	Steel
8	L	E	6"	Steel
9	L	E	10"	VCP
10	L	E	6"	VCP
11	L	E	6"	VCP
12	L	E	6"	VCP
13	L	E	6"	VCP
14	L	W	6"	VCP
15	L	E	6"	VCP
16	L	W	4"	Steel
17	L	W	6"	VCP
18	L	W	14"	Plastic
19	L	E	10"	VCP
20	L	W	10"	VCP
21	L	E	6"	Steel
22	L	W	6"	VCP

23	L	E	6"	VCP
24	L	TDC	10"	Unknown
25	L	NW	36"	Brick
26	L	NW	14"	Steel
27	L	W	8"	Steel
28	L	W	8"	CMP
29	L	E	10"	VCP
30	L	W	6"	VCP
31	L	NE	12"	Steel
32	L	E	6"	Unknown
33	L	E	8"	Steel
34	L	W	6"	Unknown
35	L	W	24"	VCP
36	L	E	6"	Steel
37	L	TDC	8"	Steel
38	L	W	12"	VCP
39	L	SE	4"	Steel

40	L	W	10"	Steel
41	L	E	8"	Steel
42	L	TDC	8"	Steel
43	L	W	10"	Steel
44	L	W	8"	Steel
45	L	E	10"	Steel
46	L	Top W	3"	Steel
47	L	W	10"	Unknown
48	L	W	6"	VCP
49	L	E	10"	VCP
50	L	E	8"	Steel
51	L	W	6"	Steel
52	L	W	10"	Steel
53	L	E	8"	Steel
54	L	E	6"	Steel
55	L	W	10"	Steel
56	L	E	10"	Steel

57	L	W	6"	Steel
58	L	E of TDC	4"	VCP
59	L	E	10"	Steel
60	L	W	10"	Steel
61	L	W	6"	Steel
62	L	W	6"	Steel
63	L	E	8"	Steel
64	L	W	10"	Steel
65	L	E	8"	Steel
66	L	W	6"	Steel
67	L	W	24"	PVC
68	L	E	12"	VCP
69	L	E	14"	VCP

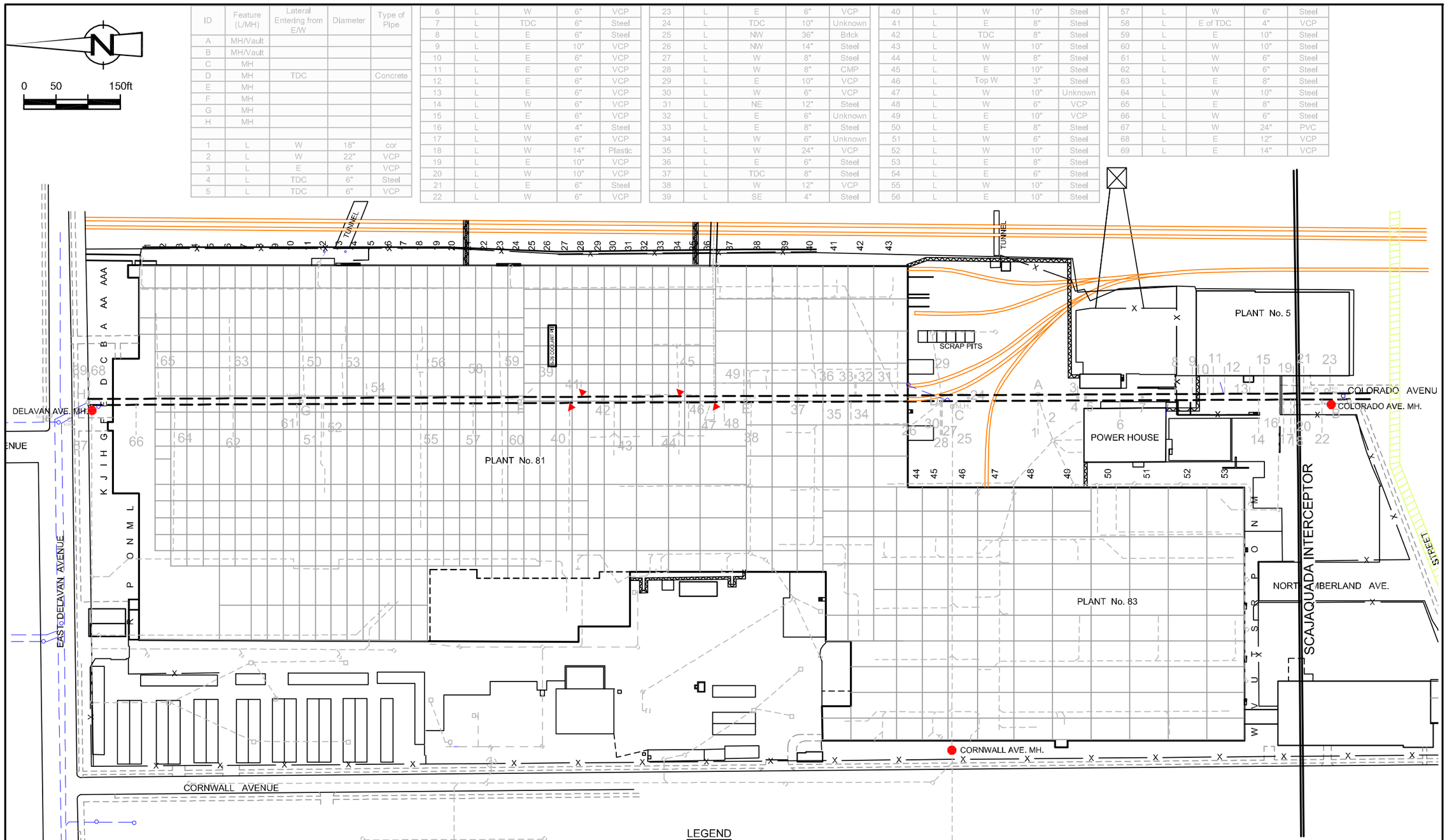
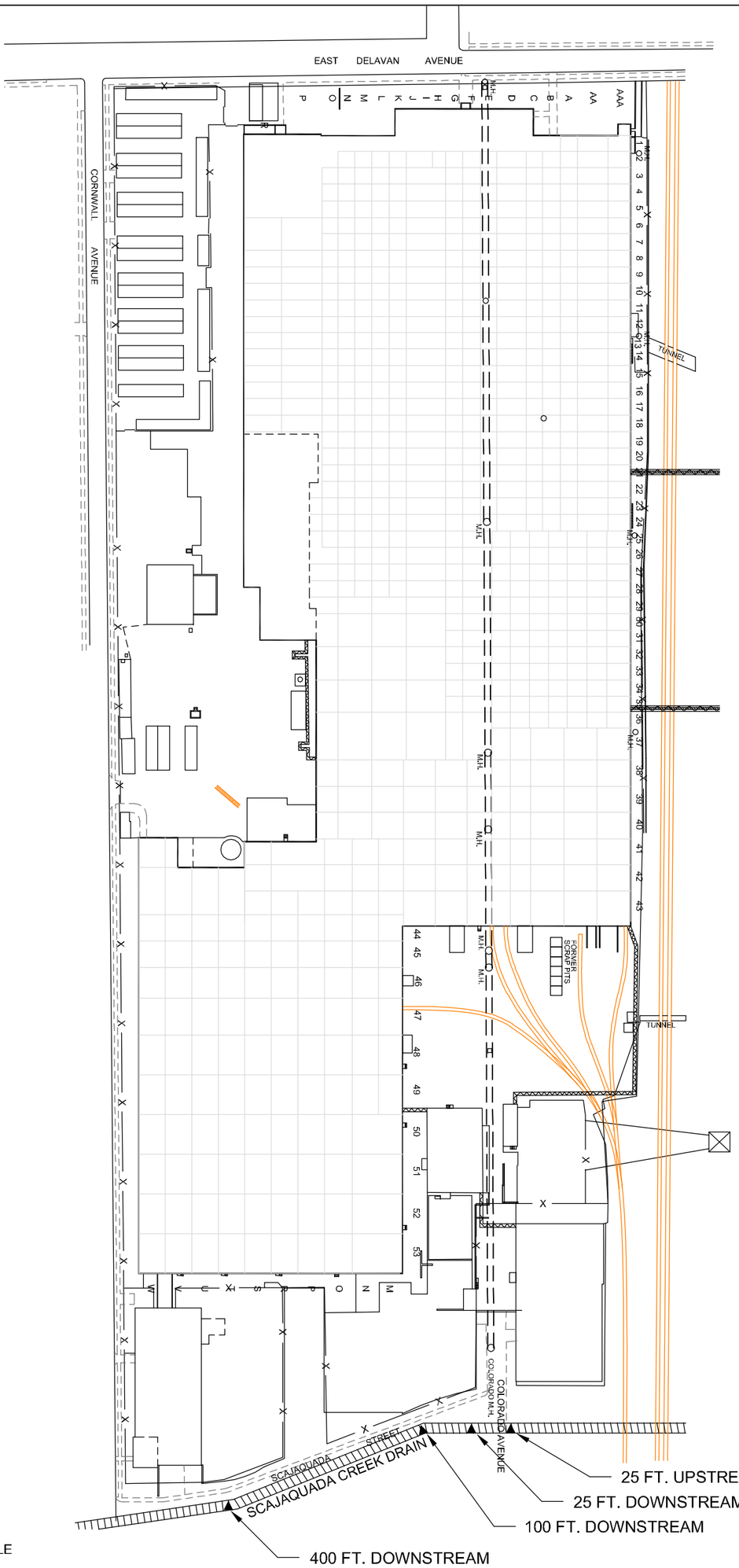
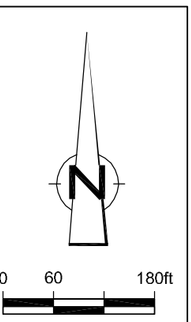


figure 4.26

5x9 SEWER SAMPLES
AMERICAN AXLE PLANT SITE
Buffalo, New York

12635-03(021)GN-BU082 JUL 07/2009





LEGEND

- M.H. ○ MANHOLE
- 5 x 9 SEWER
- ▲ SCAJAQUADA CREEK DRAIN SEDIMENT/WATER SAMPLE LOCATION
- x FENCE

figure 4.27

SCAJAQUADA CREEK DRAIN SAMPLE LOCATIONS
AMERICAN AXLE PLANT SITE
Buffalo, New York

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TABLES

TABLE 2.1

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS AND ACTIVITIES
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Company	*Year*	*Work Description*	*Purpose*	*Summary of Work*
Conestoga-Rovers and Associates, Inc.	2008-2009	Environmental investigation	Intrusive and other investigations conducted to determine the horizontal and vertical extent of oil and PCB presence at the property, chemical presence, potential path(s) of migration from the Site, and possible remedial measures	Installation of 35 monitoring wells, 15 soil borings, investigation and sampling of the Scajaquada Creek Drain, and evaluation of remedial alternatives
Conestoga-Rovers and Associates, Inc.	2005-2008	Implementation of Interim Remedial Measures	Implement remedial mearures to address obvious environmental risks associated with the Site. IRMs are intended to reduce risk to human health and the environment	Removal of subsurface oil by manual pumping from existing well network, optimization of B-26 sump operation and separation of discharge, construction and operation of B-26 groundwater treatment system, semi annual sampling of groundwater and 5x9 sewer
Conestoga-Rovers and Associates, Inc.	2001 - 2005	Environmental investigation	Intrusive and other investigations conducted to determine the horizontal and vertical extent and volume of oil present beneath the facility, chemical presence, potential path(s) of migration from the Site, and possible remedial measures	Installation of 63 monitoring wells, 6 piezometers and 22 soil borings, investigation and sampling of 5 X 9 sewer and laterals, evaluation of remedial alternatives and pilot testing
Blasland, Bouck & Lee, Inc.	1996 - 1998	Environmental investigation	An intrusive investigation conducted to determine the horizontal and vertical extent of the identified contaminant	Installation of 26 monitoring wells
Haley and Aldrich	1994	Environmental investigation	An intrusive investigation to confirm or deny presence of contaminants in soils or groundwater at levels of concern to the public health or the environment	Installation of 7 monitoring wells and 18 soil borings
Haley and Aldrich	1993	Environmental investigation	Record and background research concerning Buffalo Plant	Identification of 24 Potential Areas of Concern (PAOCs)
Wehran Engineering, P.C.	1992	Environmental investigation	An intrusive investigation in connection with contaminant presence within Plant No. 81	Installation of 2 monitoring wells and 8 soil borings
Empire Soil Investigations	1979	Railroad Track Repair	An intrusive investigation in connection with the railroad repair in the east side of Plant No. 81	Installation of 29 soil borings
Michigan Drilling Co.	1974	Plants No. 2 and 3 building additions	An intrusive investigation in connection with proposed additions to Plants No. 2 and 3	Installation of 11 soil borings
Harley Ellington-Pierce Yee Assoc.	1974	Plant No. 2 and 3 Building Additions	An intrusive investigation in connection with the proposed construction of additions to Plants No. 2 and 3	Installation of 9 test pits
Harley Ellington-Pierce Yee Assoc.	1973	Plant No. 2 and 3 Building Additions	An intrusive investigation in connection with the proposed construction of additions to Plants No. 2 and 3	Installation of 6 soil borings

TABLE 2.1

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS AND ACTIVITIES
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Company	*Year*	*Work Description*	*Purpose*	*Summary of Work*
Benjamin, Woodhouse, and Guenther, Inc.	1966	Heat Treat Building Addition	An intrusive investigation in connection with the proposed installation of the Heat Treat area	Installation of 3 soil borings
Benjamin, Woodhouse, and Guenther, Inc.	1965	Power House Construction	An intrusive investigation in connection with the construction of the Power House	Installation of 7 soil borings
Burns and McDonnel Engineering Co.	1965	Plant No. 5 Construction	An intrusive investigation in connection with the construction of Plant No. 5	Installation of 6 soil borings
Harley, Ellington, Covin & Stirtch	1964	Proposed Plant No. 3 Addition	An intrusive investigation in connection with the proposed construction of Plant No. 3	Installation of 8 soil borings
Diehl and Diehl	1964	Proposed Plant No. 2 Addition	An intrusive investigation in connection with the proposed western addition of Plant No. 2	Installation of 9 soil borings

TABLE 3.1

STRATIGRAPHIC SUMMARY
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Borehole/ Well ID	Year Installed	Ground Elevation [1]	Boring Depth (ft. BGS)	Asphalt/Concrete Depth (ft. BGS)	Asphalt/Concrete Elevation	Fill Depth (ft. BGS)	Fill Elevation	Grey or Black Clay or Silt Depth (ft. BGS)	Grey or Black Clay or Silt Elevation	Brown & Red/Brown Clay Depth (ft. BGS)	Brown & Red/Brown Clay Elevation	Black Clay Depth (ft. BGS)	Black Clay Elevation	Till Depth (ft. BGS)	Till Elevation	Top of Rock Depth (ft. BGS)
Conestoga-Rovers and Associates, Inc.																
M-1/1A	2001	67.8	19.3	0.0 to 1.0	67.8 to 66.8	1.0 to 10.0	66.8 to 57.8	Not Encountered		10.0 to 18.9	57.8 to 48.9	Not Encountered		18.9 to 19.3	48.9 to 48.5	>19.3
M-2/2A	2001	67.8	18.0	0.0 to 1.0	67.8 to 66.8	1.0 to 8.0	66.8 to 59.8	Not Encountered		8.0 to 18.0	59.8 to 49.8	Not Encountered		Not Encountered		>18
MW-1A	2001	63.8	16.1	0.0 to 0.6	63.8 to 63.2	0.6 to 9.3	63.2 to 54.5	Not Encountered		9.3 to 14.6	54.5 to 49.2	Not Encountered		14.6 to 16.1	49.2 to 47.7	>16.1
MW-2A	2001	62.0	13.1	0.0 to 0.5	62.0 to 61.5	0.5 to 6.9	61.5 to 55.1	6.9 to 8.2	55.1 to 53.8	8.2 to 12.3	53.8 to 49.7	Not Encountered		12.3 to 13.1	49.7 to 48.9	>13.1
MW-3A	2001	66.2	20.7	0.0 to 0.6	66.2 to 65.6	0.6 to 15.0	65.6 to 51.2	Not Encountered		15.0 to 20.0	51.2 to 46.2	Not Encountered		20.0 to 20.7	46.2 to 45.5	>20.7
MW-4/4A	2001	65.4	17.2	0.0 to 0.5	65.4 to 64.9	0.5 to 9.8	64.9 to 55.6	Not Encountered		9.8 to 17.2	55.6 to 48.2	Not Encountered		Not Encountered		>17.2
MW-305R	2001	67.9	17.1	0.0 to 2.0	67.9 to 65.9	2.0 to 4.2	65.9 to 63.7	4.2 to 6.0	63.7 to 61.9	6.0 to 18.0	61.9 to 49.9	Not Encountered		Not Encountered		>18
MW-401B	2001	67.9	29.8	0.0 to 1.0	67.9 to 66.9	1.0 to 2.7	66.9 to 65.2	6.5 to 8.5	61.4 to 59.4	8.5 to 18.8	59.4 to 49.1	Not Encountered		Not Encountered		>18.8
CP-7/7A	2001	68.0	16.1	0.0 to 1.5	68.0 to 66.5	1.5 to 6.3	66.5 to 61.7	Not Encountered		6.3 to 16.1	61.7 to 51.9	Not Encountered		Not Encountered		>16.1
CP-8/8A/8B	2001/2003	68.0	22.9	0.0 to 0.7	68.0 to 67.3	0.7 to 8.0	67.3 to 60.0	Not Encountered		8.0 to 15.4	60.0 to 52.6	Not Encountered		15.4 to 15.9	52.6 to 52.1	15.9
CP-9/9B	2001	68.0	26.7	0.0 to 1.5	68.0 to 66.5	1.5 to 6.5	66.5 to 61.5	Not Encountered		6.5 to 16.3	61.5 to 51.7	Not Encountered		Not Encountered		16.3
SB-1	2001	NS	2.1	0.0 to 0.8	- - -	0.8 to >2.1	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>2.1
SB-2	2001	NS	10.4	0.0 to 1.0	- - -	1.0 to 5.3	- - -	Not Encountered		5.3 to 10.4	- - -	Not Encountered		Not Encountered		>10.4
SB-3	2001	NS	6.6	0.0 to 1.0	- - -	1.0 to >6.6	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>6.6
SB-4	2001	NS	10.0	0.0 to 1.0	- - -	1.0 to 6.5	- - -	Not Encountered		6.5 to 10.0	- - -	Not Encountered		Not Encountered		>10.0
SB-5	2001	NS	3.8	0.0 to 0.8	- - -	0.8 to >3.8	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3.8
SB-6	2001	NS	1.5	0.0 to 0.6	- - -	0.6 to >1.5	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>1.5
SB-16	2001	NS	4.2	0.0 to 1.0	- - -	1.0 to >4.2	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>4.2
SB-20	2001	NS	5.5	0.0 to 1.0	- - -	1.0 to 3.8	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>5.5
				3.8 to 4.2	- - -	4.2 to 5.5	- - -									
SB-21	2001	NS	3.1	0.0 to 1.8	- - -	1.8 to >3.1	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3.1
SB-22	2001	NS	1.2	0.0 to 0.6	- - -	0.6 to >1.2	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>1.2
M-3/3A	2002	67.9	16.7	0.0 to 1.0	67.9 to 66.9	1.0 to 8.0	66.9 to 59.9	Not Encountered		8.0 to 16.7	59.9 to 51.2	Not Encountered		Not Encountered		>16.7
CP-1	2002	68.1	8.0	0.0 to 0.5	68.1 to 67.6	0.5 to 4.5	67.6 to 63.6	Not Encountered		4.5 to 8.0	63.6 to 60.1	Not Encountered		Not Encountered		>8.0
CP-2/2A	2002	68.1	15.3	0.0 to 0.5	68.1 to 67.6	0.5 to 8.0	67.6 to 60.1	Not Encountered		10.0 to 15.3	58.1 to 52.8	Not Encountered		Not Encountered		>15.3
				8.0 to 10.0	60.1 to 58.1											
CP-3B	2002	68.0	19.0	0.0 to 1.0	68.0 to 67.0	1.0 to 2.2	67.0 to 65.8	4.0 to 6.0	64.0 to 62.0	6.0 to 14.5	62.0 to 53.5	Not Encountered		Not Encountered		14.5
				2.2 to 4.0	65.8 to 64.0											
CP-4/4A	2002	68.0	17.0	0.0 to 1.0	68.0 to 67.0	1.0 to 5.0	67.0 to 63.0	Not Encountered		5.0 to 12.6	63.0 to 55.4	12.6 to 14.8	55.4 to 53.2	14.8 to 17.0	53.2 to 51.0	>17
CP-11A/11B	2002/2003	67.7	22.9	0.0 to 1.0	67.7 to 66.7	1.0 to 5.6	66.7 to 62.1	Not Encountered		5.6 to 16.0	62.1 to 51.7	Not Encountered		Not Encountered		16.0
CP-12A	2002	68.0	17.2	0.0 to 1.0	68.0 to 67.0	1.0 to 8.2	67.0 to 59.8	8.2 to 13.5	59.8 to 54.5	13.5 to 17.0	54.5 to 51.0	17.0 to 17.2	51.0 to 50.8	Not Encountered		>17.2
CP-13/13A	2002	67.9	18.1	0.0 to 0.8	67.9 to 67.2	0.8 to 6.4	67.2 to 61.5	Not Encountered		6.3 to 16.0	61.6 to 51.9	16.0 to 18.1	51.9 to 49.8	Not Encountered		>18.1
CP-14/14A/14R/14B	2002/2003/2004	67.9	24.0	0.0 to 1.0	67.9 to 66.9	1.0 to 4.5	66.9 to 63.4	4.5 to 8.0	63.4 to 59.9	8.0 to 16.0	59.9 to 51.9	Not Encountered		16.0 to 16.9	51.9 to 51.0	16.9
MW-309A	2002	67.9	16.7	0.0 to 1.0	67.9 to 66.9	1.0 to 8.0	66.9 to 59.9	Not Encountered		8.0 to 14.8	59.9 to 53.1	15.0 to 16.2	52.9 to 51.7	14.8 to 16.7	53.1 to 51.2	>16.7
T-1/1B	2002/2003	67.8	39.3	0.0 to 0.6	67.8 to 67.2	0.6 to 13.4	67.2 to 54.4	13.4 to 19.7	54.4 to 48.1	Not Encountered		Not Encountered		Not Encountered		19.7
CP-16B	2003	67.9	22.8	0.0 to 1.0	67.9 to 66.9	1.0 to 6.2	66.9 to 61.7	Not Encountered		6.2 to 16.0	61.7 to 51.9	Not Encountered		Not Encountered		16.0
CP-17A	2003	67.9	16.3	0.0 to 1.0	67.9 to 66.9	1.0 to 6.0	66.9 to 61.9	Not Encountered		6.0 to 16.3	61.9 to 51.6	Not Encountered		Not Encountered		>16.3
CP-18B	2003	68.0	27.0	0.0 to 1.0	68.0 to 67.0	1.0 to 8.3	67.0 to 59.7	Not Encountered		8.3 to 16.5	59.7 to 51.5	Not Encountered		Not Encountered		16.5
CP-19A	2003	67.9	16.8	0.0 to 0.9	67.9 to 67.0	0.9 to 6.7	67.0 to 61.2	Not Encountered		6.7 to 16.8	61.2 to 51.1	Not Encountered		Not Encountered		>16.8
MW-300A	2003	67.8	19.6	0.0 to 0.8	67.8 to 67.0	0.8 to 5.1	67.0 to 62.7	5.1 to 6.1	62.7 to 61.7	6.1 to 18.2	61.7 to 49.6	Not Encountered		18.2 to 19.6	49.6 to 48.2	>19.6
CP-15A	2004	67.9	17.0	0.0 to 1.0	67.9 to 66.9	1.0 to 8.3	66.9 to 59.6	Not Encountered		8.3 to 17.0	59.6 to 50.9	Not Encountered		Not Encountered		>17
CP-20B	2004	67.9	24.5	0.0 to 1.0	67.9 to 66.9	1.0 to 6.0	66.9 to 61.9	Not Encountered		6.0 to 17.6	61.9 to 50.3	Not Encountered		Not Encountered		17.6
CP-21B	2004	67.9	25.9	0.0 to 1.0	67.9 to 66.9	1.0 to 8.0	66.9 to 59.9	Not Encountered		8.0 to 18.4	59.9 to 49.5	Not Encountered		Not Encountered		18.4
CP-22B	2004	67.8	29.2	0.0 to 1.0	67.8 to 66.8	1.0 to 6.5	66.8 to 61.3	Not Encountered		6.5 to 16.5	61.3 to 51.3	Not Encountered		Not Encountered		16.5
CP-23/23B	2004	67.8	23.5	0.0 to 0.8	67.8 to 67.0	0.8 to 6.0	67.0 to 61.8	Not Encountered		6.0 to 16.4	61.8 to 51.4	Not Encountered		Not Encountered		16.4
CP-24/24A/24B	2004	67.9	25.7	0.0 to 1.0	67.9 to 66.9	1.0 to 7.5	66.9 to 60.4	Not Encountered		7.5 to 17.5	60.4 to 50.4	Not Encountered		17.5 to 18.7	50.4 to 49.2	18.7
CP-25/25A/25B	2004	67.9	26.1	0.0 to 0.8	67.9 to 67.1	0.8 to 5.6	67.1 to 62.3	Not Encountered		5.6 to 17.0	62.3 to 50.9	Not Encountered		17.0 to 18.6	50.9 to 49.3	18.6
CP-26/26A/26B	2004	67.8	26.0	0.0 to 0.9	67.8 to 66.9	0.9 to 8.8	66.9 to 59.0	Not Encountered		8.8 to 16.3	59.0 to 51.5	Not Encountered		16.3 to 19.0	51.5 to 48.8	19.0
CP-27/27A/27B	2004	67.8	24.0	0.0 to 0.9	67.8 to 66.9	0.9 to 8.8	66.9 to 59.0	Not Encountered		8.8 to 15.8	59.0 to 52.0	Not Encountered		15.8 to 17.0	52.0 to 50.8	17.0
CP-28/28B	2004	67.7	26.5	0.0 to 0.7	67.7 to 67.0	0.7 to 8.2	67.0 to 59.5	Not Encountered		8.2 to 19.5	59.5 to 48.2	Not Encountered		Not Encountered		19.5
GP-1	2004	NS	5.6	0.0 to 0.8	- - -	0.8 to 5.6	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>5.6
GP-2	2004	NS	4.4	0.0 to 0.8	- - -	0.8 to 4.4	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>4.4
GP-3	2004	67.8	16.0	0.0 to 0.8	67.8 to 67.0	0.8 to 6.0	67.0 to 61.8	Not Encountered		6.0 to 16.0	61.8 to 51.8	Not Encountered		Not Encountered		>16.0
GP-4	2004	NS	5.0	0.0 to 0.8	- - -	0.8 to 5.0	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>5.0
GP-5	2004	NS	5.0	0.0 to 0.8	- - -	0.8 to 5.0	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>5.0
GP-6	2004	67.8	16.0	0.0 to 1.0	67.8 to 66.8	1.0 to 6.6	66.8 to 61.2	Not Encountered		6.6 to 16.0	61.2 to 51.8	Not Encountered		Not Encountered		>16.0
GP-7	2004	NS	16.0	0.0 to 1.0	- - -	1.0 to 7.5	- - -	Not Encountered		7.5 to 16.0	- - -	Not Encountered		Not Encountered		>16.0
GP-8	2004	67.9	16.0	0.0 to 0.9	67.9 to 67.0	0.9 to 8.8	67.0 to 59.1	Not Encountered		8.8 to 16.0	59.1 to 51.9	Not Encountered		Not Encountered		>16.0
GP-9	2004	67.8	16.0	0.0 to 0.8	67.8 to 67.0	0.8 to 5.6	67.0 to 62.2	Not Encountered		5.6 to 16.0	62.2 to 51.8	Not Encountered		Not Encountered		>16.0
GP-10	2004	NS	5.0	0.0 to 0.9	- - -	0.9 to 5.0	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>5.0

TABLE 3.1

STRATIGRAPHIC SUMMARY
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Borehole/ Well ID	Year Installed	Ground Elevation [1]	Boring Depth (ft. BGS)	Asphalt/Concrete Depth (ft. BGS)	Asphalt/Concrete Elevation	Fill Depth (ft. BGS)	Fill Elevation	Grey or Black Clay or Silt Depth (ft. BGS)	Grey or Black Clay or Silt Elevation	Brown & Red/Brown Clay Depth (ft. BGS)	Brown & Red/Brown Clay Elevation	Black Clay Depth (ft. BGS)	Black Clay Elevation	Till Depth (ft. BGS)	Till Elevation	Top of Rock Depth (ft. BGS)
GP-11	2004	NS	4.0	0.0 to 0.7	- - -	0.7 to 4.0	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>4.0
GP-12	2004	67.8	16.0	0.0 to 0.7	67.8 to 67.1	0.7 to 5.3	67.1 to 62.5	5.3 to 8.2	62.5 to 59.6	8.2 to 16.0	59.6 to 51.8	Not Encountered		Not Encountered		>16.0
GP-13	2004	NS	3.8	0.0 to 0.7	- - -	0.7 to 3.8	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3.8
GP-14	2004	NS	3.8	0.0 to 0.7	- - -	0.7 to 3.8	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3.8
GP-15	2004	NS	3.8	0.0 to 0.7	- - -	0.7 to 3.8	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3.8
GP-16	2004	NS	3.8	0.0 to 0.7	- - -	0.7 to 3.8	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3.8
GP-17	2004	NS	16.0	0.0 to 0.7	- - -	0.7 to 5.5	- - -	Not Encountered		5.5 to 16.0	- - -	Not Encountered		Not Encountered		>16.0
CP-1B	2008	68.1	17.4	0.0 to 0.5	68.1 to 67.6	0.5 to 4.5	67.6 to 63.6	Not Encountered		4.5 to 12.4	63.6 to 55.7	Not Encountered		Not Encountered		12.4
CP-4B	2008	68.1	22.7	0.0 to 0.8	68.1 to 67.3	0.8 to 1.2	67.3 to 66.9	Not Encountered		4.2 to 17.7	63.9 to 50.4					17.7
				1.2 to >4	66.9 to <64.1	>4 to 4.2	<64.1 to 63.9									
MW-1B	2008	63.9	22.8	0.0 to 1.0	63.9 to 62.9	1.0 to 1.5	62.9 to 62.4	Not Encountered		1.5 to 15.6	62.4 to 48.3	Not Encountered		Not Encountered		15.6
MW-4B	2008	65.7	23.5	Not sampled see MW-4 for Stratigraphy												16.5
MW-5B	2008	67.6	24.5	0.0 to 1.0	67.6 to 66.6	1.0 to 1.7	66.6 to 65.9	Not Encountered		1.7 to 16.8	65.9 to 50.8	Not Encountered		Not Encountered		16.8
MW-6A	2008	67.2	8.8	Not Encountered		Not Encountered		Not Encountered		0.4 to 8.8	66.8 to 58.4	Not Encountered		Not Encountered		>8.8
MW-6B	2008	67.2	20.6	Not Encountered		Not Encountered		Not Encountered		0.4 to 8.6	66.8 to 58.6	Not Encountered		Not Encountered		8.6
MW-402R	2008	67.9	13.8	0.0 to 0.8	67.9 to 67.1	0.8 to 3.5	67.1 to 64.4	Not Encountered		Not Encountered		Not Encountered		Not Encountered		13.8
MW-409B	2008	64.9	24.9	0.0 to 1.6	64.9 to 63.3	1.6 to 3.0	63.3 to 61.9	Not Encountered		3 to 12.4	61.9 to 52.5	Not Encountered		Not Encountered		12.4
MW-801A	2008	66.9	18.7	0.0 to 1.5	66.9 to 65.4	1.5 to 4.8	65.4 to 62.1	Not Encountered		4.8 to 18.7	62.1 to 48.2	Not Encountered		Not Encountered		18.7
MW-802A	2008	66.3	18.6	0.0 to 1.5	66.3 to 64.8	1.5 to 4.0	64.8 to 62.3	Not Encountered		4.0 to 18.6	62.3 to 47.7	Not Encountered		Not Encountered		18.6
MW-803A	2008	66.2	16.1	0.0 to 1.5	66.2 to 64.7	1.5 to 8.7	64.7 to 57.5	Not Encountered		8.7 to 16.1	57.5 to 50.1	Not Encountered		Not Encountered		16.1
MW-804A	2008	66.9	17.7	0.0 to 1.5	66.9 to 65.4	1.5 to 4.0	65.4 to 62.9	Not Encountered		4.0 to 17.7	62.9 to 49.2	Not Encountered		Not Encountered		17.7
MW-805A	2008	67.9	14.9	0.0 to 1.7	67.9 to 66.2	1.7 to 4.0	66.2 to 63.9	Not Encountered		4.0 to 19.4	63.9 to 48.5	Not Encountered		Not Encountered		14.9
BH-5	2008	68.0	5.5	0.0 to 0.8	68.0 to 67.2	0.8 to 4.5	67.2 to 63.5	Not Encountered		4.0 to 19.4	64.0 to 48.6	Not Encountered		Not Encountered		>5.5
				4.0 to 4.5	64.0 to 63.5	4.5 to >5.5	63.5 to <62.5			4.0 to 19.4	-4.0 to -19.4			Not Encountered		
BH-6	2008	67.8	8.0	0.0 to 1.0	67.8 to 66.8	1.0 to 5.5	66.8 to 62.3	Not Encountered		5.5 to >8	62.3 to >59.8	Not Encountered		Not Encountered		>8
BH-7	2008	67.9	6.0	0.0 to 1.0	67.9 to 66.9	1.0 to 3.0	66.9 to 64.9	Not Encountered		5.5 to >6	62.4 to <61.9	Not Encountered		Not Encountered		>6
				3.0 to 3.5	64.9 to 64.4	3.5 to 5.5	64.4 to 62.4									
BH-8	2008	68.0	3.0	0.0 to 1.0	68.0 to 67.0	1.0 to >3	67.0 to <65	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>3
BH-9	2008	68.1	12.0	0.0 to 1.0	68.1 to 67.1	1.0 to 8.5	67.1 to 59.6	Not Encountered		8.6 to >12	59.5 to <56.1	Not Encountered		Not Encountered		>12
				8.0 to 8.6	60.1 to 59.5											
BH-10	2008	67.8	4.7	0.0 to 0.5	67.8 to 67.3	0.5 to >4.7	67.3 to <63.1	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>4.7
BH-11	2008	67.9	8.0	0.0 to 1.0	67.9 to 66.9	1.0 to 3.5	66.9 to 64.4	Not Encountered		3.5 to >8	64.4 to <59.9	Not Encountered		Not Encountered		>8
BH-12	2008	67.9	12.0	0.0 to 1.0	67.9 to 66.9	1.0 to 4.5	66.9 to 63.4	Not Encountered		4.5 to >12	63.4 to <55.9	Not Encountered		Not Encountered		>12
BH-14	2008	68.1	12.0	0.0 to 1.0	68.1 to 67.1	1.0 to 5.0	67.1 to 63.1	Not Encountered		5.0 to >12	63.1 to <56.1	Not Encountered		Not Encountered		>12
BH-15	2008	68.1	14.5	0.0 to 1.0	68.1 to 67.1	1.0 to 5.0	67.1 to 63.1	Not Encountered		5.0 to 14.5	63.1 to 53.6	Not Encountered		Not Encountered		14.5
BH-17	2008	68.1	5.3	0.0 to 0.8	68.1 to 67.3	0.8 to >5.3	67.3 to <62.8	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>503
BH-18	2008	68.1	6.4	0.0 to 1.6	68.1 to 66.5	1.6 to >6.4	66.5 to <61.7	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>6.4
BH-19	2008	67.9	2.5	0.0 to 1.0	67.9 to 66.9	1.0 to >2.5	66.9 to <65.4	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>2.5
BH-20	2008	67.9	15.0	0.0 to 0.8	67.9 to 67.1	0.8 to 4.3	67.1 to 63.6	Not Encountered		4.3 to 15	63.6 to 52.9	Not Encountered		Not Encountered		>15
BH-23	2008	68.1	16.9	0.0 to 0.6	68.1 to 67.5	0.6 to 2.3	67.5 to 65.8	Not Encountered		2.3 to 16.9	65.8 to 51.2	Not Encountered		Not Encountered		16.9
CP-29	2009	67.8	8.0	0.0 to 1.0	67.8 to 66.8	1.0 to 6.9	66.8 to 60.9	Not Encountered		6.9 to >8	60.9 to <59.8	Not Encountered		Not Encountered		>8
CP-30	2009	68.0	7.0	0.0 to 1.0	68.0 to 67.0	1.0 to 6.4	67.0 to 61.6	Not Encountered		6.4 to >7	61.6 to <61	Not Encountered		Not Encountered		>7
CP-31/31A	2009	68.1	17.2	0.0 to 1.0	68.1 to 67.1	1.0 to 7.0	67.1 to 61.1	Not Encountered		7.0 to 17.2	62.4 to 50.9	Not Encountered		Not Encountered		>17.2
CP-32/32A	2009	68.0	17.4	0.0 to 1.0	68.0 to 67.0	1.0 to 8.0	67.0 to 60.0	Not Encountered		8.0 to 17.4	62.4 to 50.6	Not Encountered		Not Encountered		17.4
CP-33	2009	68.0	9.0	0.0 to 1.0	68.0 to 67.0	1.0 to 8.5	67.0 to 59.5	Not Encountered		8.5 to >9	62.4 to <59.0	Not Encountered		Not Encountered		>9
CP-34/34A	2009	67.8	18.1	0.0 to 1.0	67.8 to 66.8	1.0 to 8.0	66.8 to 59.8	Not Encountered		8.0 to 18.1	62.4 to 49.7	Not Encountered		Not Encountered		18.1
MW-2B	2009	61.9	32.9	0.0 to 1.0	61.9 to 60.9	1.0 to 4.0	60.9 to 57.9	Not Encountered		4.0 to 12.9	57.9 to 49.0	Not Encountered		Not Encountered		12.9
MW-102B	2009	68.1	21.1	0.0 to 1.0	68.1 to 67.1	1 to 7.5	67.1 to 60.6	Not Encountered		7.5 to 14.1	60.6 to 54.0	Not Encountered		Not Encountered		14.1
MW-107R	2009	66.0	12.6	0.0 to 1.5	66.0 to 64.5	Not Encountered				1.5 to 12.6	64.5 to 53.4	Not Encountered		Not Encountered		>12.6
MW-408R	2009	64.9	12.5	0.0 to 0.8	64.9 to 64.1	0.8 to 4.0	64.1 to 60.9	Not Encountered		4.0 to 12.5	60.9 to 52.4	Not Encountered		Not Encountered		>12.5
MW-409R	2009	64.9	7.0	Not sampled see MW-408R for Stratigraphy												
MW-806B	2009	67.8	28.0	0.0 to 1.0	67.8 to 66.8	1.0 to 6.0	66.8 to 61.8	Not Encountered		6.0 to 15.8	61.8 to 52.0	Not Encountered		Not Encountered		15.8
MW-807	2009	68.1	11.5	0.0 to 1.5	68.1 to 66.6	1.5 to 4.0	66.6 to 64.1	Not Encountered		4.0 to 11.5	64.1 to 56.6	Not Encountered		Not Encountered		11.5
MW-808B	2009	71.7	22.3	0.0 to 0.5	71.7 to 71.2	0.5 to 7.0	71.2 to 64.7	Not Encountered		7.0 to 16.2	64.7 to 55.5	Not Encountered		Not Encountered		16.2
MW-809A	2009	65.7	17.0	0.0 to 1.0	65.7 to 64.7	1.0 to 4.0	64.7 to 61.7	Not Encountered		4.0 to 17	61.7 to 48.7	Not Encountered		Not Encountered		>17
MW-810A	2009	65.8	17.1	0.0 to 1.0	65.8 to 64.8	1.0 to 4.0	64.8 to 61.8	Not Encountered		4.0 to 17.1	61.8 to 48.7	Not Encountered		Not Encountered		>17.1
MW-811A	2009	65.9	16.4	0.0 to 1.0	65.9 to 64.9	1.0 to 4.0	64.9 to 61.9	Not Encountered		4.0 to 16.4	61.9 to 49.5	Not Encountered		Not Encountered		>16.4
MW-812A	2009	65.9	19.3	0.0 to 1.0	65.9 to 64.9	1.0 to 5.0	64.9 to 60.9	Not Encountered		5.0 to 19.3	60.9 to 46.6	Not Encountered		Not Encountered		>19.3
MW-813A	2009	61.7	13.5	0.0 to 1.0	61.7 to 60.7	1.0 to 6.0	60.7 to 55.7	Not Encountered		6.0 to 13.5	55.7 to 48.2	Not Encountered		Not Encountered		>13.5
BH-09-01	2009	66.3	17.3	0.0 to 1.0	66.3 to 65.3	1.0 to 3.0	65.3 to 63.3	Not Encountered		3.0 to 17.3	63.3 to 49.0	Not Encountered		Not Encountered		>17.3
BH-09-05	2009	66.4	18.5	0.0 to 1.0	66.4 to 65.4	1.0 to 4.0	65.4 to 62.4	Not Encountered		4.0 to 18.5	62.4 to 47.9	Not Encountered		Not Encountered		>18.5

TABLE 3.1

STRATIGRAPHIC SUMMARY
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Borehole/ Well ID	Year Installed	Ground Elevation [1]	Boring Depth (ft. BGS)	Asphalt/Concrete Depth (ft. BGS)	Asphalt/Concrete Elevation	Fill Depth (ft. BGS)	Fill Elevation	Grey or Black Clay or Silt Depth (ft. BGS)	Grey or Black Clay or Silt Elevation	Brown & Red/Brown Clay Depth (ft. BGS)	Brown & Red/Brown Clay Elevation	Black Clay Depth (ft. BGS)	Black Clay Elevation	Till Depth (ft. BGS)	Till Elevation	Top of Rock Depth (ft. BGS)
Blasland, Bouck & Lee, Inc.																
MW-204	1996	67.0	11.0	0.0 to 0.5	67.0 to 66.5	Not Encountered		0.5 to 6.0	66.5 to 61.0	6.0 to >11.0	61.0 to <86.5	Not Encountered		Not Encountered		>11.0
MW-300	1997	67.7	6.8	0.0 to 0.5	67.7 to 67.2	0.5 to 4.5	67.2 to 63.2	Not Encountered		4.5 to >6.8	63.2 to <91.5	Not Encountered		Not Encountered		>6.8
MW-301	1997	67.9	6.5	0.0 to 0.5	67.9 to 67.4	0.5 to 4.5	67.4 to 63.4	Not Encountered		4.5 to >6.5	63.4 to <92.0	Not Encountered		Not Encountered		>6.5
MW-302	1997	NS	7.9	0.0 to 0.5	- - -	0.5 to 6.0	- - -	Not Encountered		6.0 to >7.9	- - -	Not Encountered		Not Encountered		>7.9
MW-303	1997	67.9	7.4	0.0 to 0.5	67.9 to 67.4	0.5 to 6.4	67.4 to 61.5	Not Encountered		6.4 to >7.4	61.5 to <91.1	Not Encountered		Not Encountered		>7.4
MW-304	1997	NS	7.5	0.0 to 0.5	- - -	0.5 to 6.5	- - -	Not Encountered		6.5 to >7.5	- - -	Not Encountered		Not Encountered		>7.5
MW-306	1997	67.9	12.5	0.0 to 0.5	67.9 to 67.4	0.5 to 4.0	67.4 to 63.9	Not Encountered		4.0 to >12.5	63.9 to <55.4	Not Encountered		Not Encountered		>12.5
MW-307	1997	68.1	18.5	0.0 to 0.5	68.1 to 67.6	0.5 to 6.0	67.6 to 62.1	Not Encountered		6.0 to 17.0	62.1 to 51.1	Not Encountered		17.0 to 18.5	51.1 to 49.6	18.5
MW-308	1997	NS	17.5	0.0 to 3.8	- - -	3.8 to 12.0	- - -	Not Encountered		12.0 to 17.5	- - -	Not Encountered		Not Encountered		17.5
MW-309	1997	67.9	9.5	0.0 to 0.5	67.9 to 67.4	0.5 to >9.5	67.4 to <58.4	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>9.5
MW-400	1998	67.9	18.8	0.0 to 1.0	67.9 to 66.9	1.0 to 2.7	66.9 to 65.2	6.5 to 8.5	61.4 to 59.4	8.5 to >18.8	59.4 to <49.1	Not Encountered		Not Encountered		>18.8
				2.7 to 4.5	65.2 to 63.4	4.5 to 6.5	63.4 to 61.4									
MW-402	1998	68.0	14.5	0.0 to 1.0	68.0 to 67.0	1.0 to 2.2	67.0 to 65.8	4.0 to 6.0	64.0 to 62.0	6.0 to 14.5	62.0 to 53.5	Not Encountered		Not Encountered		14.5
				2.2 to 4.0	65.8 to 64.0											
MW-404	1998	66.1	16.3	0.0 to 1.0	66.1 to 65.1	1.0 to 4.0		Not Encountered		4.0 to 16.3	62.1 to 49.8	Not Encountered		Not Encountered		16.3
MW-406	1998	67.7	17.6	0.0 to 1.0	67.7 to 66.7	1.0 to 2.0	66.7 to 65.7	Not Encountered		7.5 to 17.6	60.2 to 50.1	Not Encountered		Not Encountered		>17.6
				2.0 to 3.5	65.7 to 64.2	3.5 to 7.5	64.2 to 60.2									
MW-408	1998	64.9	12.0	0.0 to 0.8	64.9 to 64.1	Not Encountered		0.8 to 7.0	64.1 to 57.9	7.0 to 12.0	57.9 to 52.9	Not Encountered		Not Encountered		12.0
MW-500	1998	NS	18.5	0.0 to 2.0	- - -	Not Encountered		2.0 to 6.0	- - -	6.0 to 18.0	- - -	Not Encountered		Not Encountered		18.5
MW-405	1999	66.1	7.0	0.0 to 1.0	66.1 to 65.1	1.0 to 4.0	65.1 to 62.1	Not Encountered		4.0 to 7.0	62.1 to 59.1	Not Encountered		Not Encountered		>7.0
H&A of New York																
MW-101	1994	*68.3*	6.4	0.0 to 1.0	68.3 to 67.3	1.0 to 6.4	67.3 to 61.9	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>6.4
MW-102	1994	68.1	13.5	0.0 to 1.0	68.1 to 67.1	1.0 to 10.0	67.1 to 58.1	Not Encountered		10.0 to 12.0	58.1 to 56.1	Not Encountered		12.0 to 13.5	56.1 to 54.6	>13.5
MW-103	1994	67.8	11.5	0.0 to 0.5	67.8 to 67.3	0.5 to 11.5	67.3 to 56.3	Not Encountered		Not Encountered		Not Encountered		Not Encountered		11.5
MW-104	1994	65.8	15.3	0.0 to 1.0	65.8 to 64.8	1.0 to 4.0	64.8 to 61.8	Not Encountered		4.0 to 15.3	61.8 to 50.5	Not Encountered		Not Encountered		>15.3
MW-105	1994	65.8	8.2	0.0 to 0.5	65.8 to 65.3	0.5 to 1.5	65.3 to 64.3	Not Encountered		1.5 to 8.0	64.3 to 57.8	Not Encountered		Not Encountered		8.0
MW-106	1994	*67.1*	11.5	0.0 to 0.8	67.1 to 66.3	0.8 to 2.5	66.3 to 64.6	Not Encountered		2.5 to 11.5	64.6 to 55.6	Not Encountered		Not Encountered		>11.5
MW-107	1994	*66.2*	13.0	0.0 to 1.0	66.2 to 65.2	1.0 to 1.7	65.2 to 64.5	Not Encountered		1.7 to 13.0	64.5 to 53.2	Not Encountered		Not Encountered		>13
SB-101	1994	68.2	10.0	0.0 to 1.0	68.2 to 67.2	1.0 to 10.0	67.2 to 58.2	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>10
SB-102	1994	68.2	17.0	0.0 to 6.5	68.2 to 61.7	Not Encountered		6.5 to 8.0	61.7 to 60.2	8.0 to 17.0	60.2 to 51.2	Not Encountered		Not Encountered		>17
SB-103	1994	68.1	16.9	0.0 to 1.0	68.1 to 67.1	1.0 to 5.0	67.1 to 63.1	5.0 to 6.0	63.1 to 62.1	6.0 to 14.0	62.1 to 54.1	Not Encountered		14.0 to 16.9	54.1 to 51.2	>16.9
SB-104	1994	68.1	9.0	0.0 to 1.0	68.1 to 67.1	1.0 to 8.0	67.1 to 60.1	Not Encountered		8.0 to >9.0	60.1 to <89.1	Not Encountered		Not Encountered		>9.0
SB-105	1994	68.1	9.0	0.0 to 1.0	68.1 to 67.1	1.0 to 6.0	67.1 to 62.1	Not Encountered		6.0 to >9.0	62.1 to <89.1	Not Encountered		Not Encountered		>9.0
SB-106	1994	68.1	9.0	0.0 to 1.0	68.1 to 67.1	1.0 to >9.0	67.1 to <89.1	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>9.0
SB-107	1994	68.1	10.0	0.0 to 1.5	68.1 to 66.6	1.5 to 9.8	66.6 to 58.3	Not Encountered		9.8 to >10.0	58.3 to <88.1	Not Encountered		Not Encountered		>10.0
SB-108	1994	68.1	11.0	0.0 to 0.5	68.1 to 67.6	0.5 to 7.0	67.6 to 61.1	Not Encountered		7.0 to >11.0	61.1 to <87.1	Not Encountered		Not Encountered		>11.0
SB-109	1994	68.1	17.1	0.0 to 1.0	68.1 to 67.1	1.0 to 7.5	67.1 to 60.6	Not Encountered		7.5 to 14.0	60.6 to 54.1	Not Encountered		14.0 to 17.1	54.1 to 51.0	>17.1
SB-110	1994	69.7	10.0	0.0 to 1.0	69.7 to 68.7	1.0 to 10.0	68.7 to 59.7	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>10.0
SB-111	1994	65.5	15.7	0.0 to 1.0	65.5 to 64.5	1.0 to 5.5	64.5 to 60.0	Not Encountered		5.5 to 15.7	60.0 to 49.8	Not Encountered		Not Encountered		>15.7
SB-112	1994	65.6	10.0	Not Encountered		0.0 to 4.0	65.6 to 61.6	Not Encountered		4.0 to >10.0	61.6 to <85.6	Not Encountered		Not Encountered		>10.0
SB-113	1994	77.0	10.0	Not Encountered		0.0 to 3.5	77.0 to 73.5	Not Encountered		3.5 to >10.0	73.5 to <97.0	Not Encountered		Not Encountered		>10.0
SB-114	1994	65.6	10.0	Not Encountered		0.0 to 6.7	65.6 to 58.9	Not Encountered		6.7 to >10.0	58.9 to <85.6	Not Encountered		Not Encountered		>10.0
SB-115	1994	67.7	13.0	0.0 to 1.0	67.7 to 66.7	1.0 to 7.5	66.7 to 60.2	Not Encountered		7.5 to 13.0	60.2 to 54.7	Not Encountered		Not Encountered		>13
SB-116	1994	68.8	9.4	0.0 to 1.0	68.8 to 67.8	1.0 to 4.0	67.8 to 64.8	Not Encountered		4.0 to 9.4	64.8 to 59.4	Not Encountered		Not Encountered		>9.4
SB-117	1994	67.3	10.0	0.0 to 1.0	67.3 to 66.3	1.0 to 4.0	66.3 to 63.3	4.0 to 6.0	63.3 to 61.3	6.0 to >10.0	61.3 to <87.3	Not Encountered		Not Encountered		>10.0
Wehran Engineering																
MW-3	1987	66.7	10.5	Not Encountered		1.0 to 5.5	65.7 to 61.2	Not Encountered		5.5 to 10.5	61.2 to 56.2	Not Encountered		Not Encountered		>10.5
B-1	1992	68.0	16.5	0.0 to 0.9	68.0 to 67.1	0.9 to 5.0	67.1 to 63.0	Not Encountered		5.0 to 14.0	63.0 to 54.0	Not Encountered		14.0 to 16.5	54.0 to 51.5	16.5
B-2	1992	68.1	17.4	Not Encountered		0.0 to 8.0	68.1 to 60.1	Not Encountered		8.0 to 17.0	60.1 to 51.1	Not Encountered		17.0 to 17.4	51.1 to 50.7	17.4
Empire Soils Investigations, Inc.																
D-1	1979	NS	8.5	0.0 to 0.8	- - -	0.8 to 8.5	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>8.5
D-2	1979	NS	10.0	0.0 to 1.0	- - -	1.0 to 7.5	- - -	Not Encountered		7.5 to >10.0	- - -	Not Encountered		Not Encountered		>10.0
D-3	1979	NS	11.0	0.0 to 0.5	- - -	0.5 to 6.0	- - -	Not Encountered		6.0 to >11.0	- - -	Not Encountered		Not Encountered		>11.0
D-4	1979	NS	13.0	0.0 to 0.5	- - -	0.5 to 7.0	- - -	Not Encountered		7.0 to >13.0	- - -	Not Encountered		Not Encountered		>13.0
E-1	1979	NS	7.0	0.0 to 0.5	- - -	0.5 to 2.5	- - -	Not Encountered		2.5 to >7.0	- - -	Not Encountered		Not Encountered		>7.0
E-2	1979	NS	7.0	0.0 to 0.5	- - -	0.5 to 5.0	- - -	Not Encountered		5.0 to >7.0	- - -	Not Encountered		Not Encountered		>7.0

TABLE 3.1

STRATIGRAPHIC SUMMARY
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Borehole/ Well ID	Year Installed	Ground Elevation [1]	Boring Depth (ft. BGS)	Asphalt/Concrete Depth (ft. BGS)	Asphalt/Concrete Elevation	Fill Depth (ft. BGS)	Fill Elevation	Grey or Black Clay or Silt Depth (ft. BGS)	Grey or Black Clay or Silt Elevation	Brown & Red/Brown Clay Depth (ft. BGS)	Brown & Red/Brown Clay Elevation	Black Clay Depth (ft. BGS)	Black Clay Elevation	Till Depth (ft. BGS)	Till Elevation	Top of Rock Depth (ft. BGS)
E-3	1979	NS	7.0	0.0 to 0.7	- - -	Not Encountered		Not Encountered		0.7 to >7.0	- - -	Not Encountered		Not Encountered		>7.0
E-4	1979	NS	7.0	0.0 to 0.5	- - -	0.5 to 3.0	- - -	Not Encountered		3.0 to >7.0	- - -	Not Encountered		Not Encountered		>7.0
T-1	1979	NS	6.0	0.0 to 1.5	- - -	1.5 to 4.0	- - -	Not Encountered		4.0 to >6.0	- - -	Not Encountered		Not Encountered		>6.0
T-2	1979	NS	14.0	0.0 to 1.9	- - -	Not Encountered		Not Encountered		1.9 to 14.0	- - -	Not Encountered		Not Encountered		>14
T-3	1979	NS	5.0	0.0 to 0.8	- - -	0.8 to 3.0	- - -	Not Encountered		3.0 to >5.0	- - -	Not Encountered		Not Encountered		>5.0
T-4	1979	NS	18.7	0.0 to 1.5	- - -	1.5 to 4.0	- - -	Not Encountered		4.0 to 13.7	- - -	Not Encountered		Not Encountered		13.7
T-5	1979	NS	5.0	0.0 to 0.9	- - -	0.9 to 3.0	- - -	Not Encountered		3.0 to >5.0	- - -	Not Encountered		Not Encountered		>5.0
T-6	1979	NS	6.0	0.0 to 1.5	- - -	Not Encountered		Not Encountered		1.5 to >4.0	- - -	Not Encountered		Not Encountered		>4.0
T-7	1979	NS	17.0	0.0 to 1.7	- - -	Not Encountered		Not Encountered		1.7 to 12.0	- - -	Not Encountered		Not Encountered		12.0
T-8	1979	NS	7.0	0.0 to 1.0	- - -	Not Encountered		Not Encountered		1.0 to >7.0	- - -	Not Encountered		Not Encountered		>7.0
T-9	1979	NS	13.0	0.0 to 1.5	- - -	Not Encountered		Not Encountered		1.5 to 13.0	- - -	Not Encountered		Not Encountered		>13
T-10	1979	NS	9.0	0.0 to 1.0	- - -	1.0 to 3.0	- - -	Not Encountered		3.0 to >9.0	- - -	Not Encountered		Not Encountered		>9.0
T-11	1979	NS	13.0	0.0 to 1.5	- - -	Not Encountered		Not Encountered		1.5 to 10.0	- - -	Not Encountered		10.0 to 13.0	- - -	13.0
T-12	1979	NS	5.0	0.0 to 0.8	- - -	0.8 to 2.0	- - -	Not Encountered		2.0 to >5.0	- - -	Not Encountered		Not Encountered		>5.0
T-14	1979	NS	9.0	0.0 to 0.5	- - -	0.5 to 3.0	- - -	Not Encountered		3.0 to >9.0	- - -	Not Encountered		Not Encountered		>9.0
T-15	1979	NS	10.6	0.0 to 1.4	- - -	Not Encountered		Not Encountered		1.4 to 10.6	- - -	Not Encountered		Not Encountered		>10.6
T-16	1979	NS	11.0	0.0 to 0.8	- - -	0.8 to 11.0	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>11
T-17	1979	NS	5.9	0.0 to 1.5	- - -	1.5 to 2.5	- - -	Not Encountered		2.5 to >5.9	- - -	Not Encountered		Not Encountered		>5.9
T-18	1979	NS	7.0	0.0 to 0.9	- - -	0.9 to 5.0	- - -	Not Encountered		5.0 to >7.0	- - -	Not Encountered		Not Encountered		>7.0
T-19	1979	NS	9.5	0.0 to 1.5	- - -	1.5 to 6.0	- - -	Not Encountered		6.0 to 9.5	- - -	Not Encountered		Not Encountered		>9.5
T-20	1979	NS	5.5	0.0 to 1.5	- - -	Not Encountered		Not Encountered		1.5 to 5.5	- - -	Not Encountered		Not Encountered		>5.5
T-21	1979	NS	6.0	0.0 to 1.2	- - -	Not Encountered		Not Encountered		1.2 to 6.0	- - -	Not Encountered		Not Encountered		>6.0
T-22	1979	NS	8.5	0.0 to 1.5	- - -	1.5 to 5.0	- - -	Not Encountered		5.0 to 6.5	- - -	Not Encountered		Not Encountered		6.5
Michigan Drilling Co.																
E52	1974	NS	23.5	Not Encountered		0.0 to 6.0	- - -	6.0 to 8.0	- - -	8.0 to 17.0	- - -	17.0 to 18.6	- - -	Not Encountered		18.6
AX-18A	1974	NS	23.9	0.0 to 0.7	- - -	Not Encountered		0.7 to 2.5	- - -	2.5 to 18.0	- - -	18.0 to 18.9	- - -	Not Encountered		18.9
N48	1974	NS	20.6	Not Encountered		0.0 to 4.2	- - -	4.1 to 5.3	- - -	5.3 to 15.7	- - -	Not Encountered		Not Encountered		15.7
G48	1974	NS	21.5	0.0 to 0.7	- - -	0.7 to 4.7	- - -	4.7 to 6.4	- - -	6.4 to 13.0	- - -	13.0 to 16.3	- - -	Not Encountered		16.3
K44	1974	NS	22.8	0.0 to 1.1	- - -	1.1 to 5.0	- - -	Not Encountered		5.0 to 17.2	- - -	17.2 to 17.9	- - -	Not Encountered		17.9
K48	1974	NS	20.8	Not Encountered		0.0 to 4.9	- - -	4.9 to 7.0	- - -	7.0 to 15.8	- - -	Not Encountered		Not Encountered		15.8
J50	1974	NS	20.0	Not Encountered		0.0 to 6.0	- - -	6.0 to 7.3	- - -	7.3 to 15.7	- - -	15.7 to 16.2	- - -	Not Encountered		16.2
H44	1974	NS	23.0	0.0 to 0.5	- - -	0.5 to 3.8	- - -	3.8 to 4.6	- - -	4.6 to 13.0	- - -	13.0 to 17.9	- - -	Not Encountered		17.9
C48	1974	NS	23.1	0.0 to 0.9	- - -	0.9 to 6.5	- - -	6.5 to 8.0	- - -	8.0 to 16.0	- - -	16.0 to 18.1	- - -	Not Encountered		18.1
E44	1974	NS	19.8	0.0 to 0.7	- - -	0.7 to 5.0	- - -	Not Encountered		5.0 to 14.0	- - -	14.0 to 15.8	- - -	Not Encountered		15.8
AT19A	1974	NS	18.3	0.0 to 0.6	- - -	0.6 to 3.0	- - -	Not Encountered		3.0 to 17.3	- - -	Not Encountered		Not Encountered		17.3
Harley Ellington-Pierce Yee Assoc.																
Test Pit No. 1 [2]	1974	NS	7.0	0.0 to 0.5	- - -	0.5 to 5.9	- - -	Not Encountered		5.9 to >7.1	- - -	Not Encountered		Not Encountered		>7.1
Test Pit No. 2 [2]	1974	NS	9.0	0.0 to 0.7	- - -	0.7 to 4.0	- - -	Not Encountered		4.0 to >9.0	- - -	Not Encountered		Not Encountered		>9.0
Test Pit No. 3 [2]	1974	NS	10.7	0.0 to 0.8	- - -	0.8 to 1.0	- - -	Not Encountered		1.0 to 9.2	- - -	9.2 to >10.7	- - -	Not Encountered		>10.7
Test Pit No. 4	1974	NS	7.0	0.0 to 1.0	- - -	1.0 to 5.4	- - -	Not Encountered		5.4 to >7.0	- - -	Not Encountered		Not Encountered		>7.0
Test Pit No. 5	1974	NS	7.5	0.0 to 0.9	- - -	0.9 to 6.9	- - -	Not Encountered		6.9 to >7.5	- - -	Not Encountered		Not Encountered		>7.5
Test Pit No. 6	1974	NS	5.5	0.0 to 0.8	- - -	0.8 to 4.5	- - -	Not Encountered		4.5 to >5.5	- - -	Not Encountered		Not Encountered		>5.5
Test Pit No. 7	1974	NS	7.5	0.0 to 0.9	- - -	0.9 to 5.6	- - -	5.6 to 6.9	- - -	6.9 to >7.5	- - -	Not Encountered		Not Encountered		>7.5
Test Pit No. 8	1974	NS	4.0	0.0 to 0.9	- - -	0.9 to >4.0	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>4.0
Test Pit No. 9	1974	NS	4.1	Not Encountered		0.0 to 4.1	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		>4.1
SB1	1973	NS	18.3	0.0 to 0.9	- - -	0.9 to 3.2	- - -	Not Encountered		3.2 to 18.3	- - -	Not Encountered		Not Encountered		>18.3
SB2	1973	NS	21.4	0.0 to 0.9	- - -	0.9 to 16.4	- - -	Not Encountered		Not Encountered		Not Encountered		Not Encountered		16.4
SB3	1973	NS	15.8	0.0 to 0.9	- - -	0.9 to 8.7	- - -	8.7 to 9.2	- - -	9.2 to 15.8	- - -	Not Encountered		Not Encountered		>15.8
SB4	1973	NS	19.8	0.0 to 0.8	- - -	0.8 to 7.2	- - -	Not Encountered		7.2 to 18.8	- - -	Not Encountered		18.8 to 19.8	- - -	>19.8
SB5	1973	NS	22.1	0.0 to 0.9	- - -	0.9 to 3.7	- - -	Not Encountered		3.7 to 16.2	- - -	Not Encountered		16.2 to 17.1	- - -	17.1
SB6	1973	NS	19.7	0.0 to 0.9	- - -	0.9 to 3.8	- - -	3.8 to 4.2	- - -	4.2 to 18.2	- - -	Not Encountered		18.2 to 19.7	- - -	>19.7
Pittsburgh Testing Laboratory																
Boring No. 1	1964	NS	17.7	0.0 to 0.6	- - -	0.6 to 7.5	- - -	Not Encountered		7.5 to 17.2	- - -	Not Encountered		17.2 to 17.7	- - -	>17.7
Boring No. 2	1964	NS	22.2	0.0 to 0.6	- - -	0.6 to 7.6	- - -	Not Encountered		7.6 to 15.7	- - -	Not Encountered		15.7 to 17.2	- - -	17.2
Boring No. 3	1964	NS	16.8	0.0 to 0.7	- - -	0.7 to 7.4	- - -	Not Encountered		7.4 to 16.8	- - -	Not Encountered		Not Encountered		>16.8
Boring No. 4	1964	NS	13.8	0.0 to 0.6	- - -	0.6 to 8.2	- - -	Not Encountered		8.2 to 12.5	- - -	Not Encountered		12.5 to 13.8	- - -	>13.8
Boring No. 5	1964	NS	16.1	0.0 to 0.5	- - -	0.5 to 7.0	- - -	7.0 to 8.5	- - -	8.5 to 15.0	- - -	Not Encountered		15.0 to 16.1	- - -	>16.1
Boring No. 6	1964	NS	12.2	0.0 to 0.6	- - -	0.6 to 5.4	- - -	5.4 to 6.5	- - -	6.5 to 11.7	- - -	Not Encountered		11.7 to 12.2	- - -	>12.2

TABLE 3.1

STRATIGRAPHIC SUMMARY
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Borehole/ Well ID	Year Installed	Ground Elevation [1]	Boring Depth (ft. BGS)	Asphalt/Concrete Depth (ft. BGS)	Asphalt/Concrete Elevation	Fill Depth (ft. BGS)	Fill Elevation	Grey or Black Clay or Silt Depth (ft. BGS)	Grey or Black Clay or Silt Elevation	Brown & Red/Brown Clay Depth (ft. BGS)	Brown & Red/Brown Clay Elevation	Black Clay Depth (ft. BGS)	Black Clay Elevation	Till Depth (ft. BGS)	Till Elevation	Top of Rock Depth (ft. BGS)
Boring No. 7	1964	NS	19.5	0.0 to 0.7	- - -	0.7 to 6.5	- - -	6.5 to 9.4	- - -	9.4 to 14.1	- - -	Not Encountered		14.1 to 14.6	- - -	14.6
Boring No. 8	1964	NS	17.1	0.0 to 0.7	- - -	0.7 to 5.8	- - -	5.8 to 6.8	- - -	6.8 to 16.5	- - -	Not Encountered		16.5 to 17.1	- - -	>17.1
Raymond Concrete Pile Division																
Boring No. 1	1965	NS	17.8	0.0 to 0.5	- - -	0.5 to 1.0	- - -	1.0 to 3.5	- - -	3.5 to 17.0	- - -	Not Encountered		Not Encountered		>17
Boring No. 2	1965	NS	19.4	0.0 to 0.5	- - -	0.5 to 4.6	- - -	Not Encountered		4.6 to 19.4	- - -	Not Encountered		Not Encountered		>19.4
Boring No. 3	1965	NS	16.4	0.0 to 0.5	- - -	0.5 to 2.6	- - -	2.6 9.0	- - -	9.0 to 16.4	- - -	Not Encountered		Not Encountered		>16.3
Boring No. 4	1965	NS	16.8	0.0 to 0.5	- - -	0.5 to 3.0	- - -	3.0 to 5.6 16.0 to 16.8	- - -	5.6 to 16.0	- - -	Not Encountered		Not Encountered		>16.8
Boring No. 5	1965	NS	17.3	0.0 to 0.5	- - -	0.5 to 2.6	- - -	2.6 to 6.0	- - -	6.0 to 17.4	- - -	Not Encountered		Not Encountered		>17.4
Boring No. 6	1965	NS	11.2	0.0 to 1.5	- - -	1.5 to 3.6	- - -	3.6 to 5.0	- - -	5.0 to 11.0	- - -	Not Encountered		Not Encountered		>11.2
Diehl and Diehl																
Boring No. 1	1964	NS	11.4	0.0 to 0.9	- - -	0.9 to 2.5	- - -	Not Encountered		2.5 to 9.0	- - -	Not Encountered		9.0 to 11.4	- - -	>11.4
Boring No. 3	1964	NS	15.1	0.0 to 0.6 5.1 to 5.4	- - - - - -	0.6 to 5.1	- - -	Not Encountered		5.4 to 14.3	- - -	Not Encountered		14.3 to 15.1	- - -	>15.1
Boring No. 4	1964	NS	15.1	Not Encountered		0.0 to 4.1	- - -	Not Encountered		4.1 to 13.5	- - -	Not Encountered		13.5 to 15.1	- - -	>15.1
Boring No. 5	1964	NS	13.7	0.0 to 0.6	- - -	0.6 to 3.8	- - -	Not Encountered		3.8 to 12.3	- - -	Not Encountered		12.3 to 13.7	- - -	>13.7
Boring No. 6	1964	NS	9.8	0.0 to 0.9	- - -	Not Encountered		Not Encountered		0.9 to 8.2	- - -	Not Encountered		8.2 to 9.8	- - -	>9.8
Boring No. 7	1964	NS	9.1	0.0 to 0.4	- - -	0.4 to 2.1	- - -	Not Encountered		2.1 to 8.3	- - -	Not Encountered		8.3 to 9.1	- - -	>9.1
Boring No. 8	1964	NS	14.1	0.0 to 0.6	- - -	0.6 to 4.5	- - -	Not Encountered		4.5 to 12.9	- - -	Not Encountered		12.9 to 14.1	- - -	>14.1
Boring No. 9	1964	NS	16.5	0.0 to 0.6	- - -	0.6 to 3.3	- - -	Not Encountered		3.3 to 14.1	- - -	Not Encountered		14.1 to 16.8	- - -	>16.8
Benjamin, Woodhouse, and Guenther, Inc.																
SB-1-65	1965	66.5	17.5	0.0 to 0.3	- - -	0.3 to 4.0	- - -	Not Encountered		4.0 to 17.5	62.5 to 49.0	Not Encountered		Not Encountered		17.5
SB-2-65	1965	67.0	17.6	0.0 to 0.3	- - -	0.3 to 13.0	- - -	Not Encountered		13.0 to 17.6	54.0 to 49.4	Not Encountered		Not Encountered		17.6
SB-3-65	1965	66.5	19.0	0.0 to 0.3	- - -	0.3 to 12.0	- - -	Not Encountered		12.0 to 18.0	54.5 to 48.5	Not Encountered		18.0 to 19.0	- - -	19.0
SB-4-65	1965	67.0	19.5	0.0 to 0.3	- - -	0.3 to 13.0	- - -	Not Encountered		13.0 to 19.5	54.0 to 47.5	Not Encountered		Not Encountered		19.5
SB-5-65	1965	67.0	20.5	0.0 to 0.3	- - -	0.3 to 8.0	- - -	8.0 to 12.5	59.0 to 54.5	12.5 to 19.5	54.5 to 47.5	Not Encountered		19.5 to 20.5	- - -	20.5
SB-6-65	1965	63.5	13.3	Not Encountered		0.0 to 3.0	- - -	Not Encountered		3.0 to 13.3	60.5 to 50.2	Not Encountered		Not Encountered		13.3
SB-7-65	1965	62.5	18.0	Not Encountered		0.0 to 4.0	- - -	Not Encountered		4.0 to 18.0	58.5 to 44.5	Not Encountered		Not Encountered		18.0
SB-3-66	1966	NS	15.5	Not Encountered		0.0 to 3.0	- - -	Not Encountered		3.0 to 14.4	- - -	Not Encountered		14.4 to 15.9	- - -	15.5
SB-4-66	1966	NS	17.0	Not Encountered		0.0 to 3.0	- - -	Not Encountered		3.0 to 15.9	- - -	Not Encountered		15.9 to 17.0	- - -	17.0
SB-5-66	1966	NS	18.1	Not Encountered		0.0 to 5.0	- - -	Not Encountered		5.0 to 18.1	- - -	Not Encountered		Not Encountered		18.1

Notes:
[1] Elevation based on GM/BSA datum.
[2] Locations the same as SB1 through SB3 installed in 1973.
ft. BGS - Feet Below Ground Surface.
NS-Not Surveyed
Stratigraphic logs not available for MW-205, MW-407, and MW-409.

TABLE 3.2

MONITORING WELL INSTALLATION DETAILS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Well No.	*Primary Unit Monitored*	*Year Installed*	*Borehole Depth (Ft. BGS)*	*Ground Elevation* [1]	*Top of Riser Elevation* [1]	*Sandpack Interval*						*Monitored Interval*					
						(Ft. BGS)			*(Elevation)* [1]			*(Ft. BGS)*			*(Elevation)* [1]		
MW-3	Fill	1987	10.5	66.7	70.64	5.5	to	10.5	61.2	to	56.2	2.8	to	9.8	63.9	to	56.9
MW-101	Fill	1994	6.4	68.3	67.62	3.0	to	6.4	65.3	to	61.9	3.0	to	6.4	65.3	to	61.9
MW-102	Fill	1994	13.5	68.3	67.83	3.0	to	13.5	65.3	to	54.8	3.0	to	13.0	65.3	to	55.3
MW-103	Fill	1994	11.5	68.1	67.85	3.0	to	11.5	65.1	to	56.6	3.0	to	11.3	65.1	to	56.8
MW-107	Fill	1994	13.0	66.2	65.97	3.0	to	13.0	63.2	to	53.2	3.0	to	12.5	63.2	to	53.7
MW-204	Fill	1996	11.0	67.0	66.45	0.7	to	11.0	66.3	to	56.0	1.0	to	11.0	66.0	to	56.0
MW-205	Fill	1996	11.0	67.8	67.13	0.7	to	11.0	67.1	to	56.8	1.0	to	11.0	66.8	to	56.8
MW-300	Fill	1997	6.8	67.7	67.45	1.8	to	6.8	65.9	to	60.9	1.8	to	6.8	65.9	to	60.9
MW-301	Fill	1997	6.5	67.9	67.62	1.3	to	6.5	66.6	to	61.4	1.5	to	6.5	66.4	to	61.4
MW-303	Fill	1997	7.4	67.9	67.60	2.2	to	7.4	65.7	to	60.5	2.4	to	7.4	65.5	to	60.5
MW-306	Fill	1997	7.5	67.9	67.63		NA			NA			NA			NA	
MW-309	Fill	1997	9.5	67.9	67.67		NA			NA			NA			NA	
MW-401	Fill	1998	7.0	67.9	67.47	1.5	to	7.0	66.4	to	60.9	2.0	to	7.0	65.9	to	60.9
MW-403	Fill	1998	7.0	67.9	67.84	1.5	to	7.0	66.4	to	60.9	2.0	to	7.0	65.9	to	60.9
MW-405	Fill	1998	7.0	66.1	65.95	1.5	to	7.0	64.6	to	59.1	2.0	to	7.0	64.1	to	59.1
MW-407	Fill	1998	7.0	67.7	67.42	1.5	to	7.0	66.2	to	60.7	2.0	to	7.0	65.7	to	60.7
MW-409R	Fill	2009	7.0	64.9	64.37	1.5	to	7.0	63.4	to	57.9	2.0	to	7.0	62.9	to	57.9
CP-1	Fill	2002	8.0	68.1	67.58	2.9	to	8.0	65.2	to	60.1	2.5	to	7.0	65.6	to	61.1
CP-2	Fill	2002	8.5	68.0	67.52	3.0	to	8.5	65.0	to	59.5	3.0	to	8.0	65.0	to	60.0
CP-4	Fill	2002	8.4	68.0	67.59	3.4	to	8.4	64.6	to	59.6	3.4	to	8.4	64.6	to	59.6
CP-7	Fill	2002	8.3	68.0	67.31	2.6	to	8.3	65.4	to	59.7	3.3	to	8.3	64.7	to	59.7
CP-8	Fill	2001	8.0	68.0	64.25	2.0	to	8.0	66.0	to	60.0	3.0	to	8.0	65.0	to	60.0
CP-9	Fill	2001	8.5	68.0	67.64	2.1	to	8.5	65.9	to	59.5	3.5	to	8.5	64.5	to	59.5
CP-13	Fill	2002	8.9	67.9	67.58	2.1	to	8.9	65.8	to	59.0	3.7	to	8.7	64.2	to	59.2
CP-14	Fill	2002	10.0	68.1	66.63	3.0	to	9.8	65.1	to	58.3	4.3	to	9.3	63.8	to	58.8
CP-23	Fill	2004	6.0	67.8	67.27	0.5	to	6.0	67.3	to	61.8	1.0	to	6.0	66.8	to	61.8
CP-24	Fill	2004	7.0	67.9	67.50	1.5	to	7.0	66.4	to	60.9	2.0	to	7.0	65.9	to	60.9
CP-25	Fill	2004	7.0	67.8	67.40	1.0	to	7.0	66.8	to	60.8	2.0	to	7.0	65.8	to	60.8
CP-26	Fill	2004	8.0	67.8	67.09	2.0	to	8.0	65.8	to	59.8	3.0	to	8.0	64.8	to	59.8
CP-27	Fill	2004	7.0	67.8	67.41	1.0	to	7.0	66.8	to	60.8	2.0	to	7.0	65.8	to	60.8
CP-28	Fill	2004	8.5	67.8	67.43	2.0	to	8.5	65.8	to	59.3	3.5	to	8.5	64.3	to	59.3
CP-29	Fill	2009	8.0	67.8	67.58	2.0	to	8.0	65.8	to	59.8	3.0	to	8.0	64.8	to	59.8
CP-30	Fill	2009	7.0	98.0	67.58	2.6	to	7.0	95.4	to	91.0	3.0	to	7.0	95.0	to	91.0
CP-31	Fill	2009	9.8	68.1	67.75	4.2	to	9.8	63.9	to	58.3	4.8	to	9.8	63.3	to	58.3
CP-32	Fill	2009	9.0	68.1	67.45	3.4	to	9.0	64.7	to	59.1	4.0	to	9.0	64.1	to	59.1
CP-33	Fill	2009	9.0	67.8	67.46	4.0	to	9.0	63.8	to	58.8	4.5	to	9.0	63.3	to	58.8
CP-34	Fill	2009	8.5	67.8	67.17	2.5	to	8.5	65.3	to	59.3	3.0	to	8.5	64.8	to	59.3
M-1	Fill	2001	10.0	67.9	66.97	3.0	to	10.0	64.9	to	57.9	5.0	to	10.0	62.9	to	57.9
M-2	Fill	2001	10.3	67.8	61.20	4.0	to	10.3	63.8	to	57.5	5.3	to	10.3	62.5	to	57.5
M-3	Fill	2002	11.0	68.0	67.24	4.8	to	11.0	63.2	to	57.0	5.3	to	10.3	62.7	to	57.7
MW-4	Fill	2001	11.0	65.6	64.92	3.5	to	11.0	62.1	to	54.6	5.5	to	10.5	60.1	to	55.1

TABLE 3.2

MONITORING WELL INSTALLATION DETAILS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Well No.	*Primary Unit Monitored*	*Year Installed*	*Borehole Depth (Ft. BGS)*	*Ground Elevation* [1]	*Top of Riser Elevation* [1]	*Sandpack Interval*						*Monitored Interval*					
						(Ft. BGS)			*(Elevation)* [1]			*(Ft. BGS)*			*(Elevation)* [1]		
MW-807	Fill	2009	7.0	68.1	67.75	1.0	to	7.0	67.1	to	61.1	2.0	to	7.0	66.1	to	61.1
T-1	Fill	2002	15.0	67.9	67.40	9.3	to	15.0	58.6	to	52.9	9.5	to	14.5	58.4	to	53.4
B-1	Clay	1992	16.5	68.0	67.46	9.3	to	16.5	58.7	to	51.5	11.3	to	16.3	56.7	to	51.7
B-2	Clay	1992	17.7	68.1	67.37	9.7	to	17.7	58.4	to	50.4	11.7	to	16.7	56.4	to	51.4
MW-106	Clay	1994	11.5	67.1	66.76	3.0	to	11.5	64.1	to	55.6	3.0	to	11.0	64.1	to	56.1
MW-305/305R	Clay	1997/2001	17.1	67.9	67.33	10.0	to	17.1	57.9	to	50.8	11.7	to	16.7	56.2	to	51.2
MW-307	Clay	1997	18.5	68.1	67.85				NA						NA		
MW-308	Clay	1997	17.5	67.9	67.63				NA						NA		
MW-400	Clay	1998	18.8	67.9	67.58	11.8	to	18.8	56.1	to	49.1	13.8	to	18.8	54.1	to	49.1
MW-402	Clay	1998	14.5	68.0	67.50	7.5	to	14.5	60.5	to	53.5	9.5	to	14.5	58.5	to	53.5
MW-404	Clay	1998	16.5	66.1	65.99	9.5	to	16.5	56.6	to	49.6	11.5	to	16.5	54.6	to	49.6
MW-406	Clay	1998	17.6	67.7	67.20	10.6	to	17.6	57.1	to	50.1	12.6	to	17.6	55.1	to	50.1
CP-2A	Clay	2002	15.3	68.1	67.77	9.2	to	15.3	58.9	to	52.8	9.8	to	14.8	58.3	to	53.3
CP-4A	Clay	2002	17.0	68.0	67.64	9.8	to	17.0	58.2	to	51.0	11.5	to	16.5	56.5	to	51.5
CP-7A	Clay	2001	16.1	68.0	67.32	7.9	to	16.1	60.1	to	51.9	10.6	to	15.6	57.4	to	52.4
CP-8A	Clay	2001	16.0	68.0	67.38	5.1	to	16.0	62.9	to	52.0	10.5	to	15.5	57.5	to	52.5
CP-11A	Clay	2002	16.0	67.7	66.94	9.0	to	16.0	58.7	to	51.7	10.5	to	15.5	57.2	to	52.2
CP-12A	Clay	2002	16.2	68.0	67.51	9.6	to	16.1	58.4	to	51.9	10.6	to	15.6	57.4	to	52.4
CP-13A	Clay	2002	18.1	67.9	67.70	8.5	to	17.8	59.4	to	50.2	12.3	to	17.3	55.6	to	50.6
CP-14A	Clay	2002	16.2	67.9	67.35	7.3	to	16.2	60.6	to	51.7	10.7	to	15.7	57.2	to	52.2
CP-14AR	Clay	2003	16.9	67.8	67.52	9.0	to	16.9	58.8	to	50.9	11.7	to	16.7	56.1	to	51.1
CP-15A	Clay	2003	17.0	67.9	67.61	10.0	to	17.0	57.9	to	50.9	11.5	to	16.5	56.4	to	51.4
CP-17A	Clay	2003	16.3	67.9	67.49	8.7	to	16.3	59.2	to	51.6	11.1	to	16.1	56.8	to	51.8
CP-19A	Clay	2003	16.8	67.9	67.55	9.1	to	16.8	58.8	to	51.2	11.6	to	16.6	56.4	to	51.4
CP-24A	Clay	2004	18.0	67.9	67.59	11.0	to	17.0	56.9	to	50.9	12.0	to	17.0	55.9	to	50.9
CP-25A	Clay	2004	18.0	67.8	67.42	11.0	to	17.0	56.8	to	50.8	12.0	to	17.0	55.8	to	50.8
CP-26A	Clay	2004	16.0	67.8	67.53	9.8	to	16.0	58.0	to	51.8	11.0	to	16.0	56.8	to	51.8
CP-27A	Clay	2004	16.0	67.8	67.34	9.5	to	15.5	58.3	to	52.3	10.5	to	15.5	57.3	to	52.3
CP-31A	Clay	2009	17.2	68.1	67.86	11.3	to	17.0	56.8	to	51.1	12.0	to	17.0	56.1	to	51.1
CP-32A	Clay	2009	17.4	68.0	67.60	9.5	to	17.0	58.5	to	51.0	10.0	to	17.0	58.0	to	51.0
CP-34A	Clay	2009	18.1	67.8	67.54	9.5	to	18.0	58.3	to	49.8	10.0	to	17.9	57.8	to	49.9
M-1A	Clay	2001	18.3	67.8	67.47	10.0	to	18.3	57.8	to	49.5	11.8	to	16.8	56.0	to	51.0
M-2A	Clay	2001	18.0	67.8	67.22	11.5	to	18.0	56.3	to	49.8	12.5	to	17.5	55.3	to	50.3
M-3A	Clay	2002	16.7	67.9	67.60	9.8	to	16.7	58.1	to	51.2	11.2	to	16.2	56.7	to	51.7
MW-1A	Clay	2001	16.1	65.4	63.27	8.0	to	15.5	57.4	to	49.9	10.0	to	15.0	55.4	to	50.4
MW-2A	Clay	2001	13.1	62.0	61.08	6.0	to	13.1	56.0	to	48.9	7.6	to	12.6	54.4	to	49.4
MW-3A	Clay	2001	20.7	66.2	65.91	9.0	to	20.7	57.2	to	45.5	15.2	to	20.2	51.0	to	46.0
MW-4A	Clay	2001	17.2	65.4	65.10	5.0	to	17.2	60.4	to	48.2	7.2	to	17.2	58.2	to	48.2
MW-6A	Clay	2008	8.8	67.2	66.96	3.3	to	8.8	63.9	to	58.4	3.8	to	8.8	63.4	to	58.4
MW-107R	Clay	2009	12.6	66.0	65.42	2.0	to	12.6	64.0	to	53.4	2.6	to	12.6	63.4	to	53.4

TABLE 3.2

MONITORING WELL INSTALLATION DETAILS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Well No.	*Primary Unit Monitored*	*Year Installed*	*Borehole Depth (Ft. BGS)*	*Ground Elevation* [1]	*Top of Riser Elevation* [1]	*Sandpack Interval*		*Monitored Interval*	
						(Ft. BGS)	*(Elevation)* [1]	*(Ft. BGS)*	*(Elevation)* [1]
MW-300A	Clay	2003	19.6	67.8	67.55	13.0 to 19.6	54.8 to 48.2	14.2 to 19.2	53.6 to 48.6
MW-309A	Clay	2002	16.8	67.9	67.49	10.0 to 16.8	57.9 to 51.1	11.3 to 16.3	56.6 to 51.6
MW-402R	Clay	2008	13.8	67.9	67.50	7.2 to 14.0	60.7 to 53.9	9.0 to 14.0	58.9 to 53.9
MW-408R	Clay	2009	12.5	64.9	64.36	5.5 to 12.5	59.4 to 52.4	7.5 to 12.5	57.4 to 52.4
MW-801A	Clay	2008	18.7	66.9	66.44	11.0 to 18.5	55.9 to 48.4	13.5 to 18.5	53.4 to 48.4
MW-802A	Clay	2008	18.6	66.3	66.00	11.5 to 18.3	54.8 to 48.0	13.3 to 18.3	53.0 to 48.0
MW-803A	Clay	2008	16.1	66.2	65.84	10.5 to 16.1	55.7 to 50.1	11.1 to 16.1	55.1 to 50.1
MW-804A	Clay	2008	17.7	66.9	66.69	10.5 to 17.5	56.4 to 49.4	12.5 to 17.5	54.4 to 49.4
MW-805A	Clay	2008	14.9	67.9	67.42	7.8 to 14.9	60.1 to 53.0	9.9 to 14.9	58.0 to 53.0
MW-809A	Clay	2009	17.0	65.7	65.16	5.5 to 17.0	60.2 to 48.7	7.0 to 17.0	58.7 to 48.7
MW-810A	Clay	2009	17.1	65.8	65.24	5.5 to 17	58.8 to 52.5	7 to 17	57.5 to 52.5
MW-811A	Clay	2009	16.4	65.9	65.41	7.0 to 16.0	58.9 to 49.9	8.0 to 16.0	57.9 to 49.9
MW-812A	Clay	2009	19.3	65.9	65.36	7.0 to 19.0	58.9 to 46.9	9.0 to 19.0	56.9 to 46.9
MW-813A	Clay	2009	13.5	61.7	61.18	7.0 to 13.3	54.7 to 48.4	8.3 to 13.3	53.4 to 48.4
MW-401B	Bedrock	2001	29.8	67.9	67.33	Open corehole	Open corehole	18.5 to 29.8	49.4 to 38.1
CP-1B	Bedrock	2008	17.4	68.1	67.72	Open corehole	Open corehole	12.4 to 17.4	55.7 to 50.7
CP-3B	Bedrock	2002	19.0	68.0	67.70	Open corehole	Open corehole	13.5 to 19.0	54.5 to 49.0
CP-4B	Bedrock	2008	22.7	68.1	67.80	Open corehole	Open corehole	17.7 to 22.7	50.4 to 45.4
CP-8B	Bedrock	2003	22.9	67.9	67.62	Open corehole	Open corehole	17.9 to 22.9	50.0 to 45.0
CP-9B	Bedrock	2001	26.8	68.0	67.62	Open corehole	Open corehole	16.3 to 26.7	51.7 to 41.3
CP-11B	Bedrock	2003	22.9	67.8	67.44	Open corehole	Open corehole	18.2 to 22.9	49.6 to 44.9
CP-14B	Bedrock	2004	24.0	67.8	67.55	Open corehole	Open corehole	19.0 to 24.0	48.8 to 43.8
CP-16B	Bedrock	2003	22.8	67.9	67.53	Open corehole	Open corehole	18.0 to 22.8	49.9 to 45.1
CP-18B	Bedrock	2003	27.0	68.0	67.49	18.0 to 26.7	50.0 to 41.3	21.4 to 26.4	46.6 to 41.6
CP-20B	Bedrock	2004	24.5	67.9	67.75	Open corehole	Open corehole	19.0 to 24.5	48.9 to 43.4
CP-21B	Bedrock	2004	25.9	67.9	67.62	Open corehole	Open corehole	19.7 to 26.5	48.2 to 41.4
CP-22B	Bedrock	2004	29.2	67.8	67.58	Open corehole	Open corehole	24.5 to 29.5	43.3 to 38.3
CP-23B	Bedrock	2004	23.5	67.8	67.51	Open corehole	Open corehole	18.5 to 23.5	49.3 to 44.3
CP-24B	Bedrock	2004	25.7	67.9	67.51	Open corehole	Open corehole	20.7 to 25.7	47.2 to 42.2
CP-25B	Bedrock	2004	26.1	67.9	67.62	Open corehole	Open corehole	20.6 to 26.1	47.3 to 41.8
CP-26B	Bedrock	2004	26.0	67.8	67.42	Open corehole	Open corehole	21.0 to 26.0	46.8 to 41.8
CP-27B	Bedrock	2004	24.0	67.8	67.54	Open corehole	Open corehole	19.0 to 24.0	48.8 to 43.8
CP-28B	Bedrock	2004	26.5	67.7	66.83	Open corehole	Open corehole	21.5 to 26.5	46.2 to 41.2
MW-1B	Bedrock	2008	22.8	63.9	63.63	Open corehole	Open corehole	17.8 to 22.8	46.1 to 41.1
MW-2B	Bedrock	2009	32.9	61.9	61.92	Open corehole	Open corehole	28.0 to 33.0	33.9 to 28.9
MW-4B	Bedrock	2008	23.5	65.7	65.20	Open corehole	Open corehole	18.5 to 23.5	47.2 to 42.2
MW-5B	Bedrock	2008	24.5	67.6	67.18	Open corehole	Open corehole	19.5 to 24.5	48.1 to 43.1
MW-6B	Bedrock	2008	20.6	67.2	66.84	Open corehole	Open corehole	10.6 to 20.6	56.6 to 46.6
MW-102B	Bedrock	2009	21.1	68.1	67.69	Open corehole	Open corehole	16.1 to 21.1	52.0 to 47.0
MW-409B	Bedrock	2008	24.9	64.9	64.27	Open corehole	Open corehole	14.4 to 24.9	50.5 to 40.0

TABLE 3.2

MONITORING WELL INSTALLATION DETAILS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Well No.	*Primary Unit Monitored*	*Year Installed*	*Borehole Depth (Ft. BGS)*	*Ground Elevation* [1]	*Top of Riser Elevation* [1]	*Sandpack Interval*		*Monitored Interval*					
						(Ft. BGS)	*(Elevation)* [1]	*(Ft. BGS)*			*(Elevation)* [1]		
MW-806B	Bedrock	2009	27.8	67.8	67.56	Open corehole	Open corehole	17.8	to	27.8	50.0	to	40.0
MW-808B	Bedrock	2009	22.3	71.7	71.16	Open corehole	Open corehole	18.5	to	22.3	53.2	to	49.4
T-1B	Bedrock	2003	39.3	67.8	67.55	Open corehole	Open corehole	21.7	to	39.3	46.1	to	28.5

Notes:

[1] Elevations are based on GM/BSA datum.

Ft. BGS Feet Below Ground Surface.

NA Not Available.

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil	11/14/06	O-12635-111406-SM-004	MW-309	PCBs	
	11/14/06	O-12635-111406-SM-005	CP-14	PCBs	
	11/14/06	O-12635-111406-SM-006	CP-14	PCBs	Field duplicate of O-12635-111406-SM-005
	11/14/06	O-12635-111406-SM-008	M-3	PCBs	
	11/14/06	O-12635-111406-SM-009	M-1	PCBs	
	11/14/06	O-12635-111406-SM-010	CP-13	PCBs	
	11/14/06	O-12635-111406-SM-012	CP-28	PCBs	
	11/14/06	O-12635-111406-SM-013	B-1	PCBs	
	11/14/06	O-12635-111406-SM-014	MW-401	PCBs	
	11/14/06	O-12635-111406-SM-015	MW-306	PCBs	
	11/15/06	O-12635-111506-SM-018	CP-11B	PCBs	
	11/15/06	O-12635-111506-SM-019	CP-11B	PCBs	Field duplicate of O-12635-111506-SM-018
	11/15/06	O-12635-111506-SM-020	CP-14A	PCBs	
	11/15/06	O-12635-111506-SM-021	CP-14AR	PCBs	
	11/17/06	O-12635-111706-SM-029	CP-13A	PCBs	
	11/17/06	O-12635-111706-SM-030	CP-9	PCBs	
	11/17/06	O-12635-111706-SM-031	CP-19A	PCBs	
	11/17/06	O-12635-111706-SM-033	B-2	PCBs	
	11/17/06	O-12635-111706-SM-034	MW-307	PCBs	
	11/17/06	O-12635-111706-SM-035	CP-8	PCBs	
	11/17/06	O-12635-111706-SM-037	CP-8A	PCBs	
	11/17/06	O-12635-111706-SM-038	CP-26	PCBs	
	11/17/06	O-12635-111706-SM-039	CP-26A	PCBs	
	11/17/06	O-12635-111706-SM-041	CP-27A	PCBs	
	11/17/06	O-12635-111706-SM-042	MW-406	PCBs	
	11/20/06	O-12635-112006-SM-043	CP-3B	PCBs	
	11/20/06	O-12635-112006-SM-044	CP-3B	PCBs	Field duplicate of O-12635-112006-SM-043
	11/20/06	O-12635-112006-SM-045	MW-305R	PCBs	
	11/20/06	O-12635-112006-SM-046	MW-308	PCBs	
	11/20/06	O-12635-112006-SM-048	MW-309A	PCBs	
	11/20/06	O-12635-112006-SM-049	T-1	PCBs	
	11/20/06	O-12635-112006-SM-050	MW-103	PCBs	
	11/20/06	O-12635-112006-SM-053	M-2A	PCBs	
	11/20/06	O-12635-112006-SM-054	MW-400	PCBs	
	11/20/06	O-12635-112006-SM-055	CP-4A	PCBs	
	11/20/06	O-12635-112006-SM-057	MW-404	PCBs	
	11/21/06	O-12635-112106-SM-063	B-26 Sump	PCBs	
	05/08/07	O-12635-050807-SM-004	M-3	PCBs	
	05/08/07	O-12635-050807-SM-005	M-1	PCBs	
	05/08/07	O-12635-050807-SM-006	MW-401	PCBs	
	05/08/07	O-12635-050807-SM-007	MW-400	PCBs	
	05/08/07	O-12635-050807-SM-008	CP-14	PCBs	
	05/08/07	O-12635-050807-SM-009	CP-14	PCBs	Field duplicate of O-12635-050807-SM-008
	05/08/07	O-12635-050807-SM-010	MW-309	PCBs	

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil (cont.)	05/08/07	O-12635-050807-SM-011	MW-306	PCBs	
	05/08/07	O-12635-050807-SM-012	MW-306	PCBs	Field duplicate of O-12635-050807-SM-011
	05/08/07	O-12635-050807-SM-014	CP-13	PCBs	
	05/08/07	O-12635-050807-SM-015	CP-19A	PCBs	
	05/08/07	O-12635-050807-SM-016	B-1	PCBs	
	05/08/07	O-12635-050807-SM-017	MW-103	PCBs	
	05/09/07	O-12635-050907-SM-021	CP-11B	PCBs	
	05/09/07	O-12635-050907-SM-022	CP-11A	PCBs	
	05/09/07	O-12635-050907-SM-023	B-2	PCBs	
	05/09/07	O-12635-050907-SM-025	CP-13A	PCBs	
	05/09/07	O-12635-050907-SM-026	MW-406	PCBs	
	05/09/07	O-12635-050907-SM-027	CP-15A	PCBs	
	05/09/07	O-12635-050907-SM-028	CP-26	PCBs	
	05/09/07	O-12635-050907-SM-029	CP-26A	PCBs	
	05/09/07	O-12635-050907-SM-030	CP-27A	PCBs	
	05/09/07	O-12635-050907-SM-031	CP-28	PCBs	
	05/09/07	O-12635-050907-SM-032	CP-28	PCBs	Field duplicate of O-12635-050907-SM-031
	05/10/07	O-12635-051007-SM-035	M-2A	PCBs	
	05/10/07	O-12635-051007-SM-036	CP-28B	PCBs	
	05/10/07	O-12635-051007-SM-037	M-1A	PCBs	
	05/10/07	O-12635-051007-SM-038	CP-14A	PCBs	
	05/10/07	O-12635-051007-SM-039	CP-14AR	PCBs	
	05/10/07	O-12635-051007-SM-040	CP-20B	PCBs	
	05/10/07	O-12635-051007-SM-041	MW-307	PCBs	
	05/10/07	O-12635-051007-SM-042	MW-308	PCBs	
	05/10/07	O-12635-051007-SM-043	MW-305R	PCBs	
	05/10/07	O-12635-051007-SM-044	T-1	PCBs	
	05/10/07	O-12635-051007-SM-046	MW-309A	PCBs	
	05/11/07	O-12635-051107-SM-048	MW-404	PCBs	
	05/11/07	O-12635-051107-SM-050	CP-16B	PCBs	
	05/11/07	O-12635-051107-SM-052	CP-9B	PCBs	
	05/11/07	O-12635-051107-SM-053	CP-17A	PCBs	
	05/11/07	O-12635-051107-SM-054	CP-2A	PCBs	
	05/11/07	O-12635-051107-SM-055	CP-3B	PCBs	
	05/11/07	O-12635-051107-SM-056	CP-3B	PCBs	Field duplicate of O-12635-051107-SM-055
	05/11/07	O-12635-051107-SM-057	CP-4A	PCBs	
	05/11/07	O-12635-051107-SM-058	CP-8	PCBs	
	05/11/07	O-12635-051107-SM-060	B-26 Sump	PCBs	
	06/04/07	O-12635-060407-SM-001	CP-20B	PCBs	
	11/05/07	O-12635-110507-001	MW-404	PCBs	
	11/05/07	O-12635-110507-002	CP-2A	PCBs	
	11/05/07	O-12635-110507-003	CP-3B	PCBs	
	11/05/07	O-12635-110507-004	MW-308	PCBs	
	11/05/07	O-12635-110507-005	CP-4A	PCBs	

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AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil (cont.)	11/05/07	O-12635-110507-006	CP-19A	PCBs	
	11/05/07	O-12635-110507-007	CP-9	PCBs	
	11/05/07	O-12635-110507-008	MW-307	PCBs	
	11/05/07	O-12635-110507-009	B-2	PCBs	
	11/05/07	O-12635-110507-010	B-2	PCBs	Field duplicate of O-12635-110507-009
	11/05/07	O-12635-110507-011	CP-7A	PCBs	
	11/05/07	O-12635-110507-012	MW-305R	PCBs	
	11/05/07	O-12635-110507-013	MW-306	PCBs	
	11/05/07	O-12635-110507-014	CP-8	PCBs	
	11/05/07	O-12635-110507-015	CP-8A	PCBs	
	11/05/07	O-12635-110507-016	CP-13	PCBs	
	11/05/07	O-12635-110507-017	CP-13A	PCBs	
	11/05/07	O-12635-110507-018	B-26	PCBs	
	11/06/07	O-12635-110607-019	CP-11B	PCBs	
	11/06/07	O-12635-110607-020	CP-11B	PCBs	Field duplicate of O-12635-110607-019
	11/06/07	O-12635-110607-021	CP-11A	PCBs	
	11/06/07	O-12635-110607-022	CP-16B	PCBs	
	11/06/07	O-12635-110607-023	CP-15A	PCBs	
	11/06/07	O-12635-110607-024	T-1	PCBs	
	11/06/07	O-12635-110607-025	CP-26A	PCBs	
	11/06/07	O-12635-110607-026	CP-27A	PCBs	
	11/06/07	O-12635-110607-027	CP-12	PCBs	
	11/06/07	O-12635-110607-028	CP-28	PCBs	
	11/06/07	O-12635-110607-029	M-1A	PCBs	
	11/06/07	O-12635-110607-030	M-1	PCBs	
	11/08/07	O-12635-110807-032	M-2A	PCBs	
	11/08/07	O-12635-110807-033	M-2A	PCBs	Field duplicate of O-12635-110807-032
	11/08/07	O-12635-110807-034	MW-400	PCBs	
	11/08/07	O-12635-110807-035	M-3	PCBs	
	11/08/07	O-12635-110807-036	CP-14	PCBs	
	11/08/07	O-12635-110807-037	CP-14AR	PCBs	
	11/08/07	O-12635-110807-038	CP-14A	PCBs	
	11/08/07	O-12635-110807-039	MW-309A	PCBs	
	11/08/07	O-12635-110807-040	MW-309	PCBs	
	11/08/07	O-12635-110807-041	MW-309	PCBs	Field duplicate of O-12635-110807-040
	11/08/07	O-12635-110807-042	MW-103	PCBs	
	11/08/07	O-12635-110807-043	MW-401	PCBs	
	06/16/08	LNAPL-12635-061608-001	MW-309	PCBs	
	06/16/08	LNAPL-12635-061608-002	MW-309A	PCBs	
	06/16/08	LNAPL-12635-061608-003	CP-14	PCBs	
	06/16/08	LNAPL-12635-061608-004	CP-14AR	PCBs	
	06/16/08	LNAPL-12635-061608-005	CP-14A	PCBs	
	06/16/08	LNAPL-12635-061608-006	CP-28	PCBs	
	06/16/08	LNAPL-12635-061608-008	M-3	PCBs	

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AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil (cont.)	06/17/08	LNAPL-12635-061708-009	M-1	PCBs	
	06/17/08	LNAPL-12635-061708-010	M-1A	PCBs	
	06/17/08	LNAPL-12635-061708-011	MW-400	PCBs	
	06/17/08	LNAPL-12635-061708-012	MW-401	PCBs	
	06/17/08	LNAPL-12635-061708-013	M-2A	PCBs	
	06/17/08	LNAPL-12635-061708-016	CP-27A	PCBs	
	06/17/08	LNAPL-12635-061708-017	MW-4B	PCBs	
	06/17/08	LNAPL-12635-061708-018	MW-404	PCBs	
	06/17/08	LNAPL-12635-061708-019	MW-305R	PCBs	
	06/17/08	LNAPL-12635-061708-020	MW-306	PCBs	
	06/17/08	LNAPL-12635-061708-021	MW-307	PCBs	
	06/17/08	LNAPL-12635-061708-022	MW-308	PCBs	
	06/17/08	LNAPL-12635-061708-023	MW-103	PCBs	
	06/17/08	LNAPL-12635-061708-024	T-1	PCBs	
	06/17/08	LNAPL-12635-061708-025	CP-11B	PCBs	
	06/17/08	LNAPL-12635-061708-026	CP-11B	PCBs	Field duplicate of LNAPL-12635-061708-025
	06/17/08	LNAPL-12635-061708-027	CP-13	PCBs	
	06/17/08	LNAPL-12635-061708-028	CP-13	PCBs	Field duplicate of LNAPL-12635-061708-027
	06/17/08	LNAPL-12635-061708-029	CP-15A	PCBs	
	06/17/08	LNAPL-12635-061708-030	CP-15A	PCBs	Field duplicate of LNAPL-12635-061708-029
	06/18/08	LNAPL-12635-061808-031	CP-26	PCBs	
	06/18/08	LNAPL-12635-061808-032	CP-26A	PCBs	
	06/18/08	LNAPL-12635-061808-033	CP-24A	PCBs	
	06/18/08	LNAPL-12635-061808-034	CP-19A	PCBs	
	06/18/08	LNAPL-12635-061808-035	CP-17A	PCBs	
	06/18/08	LNAPL-12635-061808-036	CP-16B	PCBs	
	06/18/08	LNAPL-12635-061808-037	CP-9	PCBs	
	06/18/08	LNAPL-12635-061808-038	CP-9	PCBs	Field duplicate of LNAPL-12635-061808-037
	06/18/08	LNAPL-12635-061808-039	B-2	PCBs	
	06/18/08	LNAPL-12635-061808-040	CP-7A	PCBs	
	06/18/08	LNAPL-12635-061808-041	CP-8	PCBs	
	06/18/08	LNAPL-12635-061808-042	CP-8A	PCBs	
	06/18/08	LNAPL-12635-061808-043	CP-4A	PCBs	
	06/18/08	LNAPL-12635-061808-044	CP-3B	PCBs	
	06/18/08	LNAPL-12635-061808-045	CP-2A	PCBs	
	06/18/08	LNAPL-12635-061808-046	CP-1B	PCBs	
	06/18/08	LNAPL-12635-061808-047	CP-1B	PCBs	Field duplicate of LNAPL-12635-061808-046
	06/18/08	LNAPL-12635-061808-048	MW-803A	PCBs	
	06/18/08	LNAPL-12635-061808-049	MW-802A	PCBs	
	06/18/08	LNAPL-12635-061808-050	MW-401B	PCBs	
	06/18/08	LNAPL-12635-061808-051	B-1	PCBs	
	06/19/08	LNAPL-12635-061908-052	B-26	PCBs	
	06/19/08	LNAPL-12635-061908-053	B-26	PCBs	Field duplicate of LNAPL-12635-061908-052
	06/19/08	LNAPL-12635-061908-054	CP-8B	PCBs	

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil (cont.)	06/19/08	LNAPL-12635-061908-055	CP-9B	PCBs	
	06/19/08	LNAPL-12635-061908-056	CP-4B	PCBs	
	06/20/08	LNAPL-12635-062008-064	CP-28B	PCBs	
	11/14/08	O-012635-111408-001	T-1	PCBs	
	11/14/08	O-012635-111408-002	MW-305R	PCBs	
	11/14/08	O-012635-111408-003	MW-306	PCBs	
	11/14/08	O-012635-111408-004	MW-307	PCBs	
	11/14/08	O-012635-111408-005	MW-308	PCBs	
	11/14/08	O-012635-111408-006	MW-309	PCBs	
	11/14/08	O-012635-111408-007	MW-309	PCBs	Field duplicate of O-012635-111408-006
	11/14/08	O-012635-111408-008	MW-309A	PCBs	
	11/14/08	O-012635-111408-009	CP-14	PCBs	
	11/14/08	O-012635-111408-010	CP-14A	PCBs	
	11/14/08	O-012635-111408-011	CP-15A	PCBs	
	11/14/08	O-012635-111408-012	CP-16B	PCBs	
	11/14/08	O-012635-111408-013	CP-19A	PCBs	
	11/14/08	O-012635-111408-014	CP-26A	PCBs	
	11/14/08	O-012635-111408-015	CP-27A	PCBs	
	11/14/08	O-012635-111408-016	CP-28	PCBs	
	11/14/08	O-012635-111408-018	MW-400	PCBs	
	11/14/08	O-012635-111408-019	MW-400	PCBs	Field duplicate of O-012635-111408-018
	11/14/08	O-012635-111408-020	M-1	PCBs	
	11/14/08	O-012635-111408-021	M-2A	PCBs	
	11/14/08	O-012635-111408-022	M-3	PCBs	
	11/14/08	O-012635-111408-023	MW-4B	PCBs	
	11/14/08	O-012635-111408-024	MW-404	PCBs	
	11/14/08	O-012635-111408-025	MW-802A	PCBs	
	11/14/08	O-012635-111408-026	MW-803A	PCBs	
	11/14/08	O-012635-111408-027	B-1	PCBs	
	11/14/08	O-012635-111408-028	B-2	PCBs	
	11/14/08	O-012635-111408-029	CP-1B	PCBs	
	11/14/08	O-012635-111408-030	CP-1B	PCBs	Field duplicate of O-012635-111408-029
	11/14/08	O-012635-111408-031	CP-3B	PCBs	
	11/14/08	O-012635-111408-032	CP-4A	PCBs	
	11/14/08	O-012635-111408-033	CP-4B	PCBs	
	11/14/08	O-012635-111408-034	CP-7A	PCBs	
	11/14/08	O-012635-111408-035	CP-9B	PCBs	
	11/14/08	O-012635-111408-036	CP-11B	PCBs	
	11/14/08	O-012635-111408-037	CP-11B	PCBs	Field duplicate of O-012635-111408-036
	11/14/08	O-012635-111408-038	CP-13	PCBs	
	11/14/08	O-012635-111408-039	CP-13A	PCBs	
	11/19/08	O-012635-111908-040	CP-9	PCBs	
	11/19/08	O-012635-111908-041	B-26 Sump	PCBs	
	02/19/09	O-12635-021909-001	SB-09-1	PCBs	

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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil (cont.)	03/27/09	O-12635-032709-001	MW-803A	PCBs	
	03/27/09	O-12635-032709-002	MW-404	PCBs	
	03/27/09	O-12635-032709-003	MW-802A	PCBs	
	03/27/09	O-12635-032709-004	CP-1B	PCBs	
	03/27/09	O-12635-032709-005	CP-1B	PCBs	Field duplicate of sample O-12635-032709-004
	03/27/09	O-12635-032709-006	CP-2A	PCBs	
	03/27/09	O-12635-032709-007	CP-3B	PCBs	
	03/27/09	O-12635-032709-008	MW-102B	PCBs	
	03/27/09	O-12635-032709-009	CP-4A	PCBs	
	03/27/09	O-12635-032709-010	CP-4B	PCBs	
	03/27/09	O-12635-032709-011	MW-308	PCBs	
	03/27/09	O-12635-032709-012	MW-805A	PCBs	
	03/27/09	O-12635-032709-013	MW-4B	PCBs	
	03/30/09	O-12635-033009-014	B-26	PCBs	
	03/30/09	O-12635-033009-015	B-1	PCBs	
	03/30/09	O-12635-033009-016	B-2	PCBs	
	03/30/09	O-12635-033009-017	CP-7A	PCBs	
	03/30/09	O-12635-033009-018	CP-9	PCBs	
	03/30/09	O-12635-033009-019	CP-9B	PCBs	
	03/30/09	O-12635-033009-020	CP-11B	PCBs	
	03/30/09	O-12635-033009-021	CP-13	PCBs	
	03/30/09	O-12635-033009-022	CP-14	PCBs	
	03/30/09	O-12635-033009-023	CP-14AR	PCBs	
	03/30/09	O-12635-033009-024	CP-14A	PCBs	
	03/30/09	O-12635-033009-025	CP-14A	PCBs	Field duplicate of sample O-12635-033009-024
	03/30/09	O-12635-033009-026	CP-13A	PCBs	
	04/01/09	O-12635-040109-027	CP-15A	PCBs	
	04/01/09	O-12635-040109-028	CP-19A	PCBs	
	04/01/09	O-12635-040109-029	CP-26	PCBs	
	04/01/09	O-12635-040109-030	CP-26A	PCBs	
	04/01/09	O-12635-040109-031	CP-28	PCBs	
	04/01/09	O-12635-040109-034	MW-400	PCBs	
	04/01/09	O-12635-040109-035	MW-400	PCBs	Field duplicate of sample O-12635-033009-024
	04/01/09	O-12635-040109-036	MW-401	PCBs	
	04/01/09	O-12635-040109-037	M-1	PCBs	
	04/01/09	O-12635-040109-038	M-1A	PCBs	
	04/01/09	O-12635-040109-039	M-2A	PCBs	
	04/01/09	O-12635-040109-040	M-3	PCBs	
	04/01/09	O-12635-040109-041	T-1	PCBs	
	04/02/09	O-12635-040209-042	MW-309	PCBs	
	04/02/09	O-12635-040209-043	MW-309	PCBs	Field duplicate of sample O-12635-040209-042
	04/02/09	O-12635-040209-044	MW-309A	PCBs	
	04/02/09	O-12635-040209-045	MW-306	PCBs	
	04/02/09	O-12635-040209-046	MW-305R	PCBs	

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Oil (cont.)	04/02/09	O-12635-040209-047	MW-307	PCBs	
	04/06/09	LNAPL-012635-040609-001	MW-205	PCBs, Petroleum Finger Print	
	04/06/09	LNAPL-012635-040609-002	Garage Floor Trench	PCBs, Petroleum Finger Print	
	04/06/09	LNAPL-012635-040609-003	Garage East Pit	PCBs, Petroleum Finger Print	
	04/07/09	LNAPL-012635-040709-004	Garage South Pit	PCBs, Petroleum Finger Print	
Groundwater	11/13/06	GW-12635-111306-SM-001	CP-24B	PCBs and Oil & Grease	
	11/13/06	GW-12635-111306-SM-002	CP-25B	PCBs and Oil & Grease	
	11/13/06	GW-12635-111306-SM-003	CP-25B	PCBs and Oil & Grease	Field duplicate of GW-12635-111306-SM-002
	11/14/06	GW-12635-111406-SM-007	CP-12A	PCBs and Oil & Grease	
	11/14/06	GW-12635-111406-SM-011	MW-106	PCBs and Oil & Grease	
	11/14/06	GW-12635-111406-SM-016	MW-107	PCBs and Oil & Grease	
	11/15/06	GW-12635-111506-SM-017	MW-408	PCBs and Oil & Grease	
	11/15/06	GW-12635-111506-SM-022	MW-409	PCBs and Oil & Grease	
	11/15/06	GW-12635-111506-SM-023	MW-4A	PCBs and Oil & Grease	
	11/16/06	GW-12635-111606-SM-024	CP-26B	PCBs and Oil & Grease	
	11/16/06	GW-12635-111606-SM-025	CP-27B	PCBs and Oil & Grease	
	11/16/06	GW-12635-111606-SM-026	MW-300A	PCBs and Oil & Grease	
	11/16/06	GW-12635-111606-SM-027	T-1B	PCBs and Oil & Grease	
	11/16/06	GW-12635-111606-SM-028	T-1B	PCBs and Oil & Grease	Field duplicate of GW-12635-111606-SM-027
	11/17/06	GW-12635-111706-SM-032	MW-204	PCBs and Oil & Grease	
	11/17/06	GW-12635-111706-SM-036	CP-21B	PCBs and Oil & Grease	
	11/17/06	GW-12635-111706-SM-040	CP-22B	PCBs and Oil & Grease	
	11/20/06	GW-12635-112006-SM-047	MW-405	PCBs and Oil & Grease	
	11/20/06	GW-12635-112006-SM-052	MW-2A	PCBs and Oil & Grease	
	11/20/06	GW-12635-112006-SM-056	MW-1A	PCBs and Oil & Grease	
	11/20/06	GW-12635-112006-SM-058	MW-3A	PCBs and Oil & Grease	
	11/20/06	GW-12635-112006-SM-059	MW-3A	PCBs and Oil & Grease	Field duplicate of GW-12635-112006-SM-058
	11/21/06	GW-12635-112106-SM-060	MW-205	PCBs and Oil & Grease	
	11/21/06	GW-12635-112106-SM-061	MW-102	PCBs and Oil & Grease	
	11/21/06	GW-12635-112106-SM-062	MW-4	PCBs and Oil & Grease	
	05/07/07	GW-12635-050707-SM-001	CP-24B	PCBs and Oil & Grease	
	05/07/07	GW-12635-050707-SM-002	CP-24B	PCBs and Oil & Grease	Field duplicate of GW-12635-050707-SM-001
	05/07/07	GW-12635-050707-SM-003	CP-25B	PCBs and Oil & Grease	
	05/08/07	GW-12635-050807-SM-013	CP-26B	PCBs and Oil & Grease	
	05/08/07	GW-12635-050807-SM-018	CP-27B	PCBs and Oil & Grease	
	05/08/07	GW-12635-050807-SM-019	CP-27B	PCBs and Oil & Grease	Field duplicate of GW-12635-050807-SM-018
	05/08/07	GW-12635-050807-SM-020	MW-300A	PCBs and Oil & Grease	
	05/09/07	GW-12635-050907-SM-024	MW-106	PCBs and Oil & Grease	
	05/09/07	GW-12635-050907-SM-033	MW-107	PCBs and Oil & Grease	
	05/10/07	GW-12635-0501007-SM-034	CP-12A	PCBs and Oil & Grease	
	05/10/07	GW-12635-051007-SM-045	MW-408	PCBs and Oil & Grease	
	05/10/07	GW-12635-051007-SM-047	MW-409	PCBs and Oil & Grease	
	05/11/07	GW-12635-051107-SM-051	MW-4A	PCBs and Oil & Grease	

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
	05/11/07	GW-12635-051107-SM-059	MW-4	PCBs and Oil & Grease	
	05/11/07	GW-12635-051107-SM-061	MW-405	PCBs and Oil & Grease	
	05/14/07	GW-12635-0501407-SM-062	MW-1A	PCBs and Oil & Grease	
Groundwater	05/14/07	GW-12635-0501407-SM-063	MW-2A	PCBs and Oil & Grease	
(cont.)	05/14/07	GW-12635-0501407-SM-064	MW-3A	PCBs and Oil & Grease	
	05/15/07	GW-12635-0501507-SM-065	CP-21B	PCBs and Oil & Grease	
	05/15/07	GW-12635-0501507-SM-066	CP-22B	PCBs and Oil & Grease	
	05/16/07	GW-12635-051607-SM-067	T-1B	PCBs and Oil & Grease	
	05/16/07	GW-12635-051607-SM-068	MW-102	PCBs and Oil & Grease	
	05/17/07	GW-12635-051707-SM-069	MW-204	PCBs and Oil & Grease	
	05/17/07	GW-12635-051707-SM-070	MW-205	PCBs and Oil & Grease	
	05/07/07	GW-12635-050707-SM-071	CP-25A	PCBs	
	11/05/07	WG-12635-110507-001	MW-204	PCBs and Oil & Grease	
	11/05/07	WG-12635-110507-002	MW-106	PCBs and Oil & Grease	
	11/05/07	WG-12635-110507-003	MW-409	PCBs and Oil & Grease	
	11/06/07	WG-12635-110607-004	MW-107	PCBs and Oil & Grease	
	11/06/07	WG-12635-110607-005	MW-408	PCBs and Oil & Grease	
	11/06/07	WG-12635-110607-006	MW-4	PCBs and Oil & Grease	
	11/06/07	WG-12635-110607-007	MW-4A	PCBs and Oil & Grease	
	11/06/07	WG-12635-110607-008	MW-4A	PCBs and Oil & Grease	
	11/07/07	WG-12635-110707-009	MW-405	PCBs and Oil & Grease	
	11/07/07	WG-12635-110707-010	MW-3A	PCBs and Oil & Grease	
	11/07/07	WG-12635-110707-011	MW-1A	PCBs and Oil & Grease	
	11/07/07	WG-12635-110707-012	MW-2A	PCBs and Oil & Grease	
	11/08/07	WG-12635-110807-013	CP-24	PCBs	
	11/08/07	WG-12635-110807-014	T-1B	PCBs and Oil & Grease	
	11/08/07	WG-12635-110807-015	CP-24B	PCBs and Oil & Grease	
	11/09/07	WG-12635-110907-016	CP-25B	PCBs and Oil & Grease	
	11/09/07	WG-12635-110907-017	CP26B	PCBs and Oil & Grease	
	11/09/07	WG-12635-110907-018	CP-26B	PCBs and Oil & Grease	WG-12635-110907-017
	11/13/07	WG-12635-111307-019	CP-22B	PCBs and Oil & Grease	
	11/13/07	WG-12635-111307-020	MW-205	PCBs and Oil & Grease	
	11/13/07	WG-12635-111307-021	MW-102	PCBs and Oil & Grease	
	11/13/07	WG-12635-111307-022	CP-12A	PCBs and Oil & Grease	
	11/13/07	WG-12635-111307-023	CP-23	PCBs and Oil & Grease	
	06/16/08	WG-12635-061608-001	MW-205	PCBs and Oil & Grease	
	06/16/08	WG-12635-061608-002	MW-1A	PCBs and Oil & Grease	
	06/16/08	WG-12635-061608-003	MW-1B	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/16/08	WG-12635-061608-004	CP-25B	PCBs and Oil & Grease	
	06/17/08	WG-12635-061708-005	CP-24B	PCBs and Oil & Grease	
	06/17/08	WG-12635-061708-006	CP-24B	PCBs and Oil & Grease	Field duplicate of WG-12635-061708-005
	06/17/08	WG-12635-061708-008	CP-26B	PCBs and Oil & Grease	
	06/17/08	WG-12635-061708-010	T-1B	PCBs and Oil & Grease	
	06/17/08	WG-12635-061708-012	MW-300A	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	

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AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
	06/17/08	WG-12635-061708-013	CP-22B	PCBs and Oil & Grease	
	06/18/08	WG-12635-061808-017	CP-12A	PCBs and Oil & Grease	
	06/18/08	WG-12635-061808-018	MW-102	PCBs and Oil & Grease	
Groundwater	06/18/08	WG-12635-061808-019	MW-204	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
(cont.)	06/18/08	WG-12635-061808-020	MW-102	PCBs and Oil & Grease	Field duplicate of WG-12635-061808-018
	06/18/08	WG-12635-061808-021	MW-409B	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/17/08	WG-12635-061708-011	M-2	PCBs	
	06/19/08	WG-12635-061908-022	MW-408	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/19/08	WG-12635-061908-023	MW-5B	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/19/08	WG-12635-061908-024	MW-5B	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	Field duplicate of WG-12635-061908-023
	06/19/08	WG-12635-061908-025	MW-409	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/19/08	WG-12635-061908-026	MW-4A	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/19/08	WG-12635-061908-027	MW-3A	PCBs and Oil & Grease	
	06/20/08	WG-12635-062008-028	MW-4	TCLVOCs, TCL SVOCs, PCBs, TAL Metals	
	06/20/08	WG-12635-062008-029	MW801A	PCBs and Oil & Grease	
	06/20/08	WG-12635-062008-030	MW-804A	PCBs and Oil & Grease	
	06/20/08	WG-12635-062008-031	MW-2A	PCBs and Oil & Grease	
	06/20/08	WG-12635-061808-015	CP-23	PCBs and Oil & Grease	
	06/23/08	WG-12635-062308-032	MW-6A	PCBs and Oil & Grease	
	06/23/08	WG-12635-062308-033	MW-6B	PCBs and Oil & Grease	
	06/24/08	WG-12635-062408-034	MW-106	PCBs and Oil & Grease	
	06/24/08	WG-12635-062408-035	MW-405	PCBs and Oil & Grease	
	11/17/08	GW-12635-111708-KN-001	CP-25B	PCBs and Oil & Grease	
	11/18/08	GW-12635-111808-KN-002	MW-4A	PCBs and Oil & Grease	
	11/19/08	GW-12635-111908-KN-003	MW-801A	PCBs and Oil & Grease	
	11/19/08	GW-12635-111908-KN-004	MW-2A	PCBs and Oil & Grease	
	11/19/08	GW-12635-111908-KN-005	MW-4	PCBs and Oil & Grease	
	11/19/08	GW-12635-111908-KN-006	MW-3A	PCBs and Oil & Grease	
	11/20/08	GW-12635-112008-KN-007	MW-1B	PCBs and Oil & Grease	
	11/20/08	GW-12635-112008-KN-008	MW-1A	PCBs and Oil & Grease	
	11/20/08	GW-12635-112008-KN-009	MW-405	PCBs and Oil & Grease	
	11/21/08	GW-12635-112108-KN-010	CP-26B	PCBs and Oil & Grease	
	11/21/08	GW-12635-112108-KN-011	CP-26B	PCBs and Oil & Grease	Field duplicate of GW-12635-112108-KN-010
	11/24/08	GW-12635-112408-KN-012	CP-12A	PCBs and Oil & Grease	
	11/25/08	GW-12635-112508-KN-013	CP-20B	PCBs and Oil & Grease	
	11/25/08	GW-12635-112508-KN-014	CP-22B	PCBs and Oil & Grease	
	11/25/08	GW-12635-112508-KN-015	MW-102	PCBs and Oil & Grease	
	11/25/08	GW-12635-112508-KN-016	MW-106	PCBs and Oil & Grease	
	11/26/08	GW-12635-112608-KN-017	MW-409B	PCBs and Oil & Grease	
	11/26/08	GW-12635-112608-KN-019	MW-409B	PCBs and Oil & Grease	Field duplicate of GW-12635-112608-KN-017
	11/26/08	GW-12635-112608-KN-018	CP-18B	PCBs and Oil & Grease	
	11/26/08	GW-12635-112608-KN-020	MW-300A	PCBs and Oil & Grease	
	11/26/08	GW-12635-112608-KN-021	T-1B	PCBs and Oil & Grease	
	12/01/08	GW-12635-120108-SP-022	MW-204	PCBs and Oil & Grease	

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
	12/02/08	GW-12635-120208-SP-023	MW-408	PCBs and Oil & Grease	
	12/02/08	GW-12635-120208-SP-024	MW-5B	PCBs and Oil & Grease	
	12/03/08	GW-12635-120308-SP-025	MW-6A	PCBs and Oil & Grease	
Groundwater	12/04/08	GW-12635-120408-SP-026	MW-6B	PCBs and Oil & Grease	
(cont.)	12/04/08	GW-12635-120408-SP-027	MW-205	PCBs and Oil & Grease	
	03/24/09	WG-12635-032409-001	MW-812A	PCBs and Oil & Grease	
	03/24/09	WG-12635-032409-002	MW-809A	PCBs and Oil & Grease	
	03/24/09	WG-12635-032409-003	MW-810A	PCBs and Oil & Grease	
	03/24/09	WG-12635-032409-004	MW-2B	PCBs and Oil & Grease	
	03/24/09	WG-12635-032409-005	MW-811A	PCBs and Oil & Grease	
	03/25/09	WG-12635-032509-006	MW-3	PCBs and Oil & Grease	
	03/25/09	WG-12635-032509-007	MW-813A	PCBs and Oil & Grease	
	03/25/09	WG-12635-032509-008	MW-808B	PCBs and Oil & Grease	
	03/26/09	WG-12635-032609-009	CP-31	PCBs and Oil & Grease	
	03/26/09	WG-12635-032609-010	MW-801A	PCBs and Oil & Grease	
	03/26/09	WG-12635-032609-011	MW-801A	PCBs and Oil & Grease	Field duplicate of sample WG-12635-032609-010
	03/27/09	WG-12635-032709-012	MW-405	PCBs and Oil & Grease	
	03/27/09	WG-12635-032709-013	MW-3A	PCBs and Oil & Grease	
	03/30/09	WG-12635-033009-014	MW-4A	PCBs and Oil & Grease	
	03/30/09	WG-12635-033009-015	MW-2A	PCBs and Oil & Grease	
	03/30/09	WG-12635-033009-016	MW-1B	PCBs and Oil & Grease	
	03/30/09	WG-12635-033009-017	MW-4	PCBs and Oil & Grease	
	03/31/09	WG-12635-033109-018	MW-806B	PCBs and Oil & Grease	MS/MSD
	03/31/09	WG-12635-033109-019	MW-409R	PCBs and Oil & Grease	
	03/31/09	WG-12635-033109-021	MW-409R	PCBs and Oil & Grease	Field duplicate of sample WG-12635-033109-019
	03/31/09	WG-12635-033109-020	MW-409B	PCBs and Oil & Grease	
	03/31/09	WG-12635-033109-022	MW-1A	PCBs and Oil & Grease	
	03/31/09	WG-12635-033109-023	MW-107R	PCBs and Oil & Grease	
	04/01/09	WG-12635-040109-024	MW-106	PCBs and Oil & Grease	
	04/01/09	WG-12635-040109-025	MW-408R	PCBs and Oil & Grease	
	04/01/09	WG-12635-040109-026	MW-102	PCBs and Oil & Grease	
	04/02/09	WG-12635-040209-027	CP-20B	PCBs and Oil & Grease	
	04/02/09	WG-12635-040209-028	CP-26B	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-029	CP-22B	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-030	T-1B	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-031	MW-300A	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-032	CP-24B	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-033	CP-18B	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-034	CP-23B	PCBs and Oil & Grease	
	04/03/09	WG-12635-040309-035	CP-18B	PCBs and Oil & Grease	Field duplicate of sample WG-12635-040309-033
	04/07/09	WG-12635-040709-038	CP-21B	PCBs and Oil & Grease	
	04/07/09	WG-12635-040709-039	CP-27B	PCBs and Oil & Grease	MS/MSD
	04/07/09	WG-12635-040709-040	MW-204	PCBs and Oil & Grease	
	04/07/09	WG-12635-040709-041	MW-204	PCBs and Oil & Grease	Field duplicate of sample WG-12635-040709-040

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
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Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
	04/08/09	WG-12635-040809-042	CP-14B	PCBs and Oil & Grease	
	04/08/09	WG-12635-040809-043	MW-5B	PCBs and Oil & Grease	
	04/08/09	WG-12635-040809-044	MW-6A	PCBs and Oil & Grease	
Groundwater	04/08/09	WG-12635-040809-045	MW-6B	PCBs and Oil & Grease	
(cont.)	04/09/09	WG-12635-040609-036	CP-12A	PCBs and Oil & Grease	
	04/09/09	WG-12635-040609-037	CP-25	PCBs and Oil & Grease	
	06/04/09	WG-12635-060409-001	MW-102	PCBs and Oil & Grease	Resample due to rejected data
	06/04/09	WG-12635-060409-002	MW-409B	PCBs and Oil & Grease	Resample due to rejected data
	06/11/09	WG-12635-061109-003	MW-806B	PCBs and Oil & Grease	Resample due to rejected data
Oil/Water Mixtures	06/19/08	LNAPL-12635-061908-057	CP-14B	PCBs	
	06/19/08	LNAPL-12635-061908-058	CP-18B	PCBs	
	06/19/08	LNAPL-12635-061908-059	CP-11A	PCBs	
	06/19/08	LNAPL-12635-061908-060	CP-20B	PCBs	
	06/19/08	LNAPL-12635-061908-061	CP-21B	PCBs	
	06/20/08	LNAPL-12635-062008-062	CP-23B	PCBs	
	06/20/08	LNAPL-12635-062008-063	CP-25A	PCBs	
Sewe & Laterals	09/25/07	WW-12635-092507-001	Lateral-1	PCBs and Oil & Grease	
Water	09/25/07	WW-12635-092507-002	Lateral-2	PCBs and Oil & Grease	
	09/25/07	WW-12635-092507-003	Lateral-3	PCBs and Oil & Grease	
	04/24/08	WW-12635-042408-001	Mon. Sta. 004	PCBs and Oil & Grease	
	04/24/08	WW-12625-042408-006	267' N of MH E37, west wall	PCBs and Oil & Grease	
	04/24/08	WW-12625-042408-007	247' N of MH E37, east wall	PCBs and Oil & Grease	
	04/24/08	WW-12625-042408-008	54' N of MH E37, west wall	PCBs and Oil & Grease	
	04/24/08	WW-12625-042408-009	Mon. Sta. 002	PCBs and Oil & Grease	
	04/24/08	WW-12625-042408-010	Mon. Sta. 002	PCBs and Oil & Grease	Field Duplicate of WW-12625-042408-009
	04/24/08	WW-12625-042408-011	Mon. Sta. 003	PCBs and Oil & Grease	
	3/31/2009	W-12635-033109-CMB-001	Outfall 002	PCBs and Oil & Grease	
	3/31/2009	W-12635-033109-CMB-002	Outfall 002	PCBs and Oil & Grease	Field duplicate of sample W-12635-033109-CMB-001
	3/31/2009	W-12635-033109-DT-003	Outfall 004	PCBs and Oil & Grease	
	3/31/2009	W-12635-033109-KG-004	Outfall 003	PCBs and Oil & Grease	
	3/31/2009	W-12635-033109-DT-005	5x9 Bay E28 Roof Conductor	PCBs and Oil & Grease	
	10/06/08	WW-12635-100608-001	Inlet #3	PCBs and Oil & Grease	
	10/06/08	WW-12635-100608-002	MH @ Colorado	PCBs and Oil & Grease	
	10/06/08	WW-12635-100608-003	MH @ Cornwall/Northland	PCBs and Oil & Grease	
	10/06/08	WW-12635-100608-004	MH @ Cornwall/Northland	PCBs and Oil & Grease	Field duplicate of sample WW-12635-100608-003
	10/06/08	WW-12635-100608-005	MH @ Delevan	PCBs and Oil & Grease	
Scajacquada Creek	04/24/08	WS-12635-042408-002	25' West of overflow	PCBs	
Drain - Water	04/24/08	WS-12635-042408-004	25' East of overflow	PCBs	
	3/25/2009	W-12635-032509-DT-002	400' West of Over Flow	PCBs	
	3/25/2009	W-12635-032509-DT-004	100' West of Over Flow	PCBs	
	3/25/2009	W-12635-032509-DT-007	25' West of Overflow	PCBs	

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
	3/25/2009	W-12635-032509-DT-009	25' East of Overflow	PCBs	
	3/25/2009	W-12635-032509-DT-010	25' East of Overflow	PCBs	Field duplicate of sample W-12635-032509-DT-009

SAMPLE COLLECTION ANALYSIS SUMMARY - NOVEMBER 2006 TO PRESENT
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Media	*Date*	*Sample I.D.*	*Sample Location*	*Analyses*	*Comments*
Scajacquada Creek Drain - Sediment	04/24/08	SE-12635-042408-003	25' West of overflow	PCBs	
	04/24/08	SE-12635-042408-005	25' East of overflow	PCBs	
	3/25/2009	SE-12635-032509-DT-001	400' West of Over Flow	PCBs	
	3/25/2009	SE-12635-032509-DT-003	100' West of Over Flow	PCBs	
	3/25/2009	SE-012635-032509-DT-005	25' West of Overflow	PCBs	
	3/25/2009	SE-012635-032509-DT-006	25' West of Overflow	PCBs	Field duplicate of sample SE-012635-032509-DT-005
	3/25/2009	SE-12635-032509-DT-008	25' East of Overflow	PCBs	

Notes:

PCBs	Polychlorinated Biphenyls
TCL VOCs	Target Compound List Volatile Organic Compounds
TCL SVOCs	Target Compound List Semi Volatile Organic Compounds
TAL Metals	Target Analyte List Metals

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-8*	*CP-8*	*CP-8*	*CP-8*	*CP-9*	*CP-9*
Sample ID:		*O-12635-111706-SM-035*	*O-12635-051107-SM-058*	*O-12635-110507-014*	*LNAPL-12635-061808-041*	*O-12635-111706-SM-030*	*O-12635-110507-007*
Sample Date:		*11/17/2006*	*5/11/2007*	*11/5/2007*	*6/18/2008*	*11/17/2006*	*11/5/2007*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	10 U	1 U	1 U	1 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	10 U	1 U	1 U	1 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	10 U	1 U	1 U	1 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	10 U	1 U	1 U	1 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	2.8	10 U	4.7	1.7	3.4	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	10 U	1 U	1 U	1 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	10 U	1 U	1 U	1 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-9*	*CP-9*	*CP-9*	*CP-9*	*CP-13*	*CP-13*
Sample ID:		*LNAPL-12635-061808-037*	*LNAPL-12635-061808-038*	*O-012635-111908-040*	*O-012635-033009-018*	*O-12635-111406-SM-010*	*O-12635-050807-SM-014*
Sample Date:		*6/18/2008*	*6/18/2008 (Duplicate)*	*11/19/2008*	*3/30/2009*	*11/14/2006*	*5/8/2007*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	1 U	1 U	10 U	1 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	1 U	1 U	10 U	1 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	1 U	1 U	10 U	1 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	1 U	1 U	10 U	1 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	5.3	3.9	10 U	4	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	1 U	1 U	10 U	1 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	1 U	1 U	10 U	1 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-13*	*CP-13*	*CP-13*	*CP-13*	*CP-13*	*CP-14*
Sample ID:		*O-12635-110507-016*	*LNAPL-12635-061708-027*	*LNAPL-12635-061708-028*	*O-012635-111408-038*	*O-012635-033009-021*	*O-12635-111406-SM-005*
Sample Date:		*11/5/2007*	*6/17/2008*	*6/17/2008 (Duplicate)*	*11/14/2008*	*3/30/2009*	*11/14/2006*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	100 U	100 U	100 U	10 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	100 U	100 U	100 U	10 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	100 U	100 U	100 U	10 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	100 U	100 U	100 U	10 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	1 U	100 U	100 U	100 U	10 U	6.1
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	100 U	100 U	100 U	10 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	100 U	100 U	100 U	10 U	1 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-14*	*CP-14*	*CP-14*	*CP-14*	*CP-14*	*CP-14*
Sample ID:		*O-12635-111406-SM-006*	*O-12635-050807-SM-008*	*O-12635-050807-SM-009*	*O-12635-110807-036*	*LNAPL-12635-061608-003*	*O-012635-111408-009*
Sample Date:		*11/14/2006*	*5/8/2007*	*5/8/2007*	*11/8/2007*	*6/16/2008*	*11/14/2008*
		Duplicate		*Duplicate*			
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	5 U	10 U	10 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	5 U	10 U	10 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	5 U	10 U	10 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	5 U	10 U	10 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	4.2	5 U	5 U	10 U	10 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	5 U	10 U	10 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	5 U	10 U	10 U	10 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-14*	*CP-26*	*CP-26*	*CP-26*	*CP-26*	*CP-28*
Sample ID:		*O-012635-033009-022*	*O-12635-111706-SM-038*	*O-12635-050907-SM-028*	*LNAPL-12635-061808-031*	*O-012635-040109-029*	*O-12635-111406-SM-012*
Sample Date:		*3/30/2009*	*11/17/2006*	*5/9/2007*	*6/18/2008*	*4/1/2009*	*11/14/2006*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	20 U	20 U	20 U	50 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	20 U	20 U	20 U	50 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	20 U	20 U	20 U	50 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	20 U	20 U	20 U	50 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	290	290	240	350	59
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	20 U	20 U	20 U	50 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	20 U	20 U	20 U	50 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-28*	*CP-28*	*CP-28*	*CP-28*	*CP-28*	*CP-28*
Sample ID:		*O-12635-050907-SM-031*	*O-12635-050907-SM-032*	*O-12635-110607-028*	*LNAPL-12635-061608-006*	*O-012635-111408-016*	*O-012635-040109-031*
Sample Date:		*5/9/2007*	*5/9/2007*	*11/6/2007*	*6/16/2008*	*11/14/2008*	*4/1/2009*
			Duplicate				
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	10 U	10 U	10 U	20 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	10 U	10 U	10 U	20 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	10 U	10 U	10 U	20 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	10 U	10 U	10 U	20 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	64	69	39	67	68	54
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	10 U	10 U	10 U	20 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	10 U	10 U	10 U	20 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*M-1*	*M-1*	*M-1*	*M-1*	*M-1*	*M-1*
Sample ID:		*O-12635-111406-SM-009*	*O-12635-050807-SM-005*	*O-12635-110607-030*	*LNAPL-12635-061708-009*	*O-012635-111408-020*	*O-012635-040109-037*
Sample Date:		*11/14/2006*	*5/8/2007*	*11/6/2007*	*6/17/2008*	*11/14/2008*	*4/1/2009*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	10 U	100 U	10 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	10 U	100 U	10 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	10 U	100 U	10 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	10 U	100 U	10 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	11	5 U	10 U	100 U	10 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	10 U	100 U	10 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	10 U	100 U	10 U	10 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

mg/kg - milligram per kilogram (ppm).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*M-3*	*M-3*	*M-3*	*M-3*	*M-3*	*M-3*
Sample ID:		*O-12635-111406-SM-008*	*O-12635-050807-SM-004*	*O-12635-110807-035*	*LNAPL-12635-061608-008*	*O-012635-111408-022*	*O-012635-040109-040*
Sample Date:		*11/14/2006*	*5/8/2007*	*11/8/2007*	*6/16/2008*	*11/14/2008*	*4/1/2009*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	10 U	1 U	10 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	10 U	1 U	10 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	10 U	1 U	10 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	10 U	1 U	10 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	14	5 U	10 U	8.8	10 U	12
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	10 U	1 U	10 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	10 U	1 U	10 U	10 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-103*	*MW-103*	*MW-103*	*MW-103*	*MW-306*	*MW-306*
Sample ID:		*O-12635-112006-SM-050*	*O-12635-050807-SM-017*	*O-12635-110807-042*	*LNAPL-12635-061708-023*	*O-12635-111406-SM-015*	*O-12635-050807-SM-011*
Sample Date:		*11/20/2006*	*5/8/2007*	*11/8/2007*	*6/17/2008*	*11/14/2006*	*5/8/2007*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	1 U	1 U	1 U	1 U	5 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	1 U	1 U	1 U	1 U	5 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	1 U	1 U	1 U	1 U	5 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	1 U	1 U	1 U	1 U	5 U
Aroclor-1248 (PCB-1248)	mg/Kg	1 U	1 U	1 U	1 U	13	5 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	1 U	1 U	1 U	1 U	9.1
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	1 U	1 U	1 U	3.7	5 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-306*	*MW-306*	*MW-306*	*MW-306*	*MW-306*	*MW-309*
Sample ID:		*O-12635-050807-SM-012*	*O-12635-110507-013*	*LNAPL-12635-061708-020*	*O-012635-111408-003*	*O-012635-040209-045*	*O-12635-111406-SM-004*
Sample Date:		*5/8/2007*	*11/5/2007*	*6/17/2008*	*11/14/2008*	*4/2/2009*	*11/14/2006*
		Duplicate					
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	5 U	10 U	5 U	1 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	5 U	10 U	5 U	1 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	5 U	10 U	5 U	1 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	5 U	10 U	5 U	4.1	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	5 U	9.5	12	16	1 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	8.6	5 U	10 U	5 U	10	27
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	5 U	10 U	5 U	1 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-309*	*MW-309*	*MW-309*	*MW-309*	*MW-309*	*MW-309*
Sample ID:		*O-12635-050807-SM-010*	*O-12635-110807-040*	*O-12635-110807-041*	*LNAPL-12635-061608-001*	*O-012635-111408-006*	*O-012635-111408-007*
Sample Date:		*5/8/2007*	*11/8/2007*	*11/8/2007*	*6/16/2008*	*11/14/2008*	*11/14/2008*
				Duplicate			*(Duplicate)*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	2 U	2 U	5 U	5 U	5 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	2 U	2 U	5 U	5 U	5 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	2 U	2 U	5 U	5 U	5 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	2 U	2 U	5 U	5 U	5 U
Aroclor-1248 (PCB-1248)	mg/Kg	5 U	2 U	2 U	5 U	5 U	5 U
Aroclor-1254 (PCB-1254)	mg/Kg	16	18	17	20	14	15
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	2 U	2 U	5 U	5 U	5 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-309*	*MW-309*	*MW-401*	*MW-401*	*MW-401*	*MW-401*
Sample ID:		*O-012635-040209-042*	*O-012635-040209-043*	*O-12635-111406-SM-014*	*O-12635-050807-SM-006*	*O-12635-110807-043*	*LNAPL-12635-061708-012*
Sample Date:		*4/2/2009*	*4/2/2009 (Duplicate)*	*11/14/2006*	*5/8/2007*	*11/8/2007*	*6/17/2008*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	5 U	1 U	5 U	10 U	100 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	5 U	1 U	5 U	10 U	100 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	5 U	1 U	5 U	10 U	100 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	5 U	1 U	5 U	10 U	100 U
Aroclor-1248 (PCB-1248)	mg/Kg	5 U	5 U	12	5 U	10 U	100 U
Aroclor-1254 (PCB-1254)	mg/Kg	16	14	1 U	5 U	10 U	100 U
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	5 U	1 U	5 U	10 U	100 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-401*	*T-1*	*T-1*	*T-1*	*T-1*	*T-1*
Sample ID:		*O-012635-040109-036*	*O-12635-112006-SM-049*	*O-12635-051007-SM-044*	*O-12635-110607-024*	*LNAPL-12635-061708-024*	*O-012635-111408-001*
Sample Date:		*4/1/2009*	*11/20/2006*	*5/10/2007*	*11/6/2007*	*6/17/2008*	*11/14/2008*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	5 U	10 U	5 U	2 U	5 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	5 U	10 U	5 U	2 U	5 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	5 U	10 U	5 U	2 U	5 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	5 U	10 U	5 U	2 U	5 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	9.8	11	11	11	11
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	5 U	10 U	5 U	2 U	5 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	5 U	10 U	5 U	2 U	5 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*T-1*	*B-1*	*B-1*	*B-1*	*B-1*	*B-1*
Sample ID:		*O-012635-040109-041*	*O-12635-111406-SM-013*	*O-12635-050807-SM-016*	*LNAPL-12635-061808-051*	*O-012635-111408-027*	*O-012635-033009-015*
Sample Date:		*4/1/2009*	*11/14/2006*	*5/8/2007*	*6/18/2008*	*11/14/2008*	*3/30/2009*
Stratigraphic Unit		*Fill*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	1 U	1 U	10 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	1 U	1 U	10 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	1 U	1 U	10 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	1 U	1 U	10 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	8.6	14	6.4	5.3	10 U	5.6
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	1 U	1 U	10 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	1 U	1 U	10 U	1 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*B-2*	*B-2*	*B-2*	*B-2*	*B-2*	*B-2*
Sample ID:		*O-12635-111706-SM-033*	*O-12635-050907-SM-023*	*O-12635-110507-009*	*O-12635-110507-010*	*LNAPL-12635-061808-039*	*O-012635-111408-028*
Sample Date:		*11/17/2006*	*5/9/2007*	*11/5/2007*	*11/5/2007*	*6/18/2008*	*11/14/2008*
					Duplicate		
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	2 U	2 U	1 U	100 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	2 U	2 U	1 U	100 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	2 U	2 U	1 U	100 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	2 U	2 U	1 U	100 U
Aroclor-1248 (PCB-1248)	mg/Kg	3.3	5 U	6.7	4.9	5.8	100 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	2 U	2 U	1 U	100 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	2 U	2 U	1 U	100 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*B-2*	*CP-4A*	*CP-4A*	*CP-4A*	*CP-4A*	*CP-4A*
Sample ID:		*O-012635-033009-016*	*O-12635-112006-SM-055*	*O-12635-051107-SM-057*	*O-12635-110507-005*	*LNAPL-12635-061808-043*	*O-012635-111408-032*
Sample Date:		*3/30/2009*	*11/20/2006*	*5/11/2007*	*11/5/2007*	*6/18/2008*	*11/14/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	5 U	10 U	5 U	2 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	5 U	10 U	5 U	2 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	5 U	10 U	5 U	2 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	5 U	10 U	5 U	2 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	20	22	12	20	21
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	5 U	10 U	5 U	2 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	5 U	10 U	5 U	2 U	10 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-4A*	*CP-7A*	*CP-7A*	*CP-7A*	*CP-7A*	*CP-8A*
Sample ID:		*O-012635-032709-009*	*O-12635-110507-011*	*LNAPL-12635-061808-040*	*O-012635-111408-034*	*O-012635-033009-017*	*O-12635-111706-SM-037*
Sample Date:		*3/27/2009*	*11/5/2007*	*6/18/2008*	*11/14/2008*	*3/30/2009*	*11/17/2006*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	1 U	1 U	1 U	1 U	2 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	1 U	1 U	1 U	1 U	2 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	1 U	1 U	1 U	1 U	2 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	1 U	1 U	1 U	1 U	2 U
Aroclor-1248 (PCB-1248)	mg/Kg	20	5.1	6.2	5.2	4.8	10 J
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	1 U	1 U	1 U	1 U	2 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	1 U	1 U	1 U	1 U	2 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-8A*	*CP-8A*	*CP-11A*	*CP-11A*	*CP-13A*	*CP-13A*
Sample ID:		*O-12635-110507-015*	*LNAPL-12635-061808-042*	*O-12635-050907-SM-022*	*O-12635-110607-021*	*O-12635-111706-SM-029*	*O-12635-050907-SM-025*
Sample Date:		*11/5/2007*	*6/18/2008*	*5/9/2007*	*11/6/2007*	*11/17/2006*	*5/9/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	1 U	5000 U	500 U	1 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	1 U	5000 U	500 U	1 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	1 U	5000 U	500 U	1 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	1 U	21000	500 U	1 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	11	8.2	5000 U	3400	4.6	10
Aroclor-1254 (PCB-1254)	mg/Kg	5 U	1 U	5000 U	500 U	1 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	1 U	5000 U	500 U	1 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-13A*	*CP-13A*	*CP-13A*	*CP-14A*	*CP-14A*	*CP-14A*
Sample ID:		*O-12635-110507-017*	*O-012635-111408-039*	*O-012635-033009-026*	*O-12635-111506-SM-020*	*O-12635-051007-SM-038*	*O-12635-110807-038*
Sample Date:		*11/5/2007*	*11/14/2008*	*3/30/2009*	*11/15/2006*	*5/10/2007*	*11/8/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	5 U	1 U	20 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	5 U	1 U	20 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	5 U	1 U	20 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	5 U	1 U	20 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	7.4	9.2	11	6.2	20 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	5 U	1 U	20 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	5 U	1 U	20 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-14A*	*CP-14A*	*CP-14A*	*CP-14A*	*CP-14AR*	*CP-14AR*
Sample ID:		*LNAPL-12635-061608-005*	*O-012635-111408-010*	*O-012635-033009-024*	*O-012635-033009-025*	*O-12635-111506-SM-021*	*O-12635-051007-SM-039*
Sample Date:		*6/16/2008*	*11/14/2008*	*3/30/2009*	*3/30/2009 (Duplicate)*	*11/15/2006*	*5/10/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	10 U	10 U	10 U	1 U	20 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	10 U	10 U	10 U	1 U	20 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	10 U	10 U	10 U	1 U	20 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	10 U	10 U	10 U	1 U	20 U
Aroclor-1248 (PCB-1248)	mg/Kg	3.1	10 U	10 U	10 U	5.3	20 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	10 U	10 U	10 U	1 U	20 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	10 U	10 U	10 U	1 U	20 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-14AR*	*CP-14AR*	*CP-14AR*	*CP-15A*	*CP-15A*	*CP-15A*
Sample ID:		*O-12635-110807-037*	*LNAPL-12635-061608-004*	*O-012635-033009-023*	*O-12635-050907-SM-027*	*O-12635-110607-023*	*LNAPL-12635-061708-029*
Sample Date:		*11/8/2007*	*6/16/2008*	*3/30/2009*	*5/9/2007*	*11/6/2007*	*6/17/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	1 U	10 U	5000 U	5000 U	1000 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	1 U	10 U	5000 U	5000 U	1000 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	1 U	10 U	5000 U	5000 U	1000 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	1 U	10 U	5000 U	5000 U	1000 U
Aroclor-1248 (PCB-1248)	mg/Kg	1 U	2.6	10 U	20000	22000	19000
Aroclor-1254 (PCB-1254)	mg/Kg	2.9	1 U	10 U	5000 U	5000 U	1000 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	1 U	10 U	5000 U	5000 U	1000 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-15A*	*CP-15A*	*CP-15A*	*CP-17A*	*CP-17A*	*CP-19A*
Sample ID:		*LNAPL-12635-061708-030*	*O-012635-111408-011*	*O-012635-040109-027*	*O-12635-051107-SM-053*	*LNAPL-12635-061808-035*	*O-12635-111706-SM-031*
Sample Date:		*6/17/2008*	*11/14/2008*	*4/1/2009*	*5/11/2007*	*6/18/2008*	*11/17/2006*
		(Duplicate)					
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	2000 U	5000 U	5000 U	2000 U	1000 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	2000 U	5000 U	5000 U	2000 U	1000 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	2000 U	5000 U	5000 U	2000 U	1000 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	2000 U	5000 U	5000 U	2000 U	4600	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	21000	20000	16000	21000	1000 U	160
Aroclor-1254 (PCB-1254)	mg/Kg	2000 U	5000 U	5000 U	2000 U	1000 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	2000 U	5000 U	5000 U	2000 U	1000 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-19A*	*CP-19A*	*CP-19A*	*CP-19A*	*CP-19A*	*CP-24A*
Sample ID:		*O-12635-050807-SM-015*	*O-12635-110507-006*	*LNAPL-12635-061808-034*	*O-012635-111408-013*	*O-012635-040109-028*	*LNAPL-12635-061808-033*
Sample Date:		*5/8/2007*	*11/5/2007*	*6/18/2008*	*11/14/2008*	*4/1/2009*	*6/18/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	20 U	20 U	20 U	20 U	50 U	2 U
Aroclor-1221 (PCB-1221)	mg/Kg	20 U	20 U	20 U	20 U	50 U	2 U
Aroclor-1232 (PCB-1232)	mg/Kg	20 U	20 U	20 U	20 U	50 U	2 U
Aroclor-1242 (PCB-1242)	mg/Kg	20 U	20 U	20 U	20 U	50 U	2 U
Aroclor-1248 (PCB-1248)	mg/Kg	150	140	160	140	180	14
Aroclor-1254 (PCB-1254)	mg/Kg	20 U	20 U	20 U	20 U	50 U	2 U
Aroclor-1260 (PCB-1260)	mg/Kg	20 U	20 U	20 U	20 U	50 U	2 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-26A*	*CP-26A*	*CP-26A*	*CP-26A*	*CP-26A*	*CP-26A*
Sample ID:		*O-12635-111706-SM-039*	*O-12635-050907-SM-029*	*O-12635-110607-025*	*LNAPL-12635-061808-032*	*O-012635-111408-014*	*O-012635-040109-030*
Sample Date:		*11/17/2006*	*5/9/2007*	*11/6/2007*	*6/18/2008*	*11/14/2008*	*4/1/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	50 U	50 U	50 U	20 U	50 U	50 U
Aroclor-1221 (PCB-1221)	mg/Kg	50 U	50 U	50 U	20 U	50 U	50 U
Aroclor-1232 (PCB-1232)	mg/Kg	50 U	50 U	50 U	20 U	50 U	50 U
Aroclor-1242 (PCB-1242)	mg/Kg	50 U	50 U	50 U	20 U	50 U	50 U
Aroclor-1248 (PCB-1248)	mg/Kg	330	360	380	260	250	360
Aroclor-1254 (PCB-1254)	mg/Kg	50 U	50 U	50 U	20 U	50 U	50 U
Aroclor-1260 (PCB-1260)	mg/Kg	50 U	50 U	50 U	20 U	50 U	50 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-27A*	*CP-27A*	*CP-27A*	*CP-27A*	*CP-27A*	*M-1A*
Sample ID:		*O-12635-111706-SM-041*	*O-12635-050907-SM-030*	*O-12635-110607-026*	*LNAPL-12635-061708-016*	*O-012635-111408-015*	*O-12635-051007-SM-037*
Sample Date:		*11/17/2006*	*5/9/2007*	*11/6/2007*	*6/17/2008*	*11/14/2008*	*5/10/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	5 U	1 U	10 U	5 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	5 U	1 U	10 U	5 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	5 U	1 U	10 U	5 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	5 U	1 U	10 U	5 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	4.8	5.9	2	11	7.1	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	5 U	1 U	10 U	5 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	5 U	1 U	10 U	5 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*M-1A*	*M-1A*	*M-1A*	*M-2A*	*M-2A*	*M-2A*
Sample ID:		*O-12635-110607-029*	*LNAPL-12635-061708-010*	*O-012635-040109-038*	*O-12635-112006-SM-053*	*O-12635-051007-SM-035*	*O-12635-110807-032*
Sample Date:		*11/6/2007*	*6/17/2008*	*4/1/2009*	*11/20/2006*	*5/10/2007*	*11/8/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	100 U	10 U	1 U	10 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	100 U	10 U	1 U	10 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	100 U	10 U	1 U	10 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	100 U	10 U	1 U	10 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	15	100 U	10 U	1.9	10 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	100 U	10 U	1 U	10 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	100 U	10 U	1 U	10 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*M-2A*	*M-2A*	*M-2A*	*M-2A*	*MW-305R*	*MW-305R*
Sample ID:		*O-12635-110807-033*	*LNAPL-12635-061708-013*	*O-012635-111408-021*	*O-012635-040109-039*	*O-12635-112006-SM-045*	*O-12635-051007-SM-043*
Sample Date:		*11/8/2007*	*6/17/2008*	*11/14/2008*	*4/1/2009*	*11/20/2006*	*5/10/2007*
		Duplicate					
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	10 U	10 U	10 U	R	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	10 U	10 U	10 U	R	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	10 U	10 U	10 U	R	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	10 U	10 U	10 U	R	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	10 U	10 U	10 U	13 J	12
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	10 U	10 U	10 U	R	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	10 U	10 U	10 U	R	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-305R*	*MW-305R*	*MW-305R*	*MW-305R*	*MW-307*	*MW-307*
Sample ID:		*O-12635-110507-012*	*LNAPL-12635-061708-019*	*O-012635-111408-002*	*O-012635-040209-046*	*O-12635-111706-SM-034*	*O-12635-051007-SM-041*
Sample Date:		*11/5/2007*	*6/17/2008*	*11/14/2008*	*4/2/2009*	*11/17/2006*	*5/10/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	2 U	5 U	1 U	1 UJ	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	2 U	5 U	1 U	1 UJ	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	2 U	5 U	1 U	1 UJ	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	2 U	5 U	3.9	1 UJ	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	8.3	7.2	6.7	1 U	4.8 J	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	5 U	2 U	5 U	6.9	1 UJ	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	2 U	5 U	1 U	1 UJ	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-307*	*MW-307*	*MW-307*	*MW-307*	*MW-308*	*MW-308*
Sample ID:		*O-12635-110507-008*	*LNAPL-12635-061708-021*	*O-012635-111408-004*	*O-012635-040209-047*	*O-12635-112006-SM-046*	*O-12635-051007-SM-042*
Sample Date:		*11/5/2007*	*6/17/2008*	*11/14/2008*	*4/2/2009*	*11/20/2006*	*5/10/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	10 U	5 U	1 U	1 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	10 U	5 U	1 U	1 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	10 U	5 U	1 U	1 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	10 U	5 U	1 U	1 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	10 U	8.7	10	9.1	11
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	10 U	5 U	1 U	1 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	10 U	5 U	1 U	1 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-308*	*MW-308*	*MW-308*	*MW-308*	*MW-309A*	*MW-309A*
Sample ID:		*O-12635-110507-004*	*LNAPL-12635-061708-022*	*O-012635-111408-005*	*O-012635-032709-011*	*O-12635-112006-SM-048*	*O-12635-051007-SM-046*
Sample Date:		*11/5/2007*	*6/17/2008*	*11/14/2008*	*3/27/2009*	*11/20/2006*	*5/10/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	2 U	5 U	5 U	5 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	2 U	5 U	5 U	5 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	2 U	5 U	5 U	5 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	10	5 U	5 U	5 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	8	2 U	10	11	5 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	5 U	3.1	5 U	5 U	21	18
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	2 U	5 U	5 U	5 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-309A*	*MW-309A*	*MW-309A*	*MW-309A*	*MW-400*	*MW-400*
Sample ID:		*O-12635-110807-039*	*LNAPL-12635-061608-002*	*O-012635-111408-008*	*O-012635-040209-044*	*O-12635-112006-SM-054*	*O-12635-050807-SM-007*
Sample Date:		*11/8/2007*	*6/16/2008*	*11/14/2008*	*4/2/2009*	*11/20/2006*	*5/8/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	2 U	5 U	10 U	5 U	1 U	5 U
Aroclor-1221 (PCB-1221)	mg/Kg	2 U	5 U	10 U	5 U	1 U	5 U
Aroclor-1232 (PCB-1232)	mg/Kg	2 U	5 U	10 U	5 U	1 U	5 U
Aroclor-1242 (PCB-1242)	mg/Kg	2 U	5 U	10 U	5 U	1 U	5 U
Aroclor-1248 (PCB-1248)	mg/Kg	2 U	5 U	10 U	5 U	4.7	5 U
Aroclor-1254 (PCB-1254)	mg/Kg	12	26	17	17	1 U	5 U
Aroclor-1260 (PCB-1260)	mg/Kg	2 U	5 U	10 U	5 U	1 U	5 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-400*	*MW-400*	*MW-400*	*MW-400*	*MW-400*	*MW-400*
Sample ID:		*O-12635-110807-034*	*LNAPL-12635-061708-011*	*O-012635-111408-018*	*O-012635-111408-019*	*O-012635-040109-034*	*O-012635-040109-035*
Sample Date:		*11/8/2007*	*6/17/2008*	*11/14/2008*	*11/14/2008 (Duplicate)*	*4/1/2009*	*4/1/2009 (Duplicate)*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	100 U	1 U	1 U	10 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	100 U	1 U	1 U	10 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	100 U	1 U	1 U	10 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	100 U	1 U	1 U	10 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	100 U	3	3.6	10 U	10 U
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	100 U	1 U	1 U	10 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	100 U	1 U	1 U	10 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-406*	*MW-406*	*CP-4B*	*CP-4B*	*CP-4B*	*CP-8B*
Sample ID:		*O-12635-111706-SM-042*	*O-12635-050907-SM-026*	*LNAPL-12635-061908-056*	*O-012635-111408-033*	*O-012635-032709-010*	*LNAPL-12635-061908-054*
Sample Date:		*11/17/2006*	*5/9/2007*	*6/19/2008*	*11/14/2008*	*3/27/2009*	*6/19/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	100 U	2000 U	50 U	100 U	100 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	100 U	2000 U	50 U	100 U	100 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	100 U	2000 U	50 U	100 U	100 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	100 U	2000 U	50 U	100 U	100 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	700	27000	420	440	490	170
Aroclor-1254 (PCB-1254)	mg/Kg	100 U	2000 U	50 U	100 U	100 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	100 U	2000 U	50 U	100 U	100 U	10 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-9B*	*CP-9B*	*CP-9B*	*CP-9B*	*CP-11B*	*CP-11B*
Sample ID:		*O-12635-051107-SM-052*	*LNAPL-12635-061908-055*	*O-012635-111408-035*	*O-012635-033009-019*	*O-12635-111506-SM-018*	*O-12635-111506-SM-019*
Sample Date:		*5/11/2007*	*6/19/2008*	*11/14/2008*	*3/30/2009*	*11/15/2006*	*11/15/2006*
							Duplicate
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	1 U	1 U	1 U	500 U	500 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	1 U	1 U	1 U	500 U	500 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	1 U	1 U	1 U	500 U	500 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	1 U	1 U	1 U	500 U	500 U
Aroclor-1248 (PCB-1248)	mg/Kg	16	6.3	4.6	8.1	6300	7200
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	1 U	1 U	1 U	500 U	500 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	1 U	1 U	1 U	500 U	500 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-11B*	*CP-11B*	*CP-11B*	*CP-11B*	*CP-11B*	*CP-11B*
Sample ID:		*O-12635-050907-SM-021*	*O-12635-110607-019*	*O-12635-110607-020*	*LNAPL-12635-061708-025*	*LNAPL-12635-061708-026*	*O-012635-111408-036*
Sample Date:		*5/9/2007*	*11/6/2007*	*11/6/2007*	*6/17/2008*	*6/17/2008*	*11/14/2008*
				Duplicate		*(Duplicate)*	
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1000 U	500 U	200 U	500 U	500 U	1000 U
Aroclor-1221 (PCB-1221)	mg/Kg	1000 U	500 U	200 U	500 U	500 U	1000 U
Aroclor-1232 (PCB-1232)	mg/Kg	1000 U	500 U	200 U	500 U	500 U	1000 U
Aroclor-1242 (PCB-1242)	mg/Kg	3100	500 U	200 U	7200	7300	1000 U
Aroclor-1248 (PCB-1248)	mg/Kg	1000 U	2000	1900	500 U	500 U	6200
Aroclor-1254 (PCB-1254)	mg/Kg	1000 U	500 U	200 U	500 U	500 U	1000 U
Aroclor-1260 (PCB-1260)	mg/Kg	1000 U	500 U	200 U	500 U	500 U	1000 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-11B*	*CP-11B*	*CP-16B*	*CP-16B*	*CP-16B*	*CP-16B*
Sample ID:		*O-012635-111408-037*	*O-012635-033009-020*	*O-12635-051107-SM-050*	*O-12635-110607-022*	*LNAPL-12635-061808-036*	*O-012635-111408-012*
Sample Date:		*11/14/2008 (Duplicate)*	*3/30/2009*	*5/11/2007*	*11/6/2007*	*6/18/2008*	*11/14/2008*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1000 U	500 U	1000 U	200 U	200 U	500 U
Aroclor-1221 (PCB-1221)	mg/Kg	1000 U	500 U	1000 U	200 U	200 U	500 U
Aroclor-1232 (PCB-1232)	mg/Kg	1000 U	500 U	1000 U	200 U	200 U	500 U
Aroclor-1242 (PCB-1242)	mg/Kg	1000 U	500 U	1000 U	200 U	1700	500 U
Aroclor-1248 (PCB-1248)	mg/Kg	6000	4300	8000	1700	200 U	2600
Aroclor-1254 (PCB-1254)	mg/Kg	1000 U	500 U	1000 U	200 U	200 U	500 U
Aroclor-1260 (PCB-1260)	mg/Kg	1000 U	500 U	1000 U	200 U	200 U	500 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.2

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-20B*	*CP-20B*	*CP-28B*	*CP-28B*	*MW-401B*
Sample ID:		*O-12635-051007-SM-040*	*O-12635-060407-SM-001*	*O-12635-051007-SM-036*	*LNAPL-12635-062008-064*	*LNAPL-12635-061808-050*
Sample Date:		*5/10/2007*	*6/4/2007*	*5/10/2007*	*6/20/2008*	*6/18/2008*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/Kg	5000 U	2000 U	1 U	1 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	5000 U	2000 U	1 U	1 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	5000 U	2000 U	1 U	1 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	5000 U	2000 U	1 U	1 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	14000	17000	1 U	1 U	2.1
Aroclor-1254 (PCB-1254)	mg/Kg	5000 U	2000 U	1 U	1 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	5000 U	2000 U	1 U	1 U	1 U
				-	-	
				-	-	

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
mg/kg - milligram per kilogram (ppm).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-23*	*CP-23*	*CP-24*	*CP-25*	*CP-31*	*M-2*	*MW-409*
Sample ID:		*WG-12635-111307-023*	*WG-12635-061808-015*	*WG-12635-110807-013*	*WG-12635-040609-037*	*WG-12635-032609-009*	*WG-12635-061708-011*	*GW-12635-111506-SM-022*
Sample Date:		*11/13/2007*	*6/18/2008*	*11/8/2007*	*4/9/2009*	*3/26/2009*	*6/17/2008*	*11/15/2006*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.62	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.98	0.065 U	5.0	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.6	5.0 U	-	24.8	5.0 U	-	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-409*	*MW-409*	*MW-409*	*MW-409R*	*MW-409R*	*CP-12A*	*CP-12A*
Sample ID:		*GW-12635-051007-SM-047*	*WG-12635-110507-003*	*WG-12635-061908-025*	*WG-12635-033109-019*	*WG-12635-033109-021*	*GW-12635-111406-SM-007*	*GW-12635-051007-SM-034*
Sample Date:		*5/10/2007*	*11/5/2007*	*6/19/2008*	*3/31/2009*	*3/31/2009 (Duplicate)*	*11/14/2006*	*5/10/2007*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-12A*	*CP-12A*	*CP-12A*	*CP-12A*	*CP-25A*	*MW-300A*	*MW-300A*
Sample ID:		*WG-12635-111307-022*	*WG-12635-061808-017*	*GW-12635-112408-KN-012*	*WG-12635-040609-036*	*GW-12635-051707-071*	*GW-12635-111606-SM-026*	*GW-12635-050807-SM-020*
Sample Date:		*11/13/2007*	*6/18/2008*	*11/24/2008*	*4/9/2009*	*5/17/2007*	*11/16/2006*	*5/8/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 UJ	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 UJ	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 UJ	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 UJ	0.65 U	0.086	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.32	0.65 U	0.065 U	0.19	2.3	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 UJ	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 UJ	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	44.3	9.9	5.0 U	5.5	-	5.0 U	5.0 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
* - Sample is an oil/water mix.
µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-300A*	*MW-300A*	*MW-300A*	*MW-408*	*MW-408*	*MW-408*	*MW-408*
Sample ID:		*WG-12635-061708-012*	*GW-12635-112608-KN-020*	*WG-12635-040309-031*	*GW-12635-111506-SM-017*	*GW-12635-051007-SM-045*	*WG-12635-110607-005*	*WG-12635-061908-022*
Sample Date:		*6/17/2008*	*11/26/2008*	*4/3/2009*	*11/15/2006*	*5/10/2007*	*11/6/2007*	*6/19/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-408*	*MW-408R*	*CP-14B*	*CP-18B*	*CP-18B*	*CP-18B*	*CP-20B*
Sample ID:		*GW-12635-120208-SP-023*	*WG-12635-040109-025*	*WG-12635-040809-042*	*GW-12635-112608-KN-018*	*WG-12635-040309-033*	*WG-12635-040309-035*	*GW-12635-112508-KN-013*
Sample Date:		*12/2/2008*	*4/1/2009*	*4/8/2009*	*11/26/2008*	*4/3/2009*	*4/3/2009 (Duplicate)*	*11/25/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	6.5
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.32 U	0.065 U	0.076	0.065 U	0.065 U	0.32 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-20B*	*CP-21B*	*CP-21B*	*CP-21B*	*CP-22B*	*CP-22B*	*CP-22B*
Sample ID:		*WG-12635-040209-027*	*GW-12635-111706-SM-036*	*GW-12635-051507-SM-065*	*WG-12635-040709-038*	*GW-12635-111706-SM-040*	*GW-12635-051507-SM-066*	*WG-12635-111307-019*
Sample Date:		*4/2/2009*	*11/17/2006*	*5/15/2007*	*4/7/2009*	*11/17/2006*	*5/15/2007*	*11/13/2007*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.13 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.13 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.13 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	6.3	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	1.3
Aroclor-1248 (PCB-1248)	ug/L	0.13 U	0.11	0.17	0.065 UJ	0.37	0.27	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.13 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.26
Aroclor-1260 (PCB-1260)	ug/L	0.13 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-22B*	*CP-22B*	*CP-22B*	*CP-23B*	*CP-24B*	*CP-24B*
Sample ID:		*WG-12635-061708-013*	*GW-12635-112508-KN-014*	*WG-12635-040309-029*	*WG-12635-040309-034*	*GW-12635-111306-SM-001*	*GW-12635-050707-SM-001*
Sample Date:		*6/17/2008*	*11/25/2008*	*4/3/2009*	*4/3/2009*	*11/13/2006*	*5/7/2007*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.72	0.076	0.065 U	0.065 U	1.1	2.1
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.48	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-24B*	*CP-24B*	*CP-24B*	*CP-24B*	*CP-24B*	*CP-25B*	*CP-25B*
Sample ID:		*GW-12635-050707-SM-002*	*WG-12635-110807-015*	*WG-12635-061708-005*	*WG-12635-061708-006*	*WG-12635-040309-032*	*GW-12635-111306-SM-002*	*GW-12635-111306-SM-003*
Sample Date:		*5/7/2007*	*11/8/2007*	*6/17/2008*	*6/17/2008*	*4/3/2009*	*11/13/2006*	*11/13/2006*
		Duplicate			*(Duplicate)*			*Duplicate*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	6.5 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	6.5 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	6.5 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	1.6	1.6	6.5 U	6.5 U	1.5	0.84	0.95
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	6.5 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	6.5 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	6.5 U	6.5 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	7.4 J	5.9	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-25B*	*CP-25B*	*CP-25B*	*CP-25B*	*CP-26B*	*CP-26B*
Sample ID:		*GW-12635-050707-SM-003*	*WG-12635-110907-016*	*WG-12635-061608-004*	*GW-12635-111708-KN-001*	*GW-12635-111606-SM-024*	*GW-12635-050807-SM-013*
Sample Date:		*5/7/2007*	*11/9/2007*	*6/16/2008*	*11/17/2008*	*11/16/2006*	*5/8/2007*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	1.4	2.3	1.5	0.42	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.8 J	5.0 U	5.0 U	5.0 U	5.0 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
* - Sample is an oil/water mix.
µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-26B*	*CP-26B*	*CP-26B*	*CP-26B*	*CP-26B*	*CP-26B*	*CP-27B*
Sample ID:		*WG-12635-110907-017*	*WG-12635-110907-018*	*WG-12635-061708-008*	*GW-12635-112108-KN-010*	*GW-12635-112108-KN-011*	*WG-12635-040209-028*	*GW-12635-111606-SM-025*
Sample Date:		*11/9/2007*	*11/9/2007*	*6/17/2008*	*11/21/2008*	*11/21/2008*	*4/2/2009*	*11/16/2006*
			Duplicate			*(Duplicate)*		
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.65 U	0.084	0.066	0.24	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.3

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-27B*	*CP-27B*	*CP-27B*	*MW-409B*	*MW-409B*	*MW-409B*	*MW-409B*
Sample ID:		*GW-12635-050807-SM-018*	*GW-12635-050807-SM-019*	*WG-12635-040709-039*	*WG-12635-061808-021*	*GW-12635-112608-KN-017*	*GW-12635-112608-KN-019*	*WG-12635-033109-020*
Sample Date:		*5/8/2007*	*5/8/2007* *Duplicate*	*4/7/2009*	*6/18/08*	*11/26/2008*	*11/26/2008* *(Duplicate)*	*3/31/2009*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	R
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*T-1B*	*T-1B*	*T-1B*	*T-1B*	*T-1B*	*T-1B*	*T-1B*
Sample ID:		*GW-12635-111606-SM-027*	*GW-12635-111606-SM-028*	*GW-12635-051607-067*	*WG-12635-110807-014*	*WG-12635-061708-010*	*GW-12635-112608-KN-021*	*WG-12635-040309-030*
Sample Date:		*11/16/2006*	*11/16/2006* *Duplicate*	*5/16/2007*	*11/8/2007*	*6/17/2008*	*11/26/2008*	*4/3/2009*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.13 U	0.13 U	0.065 U	0.32 U	0.32 U	0.32 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.13 U	0.13 U	0.065 U	0.32 U	0.32 U	0.32 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.13 U	0.13 U	0.065 U	0.32 U	0.32 U	0.32 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	4.5	4.4	3.1	6.1	9.4	5.1	4.4
Aroclor-1248 (PCB-1248)	ug/L	0.13 U	0.13 U	0.065 U	0.32 U	0.32 U	0.32 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.13 U	0.13 U	0.065 U	0.32 U	0.32 U	0.32 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.13 U	0.13 U	0.065 U	0.32 U	0.32 U	0.32 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.4

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL/GROUNDWATER MIXTURE DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-11A*	*CP-25A*	*CP-14B*	*CP-18B*	*CP-20B*	*CP-21B*
Sample ID:		*LNAPL-12635-061908-059*	*LNAPL-12635-062008-063*	*LNAPL-12635-061908-057*	*LNAPL-12635-061908-058*	*LNAPL-12635-061908-060*	*LNAPL-12635-061908-061*
Sample Date:		*6/19/2008*	*6/20/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008*
		*	*	*	*	*	*
Stratigraphic Unit		*Clay*	*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	320 U	58 U	0.65 U	0.65 U	320 U	77 U
Aroclor-1221 (PCB-1221)	ug/L	320 U	58 U	0.65 U	0.65 U	320 U	77 U
Aroclor-1232 (PCB-1232)	ug/L	320 U	58 U	0.65 U	0.65 U	320 U	77 U
Aroclor-1242 (PCB-1242)	ug/L	11000	58 U	0.65 U	13	320 U	1400
Aroclor-1248 (PCB-1248)	ug/L	320 U	1900	3.6	0.65 U	6500	77 U
Aroclor-1254 (PCB-1254)	ug/L	2800	58 U	0.65 U	0.65 U	320 U	77 U
Aroclor-1260 (PCB-1260)	ug/L	320 U	58 U	0.65 U	0.65 U	320 U	77 U
General Chemistry							
n-Hexane Extractable Material	mg/L	-	-	-	-	-	-

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
SITE MONITORING WELL OIL/GROUNDWATER MIXTURE DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		***CP-23B***
Sample ID:		***LNAPL-12635-062008-062***
Sample Date:		***6/20/2008***
		*
Stratigraphic Unit		***Bedrock***
Parameters:	***Units***	
Polychlorinated Biphenyls		
Aroclor-1016 (PCB-1016)	ug/L	160 U
Aroclor-1221 (PCB-1221)	ug/L	160 U
Aroclor-1232 (PCB-1232)	ug/L	160 U
Aroclor-1242 (PCB-1242)	ug/L	160 U
Aroclor-1248 (PCB-1248)	ug/L	4400
Aroclor-1254 (PCB-1254)	ug/L	160 U
Aroclor-1260 (PCB-1260)	ug/L	160 U
General Chemistry		
n-Hexane Extractable Material	mg/L	-

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
* - Sample is an oil/water mix.
µg/L - microgram per liter (ppb).

TABLE 4.5

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-2A*	*CP-2A*	*CP-2A*	*CP-2A*	*CP-4A*	*CP-4A*
Sample ID:		*O-12635-051107-SM-054*	*O-12635-110507-002*	*LNAPL-12635-061808-045*	*O-012635-032709-006*	*O-12635-112006-SM-055*	*O-12635-051107-SM-057*
Sample Date:		*5/11/2007*	*11/5/2007*	*6/18/2008*	*3/27/2009*	*11/20/2006*	*5/11/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	20 U	1 U	10 U	20 U	5 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	20 U	1 U	10 U	20 U	5 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	20 U	1 U	10 U	20 U	5 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	20 U	1 U	10 U	20 U	5 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	120	4.6	54	100	20	22
Aroclor-1254 (PCB-1254)	mg/Kg	20 U	1 U	10 U	20 U	5 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	20 U	1 U	10 U	20 U	5 U	10 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.5

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-4A*	*CP-4A*	*CP-4A*	*CP-4A*	*MW-308*	*MW-308*
Sample ID:		*O-12635-110507-005*	*LNAPL-12635-061808-043*	*O-012635-111408-032*	*O-012635-032709-009*	*O-12635-112006-SM-046*	*O-12635-051007-SM-042*
Sample Date:		*11/5/2007*	*6/18/2008*	*11/14/2008*	*3/27/2009*	*11/20/2006*	*5/10/2007*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	2 U	10 U	10 U	1 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	2 U	10 U	10 U	1 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	2 U	10 U	10 U	1 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	2 U	10 U	10 U	1 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	12	20	21	20	9.1	11
Aroclor-1254 (PCB-1254)	mg/Kg	5 U	2 U	10 U	10 U	1 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	2 U	10 U	10 U	1 U	10 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.5

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-308*	*MW-308*	*MW-308*	*MW-308*	*MW-805A*	*CP-1B*
Sample ID:		*O-12635-110507-004*	*LNAPL-12635-061708-022*	*O-012635-111408-005*	*O-012635-032709-011*	*O-012635-032709-012*	*LNAPL-12635-061808-046*
Sample Date:		*11/5/2007*	*6/17/2008*	*11/14/2008*	*3/27/2009*	*3/27/2009*	*6/18/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	2 U	5 U	5 U	1 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	2 U	5 U	5 U	1 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	2 U	5 U	5 U	1 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	10	5 U	5 U	1 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	8	2 U	10	11	1 U	8
Aroclor-1254 (PCB-1254)	mg/Kg	5 U	3.1	5 U	5 U	1 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	2 U	5 U	5 U	1 U	1 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.5

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-1B*	*CP-1B*	*CP-1B*	*CP-1B*	*CP-1B*	*CP-3B*
Sample ID:		*LNAPL-12635-061808-047*	*O-012635-111408-029*	*O-012635-111408-030*	*O-012635-032709-004*	*O-012635-032709-005*	*O-12635-112006-SM-043*
Sample Date:		*6/18/2008*	*11/14/2008*	*11/14/2008*	*3/27/2009*	*3/27/2009*	*11/20/2006*
		(Duplicate)		*(Duplicate)*		*(Duplicate)*	
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	2 U	2 U	2 U	1 U	5 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	2 U	2 U	2 U	1 U	5 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	2 U	2 U	2 U	1 U	5 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	2 U	2 U	2 U	1 U	5 U
Aroclor-1248 (PCB-1248)	mg/Kg	8.7	7.9	8	8.2	3.8	28
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	2 U	2 U	2 U	1 U	5 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	2 U	2 U	2 U	1 U	5 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.5

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-3B*	*CP-3B*	*CP-3B*	*CP-3B*	*CP-3B*	*CP-3B*
Sample ID:		*O-12635-112006-SM-044*	*O-12635-051107-SM-055*	*O-12635-051107-SM-056*	*O-12635-110507-003*	*LNAPL-12635-061808-044*	*O-012635-111408-031*
Sample Date:		*11/20/2006*	*5/11/2007*	*5/11/2007*	*11/5/2007*	*6/18/2008*	*11/14/2008*
		Duplicate		*Duplicate*			
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	5 U	10 U	10 U	5 U	5 U	10 U
Aroclor-1221 (PCB-1221)	mg/Kg	5 U	10 U	10 U	5 U	5 U	10 U
Aroclor-1232 (PCB-1232)	mg/Kg	5 U	10 U	10 U	5 U	5 U	10 U
Aroclor-1242 (PCB-1242)	mg/Kg	5 U	10 U	10 U	5 U	5 U	10 U
Aroclor-1248 (PCB-1248)	mg/Kg	30	27	27	31	29	26
Aroclor-1254 (PCB-1254)	mg/Kg	5 U	10 U	10 U	5 U	5 U	10 U
Aroclor-1260 (PCB-1260)	mg/Kg	5 U	10 U	10 U	5 U	5 U	10 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.5

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*CP-3B*	*CP-4B*	*CP-4B*	*CP-4B*	*MW-102B*
Sample ID:		*O-012635-032709-007*	*LNAPL-12635-061908-056*	*O-012635-111408-033*	*O-012635-032709-010*	*O-012635-032709-008*
Sample Date:		*3/27/2009*	*6/19/2008*	*11/14/2008*	*3/27/2009*	*3/27/2009*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	50 U	100 U	100 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	50 U	100 U	100 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	50 U	100 U	100 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	50 U	100 U	100 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	27	420	440	490	2.3
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	50 U	100 U	100 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	50 U	100 U	100 U	1 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.6

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-102*	*MW-102*	*MW-102*	*MW-102*	*MW-102*	*MW-102*	*MW-102*
Sample ID:		*GW-12635-112106-SM-061*	*GW-12635-051607-068*	*WG-12635-111307-021*	*WG-12635-061808-018*	*WG-12635-061808-020*	*GW-12635-112508-KN-015*	*WG-12635-040109-026*
Sample Date:		*11/21/2006*	*5/16/2007*	*11/13/2007*	*6/18/2008*	*6/18/2008 (Duplicate)*	*11/25/2008*	*4/1/2009*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	R
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-102*	*MW-6A*	*MW-6A*	*MW-6A*	*MW-106*	*MW-106*	*MW-106*
Sample ID:		*WG-12635-060409-001*	*WG-12635-062308-032*	*GW-12635-120308-SP-025*	*WG-12635-040809-044*	*GW-12635-111406-SM-011*	*GW-12635-050907-SM-024*	*WG-12635-110507-002*
Sample Date:		*6/4/2009*	*6/23/2008*	*12/3/2008*	*4/8/2009*	*11/14/2006*	*5/9/2007*	*11/5/2007*
Stratigraphic Unit		*Fill*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	6.0	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-106*	*MW-106*	*MW-106*	*MW-107*	*MW-107*	*MW-107*	*MW-107R*
Sample ID:		*WG-12635-062408-034*	*GW-12635-112508-KN-016*	*WG-12635-040109-024*	*GW-12635-111406-SM-016*	*GW-12635-050907-SM-033*	*WG-12635-110607-004*	*WG-12635-033109-023*
Sample Date:		*6/24/2008*	*11/25/2008*	*4/1/2009*	*11/14/2006*	*5/9/2007*	*11/6/2007*	*3/31/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.65 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.65 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.65 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.65 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.65 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.65 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.12	0.65 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.6

ANALYTICAL RESULTS SUMMARY
CARRIER JOB AREA MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-6B*	*MW-6B*	*MW-6B*	*MW-806B*	*MW-806B*	*MW-808B*
Sample ID:		*WG-12635-062308-033*	*GW-12635-120408-SP-026*	*WG-12635-040809-045*	*WG-12635-033109-018*	*WG-12635-061109-003*	*WG-12635-032509-008*
Sample Date:		*6/23/2008*	*12/4/2008*	*4/8/2009*	*3/31/2009*	*6/11/2009*	*3/25/2009*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	R	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-4*	*MW-4*	*MW-4*	*MW-4*	*MW-4*	*MW-4*
Sample ID:		*GW-12635-112106-SM-062*	*GW-12635-051107-SM-059*	*WG-12635-110607-006*	*WG-12635-062008-028*	*GW-12635-111908-KN-005*	*WG-12635-033009-017*
Sample Date:		*11/21/2006*	*5/11/2007*	*11/6/2007*	*6/20/2008*	*11/19/2008*	*3/30/2009*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-405*	*MW-405*	*MW-405*	*MW-405*	*MW-405*	*MW-405*
Sample ID:		*GW-12635-112006-SM-047*	*GW-12635-051107-SM-061*	*WG-12635-110707-009*	*WG-12635-062408-035*	*GW-12635-112008-KN-009*	*WG-12635-032709-012*
Sample Date:		*11/20/2006*	*5/11/2007*	*11/7/2007*	*6/24/2008*	*11/20/2008*	*3/27/2009*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-1A*	*MW-1A*	*MW-1A*	*MW-1A*	*MW-1A*	*MW-1A*
Sample ID:		*GW-12635-112006-SM-056*	*GW-12635-051407-SM-062*	*WG-12635-110707-011*	*WG-12635-061608-002*	*GW-12635-112008-KN-008*	*WG-12635-033109-022*
Sample Date:		*11/20/2006*	*5/14/2007*	*11/7/2007*	*6/16/2008*	*11/20/2008*	*3/31/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.070	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-2A*	*MW-2A*	*MW-2A*	*MW-2A*	*MW-2A*	*MW-2A*
Sample ID:		*GW-12635-112006-SM-052*	*GW-12635-051407-SM-063*	*WG-12635-110707-012*	*WG-12635-062008-031*	*GW-12635-111908-KN-004*	*WG-12635-033009-015*
Sample Date:		*11/20/2006*	*5/14/2007*	*11/7/2007*	*6/20/2008*	*11/19/2008*	*3/30/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 UJ	0.065 U	3.3	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-3A*	*MW-3A*	*MW-3A*	*MW-3A*	*MW-3A*	*MW-3A*
Sample ID:		*GW-12635-112006-SM-058*	*GW-12635-112006-SM-059*	*GW-12635-051407-SM-064*	*WG-12635-110707-010*	*WG-12635-061908-027*	*GW-12635-111908-KN-006*
Sample Date:		*11/20/2006*	*11/20/2006* *Duplicate*	*5/14/2007*	*11/7/2007*	*6/19/2008*	*11/19/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-3A*	*MW-4A*	*MW-4A*	*MW-4A*	*MW-4A*	*MW-4A*	*MW-4A*
Sample ID:		*WG-12635-032709-013*	*GW-12635-111506-SM-023*	*GW-12635-051107-SM-051*	*WG-12635-110607-007*	*WG-12635-110607-008*	*WG-12635-061908-026*	*GW-12635-111808-KN-002*
Sample Date:		*3/27/2009*	*11/15/2006*	*5/11/2007*	*11/6/2007*	*11/6/2007*	*6/19/2008*	*11/18/2008*
						Duplicate		
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-4A*	*MW-801A*	*MW-801A*	*MW-801A*	*MW-801A*	*MW-804A*	*MW-809A*
Sample ID:		*WG-12635-033009-014*	*WG-12635-062008-029*	*GW-12635-111908-KN-003*	*WG-12635-032609-010*	*WG-12635-032609-011*	*WG-12635-062008-030*	*WG-12635-032409-002*
Sample Date:		*3/30/2009*	*6/20/2008*	*11/19/2008*	*3/26/2009*	*3/26/2009 (Duplicate)*	*6/20/2008*	*3/24/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.072	0.065 U	0.065 U	0.32 U	0.32 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.32 U	0.32 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-810A*	*MW-811A*	*MW-812A*	*MW-813A*	*MW-1B*	*MW-1B*	*MW-1B*
Sample ID:		*WG-12635-032409-003*	*WG-12635-032409-005*	*WG-12635-032409-001*	*WG-12635-032509-007*	*WG-12635-061608-003*	*GW-12635-112008-KN-007*	*WG-12635-033009-016*
Sample Date:		*3/24/2009*	*3/24/2009*	*3/24/2009*	*3/25/2009*	*6/16/08*	*11/20/2008*	*3/30/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.32 U	0.067	0.065 U	0.065 U	0.065 U	0.067	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.7

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		***MW-2B***
Sample ID:		***WG-12635-032409-004***
Sample Date:		***3/24/2009***
Stratigraphic Unit		***Bedrock***
Parameters:	***Units***	
Polychlorinated Biphenyls		
Aroclor-1016 (PCB-1016)	ug/L	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.14
Aroclor-1248 (PCB-1248)	ug/L	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U
General Chemistry		
n-Hexane Extractable Material	mg/L	5.0 U

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.8

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-404*	*MW-404*	*MW-404*	*MW-404*	*MW-404*	*MW-404*
Sample ID:		*O-12635-112006-SM-057*	*O-12635-051107-SM-048*	*O-12635-110507-001*	*LNAPL-12635-061708-018*	*O-012635-111408-024*	*O-012635-032709-002*
Sample Date:		*11/20/2006*	*5/11/2007*	*11/5/2007*	*6/17/2008*	*11/14/2008*	*3/27/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	1 U	5 U	10 U	10 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	1 U	5 U	10 U	10 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	1 U	5 U	10 U	10 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	3.1	5 U	10 U	10 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	4.7	1 U	5	10 U	10 U	7.3
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	1.1	5 U	10 U	10 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	1 U	5 U	10 U	10 U	1 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.8

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-802A*	*MW-802A*	*MW-802A*	*MW-803A*	*MW-803A*	*MW-803A*
Sample ID:		*LNAPL-12635-061808-049*	*O-012635-111408-025*	*O-012635-032709-003*	*LNAPL-12635-061808-048*	*O-012635-111408-026*	*O-012635-032709-001*
Sample Date:		*6/18/2008*	*11/14/2008*	*3/27/2009*	*6/18/2008*	*11/14/2008*	*3/27/2009*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/Kg	1 U	10 U	1 U	20 U	50 U	20 U
Aroclor-1221 (PCB-1221)	mg/Kg	1 U	10 U	1 U	20 U	50 U	20 U
Aroclor-1232 (PCB-1232)	mg/Kg	1 U	10 U	1 U	20 U	50 U	20 U
Aroclor-1242 (PCB-1242)	mg/Kg	1 U	10 U	1 U	20 U	50 U	20 U
Aroclor-1248 (PCB-1248)	mg/Kg	1 U	10 U	6.3	230	230	260
Aroclor-1254 (PCB-1254)	mg/Kg	1 U	10 U	1 U	20 U	50 U	20 U
Aroclor-1260 (PCB-1260)	mg/Kg	1 U	10 U	1 U	20 U	50 U	20 U

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.8

ANALYTICAL RESULTS SUMMARY
SOUTH YARD MONITORING WELL OIL DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-4B*	*MW-4B*	*MW-4B*
Sample ID:		*LNAPL-12635-061708-017*	*O-012635-111408-023*	*O-012635-032709-013*
Sample Date:		*6/17/2008*	*11/14/2008*	*3/27/2009*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	mg/Kg	10 U	50 U	1 U
Aroclor-1221 (PCB-1221)	mg/Kg	10 U	50 U	1 U
Aroclor-1232 (PCB-1232)	mg/Kg	10 U	50 U	1 U
Aroclor-1242 (PCB-1242)	mg/Kg	10 U	50 U	1 U
Aroclor-1248 (PCB-1248)	mg/Kg	10 U	390	6.1
Aroclor-1254 (PCB-1254)	mg/Kg	10 U	50 U	1 U
Aroclor-1260 (PCB-1260)	mg/Kg	10 U	50 U	1 U
		-	-	-
		-	-	-

Notes:

U - Not present at or above the associated value.

mg/kg - milligram per kilogram (ppm).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-3*	*MW-4*	*MW-4*	*MW-4*	*MW-4*	*MW-4*	*MW-4*
Sample ID:		*WG-12635-032509-006*	*GW-12635-112106-SM-062*	*GW-12635-051107-SM-059*	*WG-12635-110607-006*	*WG-12635-062008-028*	*GW-12635-111908-KN-005*	*WG-12635-033009-017*
Sample Date:		*3/25/2009*	*11/21/2006*	*5/11/2007*	*11/6/2007*	*6/20/2008*	*11/19/2008*	*3/30/2009*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.075	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
* - Sample is an oil/water mix.
µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-204*	*MW-204*	*MW-204*	*MW-204*	*MW-204*	*MW-204*	*MW-204*
Sample ID:		*GW-12635-111706-SM-032*	*GW-12635-051707-069*	*WG-12635-110507-001*	*WG-12635-061808-019*	*GW-12635-120108-SP-022*	*WG-12635-040709-040*	*WG-12635-040709-041*
Sample Date:		*11/17/2006*	*5/17/2007*	*11/5/2007*	*6/18/2008*	*12/1/2008*	*4/7/2009*	*4/7/2009 (Duplicate)*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.070	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-205*	*MW-205*	*MW-205*	*MW-205*	*MW-205*	*MW-405*	*MW-405*
Sample ID:		*GW-12635-112106-SM-060*	*GW-12635-051707-070*	*WG-12635-111307-020*	*WG-12635-061608-001*	*GW-12635-120408-SP-027*	*GW-12635-112006-SM-047*	*GW-12635-051107-SM-061*
Sample Date:		*11/21/2006*	*5/17/2007*	*11/13/2007*	*6/16/2008*	*12/4/2008*	*11/20/2006*	*5/11/2007*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	9.5	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-405*	*MW-405*	*MW-405*	*MW-405*	*MW-409*	*MW-409*	*MW-409*
Sample ID:		*WG-12635-110707-009*	*WG-12635-062408-035*	*GW-12635-112008-KN-009*	*WG-12635-032709-012*	*GW-12635-111506-SM-022*	*GW-12635-051007-SM-047*	*WG-12635-110507-003*
Sample Date:		*11/7/2007*	*6/24/2008*	*11/20/2008*	*3/27/2009*	*11/15/2006*	*5/10/2007*	*11/5/2007*
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*	*Fill*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-409*	*MW-409R*	*MW-409R*	*MW-1A*	*MW-1A*	*MW-1A*	*MW-1A*
Sample ID:		*WG-12635-061908-025*	*WG-12635-033109-019*	*WG-12635-033109-021*	*GW-12635-112006-SM-056*	*GW-12635-051407-SM-062*	*WG-12635-110707-011*	*WG-12635-061608-002*
Sample Date:		*6/19/2008*	*3/31/2009*	*3/31/2009*	*11/20/2006*	*5/14/2007*	*11/7/2007*	*6/16/2008*
				(Duplicate)				
Stratigraphic Unit		*Fill*	*Fill*	*Fill*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.32 U	0.32 U	0.065 U	0.065 UJ	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
* - Sample is an oil/water mix.
µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-1A*	*MW-1A*	*MW-2A*	*MW-2A*	*MW-2A*	*MW-2A*
Sample ID:		*GW-12635-112008-KN-008*	*WG-12635-033109-022*	*GW-12635-112006-SM-052*	*GW-12635-051407-SM-063*	*WG-12635-110707-012*	*WG-12635-062008-031*
Sample Date:		*11/20/2008*	*3/31/2009*	*11/20/2006*	*5/14/2007*	*11/7/2007*	*6/20/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.070	0.065 U	0.065 U	0.065 UJ	0.065 U	3.3
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-2A*	*MW-2A*	*MW-3A*	*MW-3A*	*MW-3A*	*MW-3A*
Sample ID:		*GW-12635-111908-KN-004*	*WG-12635-033009-015*	*GW-12635-112006-SM-058*	*GW-12635-112006-SM-059*	*GW-12635-051407-SM-064*	*WG-12635-110707-010*
Sample Date:		*11/19/2008*	*3/30/2009*	*11/20/2006*	*11/20/2006*	*5/14/2007*	*11/7/2007*
					Duplicate		
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-3A*	*MW-3A*	*MW-3A*	*MW-4A*	*MW-4A*	*MW-4A*	*MW-4A*
Sample ID:		*WG-12635-061908-027*	*GW-12635-111908-KN-006*	*WG-12635-032709-013*	*GW-12635-111506-SM-023*	*GW-12635-051107-SM-051*	*WG-12635-110607-007*	*WG-12635-110607-008*
Sample Date:		*6/19/2008*	*11/19/2008*	*3/27/2009*	*11/15/2006*	*5/11/2007*	*11/6/2007*	*11/6/2007* *Duplicate*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 UJ	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-4A*	*MW-4A*	*MW-4A*	*MW-6A*	*MW-6A*	*MW-6A*	*MW-106*
Sample ID:		*WG-12635-061908-026*	*GW-12635-111808-KN-002*	*WG-12635-033009-014*	*WG-12635-062308-032*	*GW-12635-120308-SP-025*	*WG-12635-040809-044*	*GW-12635-111406-SM-011*
Sample Date:		*6/19/2008*	*11/18/2008*	*3/30/2009*	*6/23/2008*	*12/3/2008*	*4/8/2009*	*11/14/2006*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-106*	*MW-106*	*MW-106*	*MW-106*	*MW-106*	*MW-107*
Sample ID:		*GW-12635-050907-SM-024*	*WG-12635-110507-002*	*WG-12635-062408-034*	*GW-12635-112508-KN-016*	*WG-12635-040109-024*	*GW-12635-111406-SM-016*
Sample Date:		*5/9/2007*	*11/5/2007*	*6/24/2008*	*11/25/2008*	*4/1/2009*	*11/14/2006*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-107*	*MW-107*	*MW-107R*	*MW-300A*	*MW-300A*	*MW-300A*
Sample ID:		*GW-12635-050907-SM-033*	*WG-12635-110607-004*	*WG-12635-033109-023*	*GW-12635-111606-SM-026*	*GW-12635-050807-SM-020*	*WG-12635-061708-012*
Sample Date:		*5/9/2007*	*11/6/2007*	*3/31/2009*	*11/16/2006*	*5/8/2007*	*6/17/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.12	0.65 U	0.065 U	0.065 U	0.065 U
General Chemistry							
n-Hexane Extractable Material	mg/L	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-300A*	*MW-300A*	*MW-408*	*MW-408*	*MW-408*	*MW-408*	*MW-408*
Sample ID:		*GW-12635-112608-KN-020*	*WG-12635-040309-031*	*GW-12635-111506-SM-017*	*GW-12635-051007-SM-045*	*WG-12635-110607-005*	*WG-12635-061908-022*	*GW-12635-120208-SP-023*
Sample Date:		*11/26/2008*	*4/3/2009*	*11/15/2006*	*5/10/2007*	*11/6/2007*	*6/19/2008*	*12/2/2008*
Stratigraphic Unit		*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*	*Clay*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-408R*	*MW-1B*	*MW-1B*	*MW-1B*	*MW-2B*	*MW-5B*	*MW-5B*
Sample ID:		*WG-12635-040109-025*	*WG-12635-061608-003*	*GW-12635-112008-KN-007*	*WG-12635-033009-016*	*WG-12635-032409-004*	*WG-12635-061908-023*	*WG-12635-061908-024*
Sample Date:		*4/1/2009*	*6/16/08*	*11/20/2008*	*3/30/2009*	*3/24/2009*	*6/19/08*	*6/19/08*
								Duplicate
Stratigraphic Unit		*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.14	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.32 U	0.065 U	0.067	0.065 U	0.065 U	0.065 UJ	0.56 J
Aroclor-1254 (PCB-1254)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-5B*	*MW-5B*	*MW-6B*	*MW-6B*	*MW-6B*	*MW-409B*	*MW-409B*
Sample ID:		*GW-12635-120208-SP-024*	*WG-12635-040809-043*	*WG-12635-062308-033*	*GW-12635-120408-SP-026*	*WG-12635-040809-045*	*WG-12635-061808-021*	*GW-12635-112608-KN-017*
Sample Date:		*12/2/2008*	*4/8/2009*	*6/23/2008*	*12/4/2008*	*4/8/2009*	*6/18/08*	*11/26/2008*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*							
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry								
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

J - Estimated value.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

* - Sample is an oil/water mix.

µg/L - microgram per liter (ppb).

TABLE 4.9

ANALYTICAL RESULTS SUMMARY
PERIMETER MONITORING WELL GROUNDWATER DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
NOVEMBER 2006 - APRIL 2009

Sample Location:		*MW-409B*	*MW-409B*	*MW-409B*	*MW-808B*
Sample ID:		*GW-12635-112608-KN-019*	*WG-12635-033109-020*	*GW-12635-060409-002*	*WG-12635-032509-008*
Sample Date:		*11/26/2008 (Duplicate)*	*3/31/2009*	*6/4/2009*	*3/25/2009*
Stratigraphic Unit		*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:	*Units*				
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	R	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	R	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	R	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	R	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	R	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	R	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	R	0.065 U	0.065 U
General Chemistry					
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U

Notes:
J - Estimated value.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
* - Sample is an oil/water mix.
µg/L - microgram per liter (ppb).

TABLE 4.10

ANALYTICAL RESULTS SUMMARY
MAINTENANCE GARAGE FREE PRODUCT DATA
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. #915196
APRIL 2009

Sample Location:		*MW-205*	*Floor Trench*	*East Pit*	*South Pit*
Sample ID:		*LNAPL-012635-040609-001*	*LNAPL-012635-040609-002*	*LNAPL-012635-040609-003*	*LNAPL-012635-040709-004*
Sample Date:		*4/6/09*	*4/6/09*	*4/6/09*	*4/7/09*
Parameters:	*Units*				
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	mg/kg	1 U	1 U	1 U	1 U
Aroclor-1221 (PCB-1221)	mg/kg	1 U	1 U	1 U	1 U
Aroclor-1232 (PCB-1232)	mg/kg	1 U	1 U	1 U	1 U
Aroclor-1242 (PCB-1242)	mg/kg	1 U	1 U	1 U	1 U
Aroclor-1248 (PCB-1248)	mg/kg	1 U	1 U	1 U	1 U
Aroclor-1254 (PCB-1254)	mg/kg	1 U	1 U	1 U	1 U
Aroclor-1260 (PCB-1260)	mg/kg	1 U	1 U	1 U	1 U
Petroleum Fingerprint		DRO	DRO	DRO*	DRO

Notes:

U - Not present at or above the associated value.

DRO - Diesel Range Organics.

* - Higher viscosity and boiling point, more indicative of hydraulic or transmission fluids.

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-4*	*MW-204*	*MW-409*	*MW-4A*	*MW-300A*
Sample ID:				*WG-12635-062008-028*	*WG-12635-061808-019*	*WG-12635-061908-025*	*WG-12635-061908-026*	*WG-12635-061708-012*
Sample Date:				*6/20/2008*	*6/18/2008*	*6/19/2008*	*6/19/2008*	*6/17/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]							
	Standard	*Guidance value*						
Stratigraphic Unit:				*Fill*	*Fill*	*Fill*	*Clay*	*Clay*
Parameters:			*Units*					
Volatile Organic Compounds								
1,1,1-Trichloroethane	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	-	0.2	ug/L	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane (DBCP)	0.	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene Dibromide)	0.04	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	3	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	0.6	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	3	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	3	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
2-Hexanone	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Acetone	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Benzene	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Bromoform	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Bromomethane (Methyl Bromide)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	ug/L	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	7	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chloromethane (Methyl Chloride)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	0.4[2]	-	ug/L	10 U	10 U	10 U	10 U	10 U
Cyclohexane	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane (CFC-12)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Methyl acetate	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-4*	*MW-204*	*MW-409*	*MW-4A*	*MW-300A*
Sample ID:				*WG-12635-062008-028*	*WG-12635-061808-019*	*WG-12635-061908-025*	*WG-12635-061908-026*	*WG-12635-061708-012*
Sample Date:				*6/20/2008*	*6/18/2008*	*6/19/2008*	*6/19/2008*	*6/17/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]							
	Standard	*Guidance value*						
Stratigraphic Unit:				*Fill*	*Fill*	*Fill*	*Clay*	*Clay*
Parameters:			*Units*					
Methyl cyclohexane	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Methyl Tert Butyl Ether	-	10	ug/L	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Styrene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Toluene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4[3]	-	ug/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane (CFC-11)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Trifluorotrichloroethane (Freon 113)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	2	-	ug/L	10 U	10 U	10 U	10 U	10 U
Xylene (total)	5[4]		ug/L	10 U	10 U	10 U	10 U	10 U
Semi-volatile Organic Compounds								
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	NC	NC	ug/L	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	1[5]	50	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	1[5]	10	ug/L	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	-	10	ug/L	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	5	-	ug/L	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	5	-	ug/L	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	1[5]	-	ug/L	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-4*	*MW-204*	*MW-409*	*MW-4A*	*MW-300A*
Sample ID:				*WG-12635-062008-028*	*WG-12635-061808-019*	*WG-12635-061908-025*	*WG-12635-061908-026*	*WG-12635-061708-012*
Sample Date:				*6/20/2008*	*6/18/2008*	*6/19/2008*	*6/19/2008*	*6/17/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]							
	Standard	*Guidance value*						
Stratigraphic Unit:				*Fill*	*Fill*	*Fill*	*Clay*	*Clay*
Parameters:			*Units*					
4-Nitroaniline	5	-	ug/L	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	1[5]	-	ug/L	25 U	25 U	25 U	25 U	25 U
Acenaphthene	-	20	ug/L	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Acetophenone	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Anthracene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Atrazine	7.5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	ND	-	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	-	0.002	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	-	0.002	ug/L	10 U	10 U	10 U	10 U	10 U
Biphenyl	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	1.0	-	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Butyl benzylphthalate	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 UJ
Carbazole	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Chrysene	-	0.002	ug/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	50	-	ug/L	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Fluorene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.04	-	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	0.5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Isophorone	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	-	10	ug/L	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	0.4	-	ug/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-4*	*MW-204*	*MW-409*	*MW-4A*	*MW-300A*
Sample ID:				*WG-12635-062008-028*	*WG-12635-061808-019*	*WG-12635-061908-025*	*WG-12635-061908-026*	*WG-12635-061708-012*
Sample Date:				*6/20/2008*	*6/18/2008*	*6/19/2008*	*6/19/2008*	*6/17/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]							
	Standard	*Guidance value*						
Stratigraphic Unit:				*Fill*	*Fill*	*Fill*	*Clay*	*Clay*
Parameters:			*Units*					
N-Nitrosodiphenylamine	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	1[5]	-	ug/L	25 U	25 U	25 U	25 U	25 U
Phenanthrene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Phenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
Pyrene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Metals								
Aluminum	100	-	ug/L	200 U	200 U	**369**	200 U	200 U
Antimony	3	-	ug/L	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic	25	-	ug/L	10.0 U	10.0 U	18.9	10.0 U	10.0 U
Barium	1,000	-	ug/L	**3460**	286	200 U	200 U	200 U
Beryllium	5	-	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	5	-	ug/L	5.0 U	**5.6**	5.0 U	5.0 U	5.0 U
Calcium	NC	NC	ug/L	21400	161000	37200	149000	126000
Chromium Total	50	-	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt	NC	-	ug/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Copper	200	-	ug/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Iron	300	-	ug/L	**3820**	**308**	**1700**	158	**366**
Lead	25	-	ug/L	5.0	5.0 U	5.0 U	5.0 U	5.0 U
Magnesium	-	35,000	ug/L	5000 U	26100	9680	143000	**145000**
Manganese	300	-	ug/L	15.0 U	**1380**	222	131	137
Mercury	0.7	-	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	100	-	ug/L	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U
Potassium	NC	NC	ug/L	22300	13500	5000 U	5000 U	5000 U
Selenium	10	-	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	50	-	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	-	20,000	ug/L	**695000**	**763000**	**503000**	**364000**	**136000**
Thallium	-	0.5	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	**18.0**
Vanadium	NC	NC	ug/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc	-	2,000	ug/L	32.0	43.4	20.0 U	73.6	20.0 U
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-4*	*MW-204*	*MW-409*	*MW-4A*	*MW-300A*
Sample ID:				*WG-12635-062008-028*	*WG-12635-061808-019*	*WG-12635-061908-025*	*WG-12635-061908-026*	*WG-12635-061708-012*
Sample Date:				*6/20/2008*	*6/18/2008*	*6/19/2008*	*6/19/2008*	*6/17/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]							
	Standard	*Guidance value*						
Stratigraphic Unit:				*Fill*	*Fill*	*Fill*	*Clay*	*Clay*
Parameters:			*Units*					
Aroclor-1242 (PCB-1242)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

Notes:
[1] - New York Ambient Water Quality Standards and Guidance Values presented in NYSDEC Technical & Operational Guidance Series (TOGS) 1.1.1 dated June 1998 with addenda dated January 1999, April 200, and June 2004.
[2] - Applies to the sum of cis- and trans-1,3-dichloropropene
[3] - Applies to the sum of cis- and trans-1,3-dichloropropene
[4] - Applies to the sum of 1,2-, 1,3- and 1,4-xylene.
[5] - Applies to the sum of phenolic compound substances.
[6] - "ND" means a non-detectable concentration by the approved analytical methods referenced in section 700.3.
[7] - Applies to the sum of these substances.
31 - Result exceeds criteria
R - Result was rejected during data validation. Review data validation report for more information.
J - Estimated concentration.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
µg/L - micrograms per liter.

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-408*	*MW-1B*	*MW-5B*	*MW-5B*	*MW-409B*
Sample ID:				*WG-12635-061908-022*	*WG-12635-061608-003*	*WG-12635-061908-023*	*WG-12635-061908-024*	*WG-12635-061808-021*
Sample Date:				*6/19/2008*	*6/16/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]						*(Duplicate)*	
	Standard	*Guidance value*						
Stratigraphic Unit:				*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:			*Units*					
Volatile Organic Compounds								
1,1,1-Trichloroethane	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	-	0.2	ug/L	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane (DBCP)	0.	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene Dibromide)	0.04	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	3	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	0.6	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	3	-	ug/L	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	3	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
2-Hexanone	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Acetone	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Benzene	1	-	ug/L	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Bromoform	-	50	ug/L	10 U	10 U	10 U	10 U	10 UJ
Bromomethane (Methyl Bromide)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	ug/L	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	5	-	ug/L	10 U	10 U	10 U	10 U	10 UJ
Chlorobenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	7	-	ug/L	10 U	10 U	10 U	10 U	10 U
Chloromethane (Methyl Chloride)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	**11**
cis-1,3-Dichloropropene	0.4 [2]	-	ug/L	10 U	10 U	10 U	10 U	10 UJ
Cyclohexane	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	-	50	ug/L	10 U	10 U	10 U	10 U	10 UJ
Dichlorodifluoromethane (CFC-12)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Methyl acetate	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-408*	*MW-1B*	*MW-5B*	*MW-5B*	*MW-409B*
Sample ID:				*WG-12635-061908-022*	*WG-12635-061608-003*	*WG-12635-061908-023*	*WG-12635-061908-024*	*WG-12635-061808-021*
Sample Date:				*6/19/2008*	*6/16/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]						*(Duplicate)*	
	Standard	*Guidance value*						
Stratigraphic Unit:				*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:			*Units*					
Methyl cyclohexane	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Methyl Tert Butyl Ether	-	10	ug/L	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Styrene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Toluene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	0.4[3]	-	ug/L	10 U	10 U	10 U	10 U	10 UJ
Trichloroethene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane (CFC-11)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Trifluorotrichloroethane (Freon 113)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	2	-	ug/L	10 U	10 U	10 U	10 U	**31**
Xylene (total)	5[4]		ug/L	10 U	10 U	10 U	10 U	10 U
Semi-volatile Organic Compounds								
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	NC	NC	ug/L	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	1[5]	50	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	1[5]	10	ug/L	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	-	10	ug/L	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	5	-	ug/L	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	5	-	ug/L	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	1[5]	-	ug/L	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-408*	*MW-1B*	*MW-5B*	*MW-5B*	*MW-409B*
Sample ID:				*WG-12635-061908-022*	*WG-12635-061608-003*	*WG-12635-061908-023*	*WG-12635-061908-024*	*WG-12635-061808-021*
Sample Date:				*6/19/2008*	*6/16/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]						*(Duplicate)*	
	Standard	*Guidance value*						
Stratigraphic Unit:				*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:			*Units*					
4-Nitroaniline	5	-	ug/L	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	1[5]	-	ug/L	25 U	25 U	25 U	25 U	25 U
Acenaphthene	-	20	ug/L	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Acetophenone	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Anthracene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Atrazine	7.5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	ND	-	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	-	0.002	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	-	0.002	ug/L	10 U	10 U	10 U	10 U	10 U
Biphenyl	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	1.0	-	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Butyl benzylphthalate	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	NC	NC	ug/L	10 U	10 UJ	10 U	10 U	10 U
Carbazole	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Chrysene	-	0.002	ug/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	50	-	ug/L	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Fluorene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.04	-	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	0.5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	5	-	ug/L	10 U	10 U	10 U	10 U	R
Hexachloroethane	5	-	ug/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U
Isophorone	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	-	10	ug/L	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	0.4	-	ug/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	NC	NC	ug/L	10 U	10 U	10 U	10 U	10 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-408*	*MW-1B*	*MW-5B*	*MW-5B*	*MW-409B*
Sample ID:				*WG-12635-061908-022*	*WG-12635-061608-003*	*WG-12635-061908-023*	*WG-12635-061908-024*	*WG-12635-061808-021*
Sample Date:				*6/19/2008*	*6/16/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]						*(Duplicate)*	
	Standard	*Guidance value*						
Stratigraphic Unit:				*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:			*Units*					
N-Nitrosodiphenylamine	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	1[5]	-	ug/L	25 U	25 U	25 U	25 U	25 U
Phenanthrene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Phenol	1[5]	-	ug/L	10 U	10 U	10 U	10 U	10 U
Pyrene	-	50	ug/L	10 U	10 U	10 U	10 U	10 U
Metals								
Aluminum	100	-	ug/L	200 U	200 U	200 U	200 U	200 U
Antimony	3	-	ug/L	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic	25	-	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Barium	1,000	-	ug/L	556	206	200 U	200 U	210
Beryllium	5	-	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	5	-	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	NC	NC	ug/L	165000	162000	83800	83200	184000
Chromium Total	50	-	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt	NC	-	ug/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Copper	200	-	ug/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Iron	300	-	ug/L	**6290**	**1750**	**360**	**327**	**1720**
Lead	25	-	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Magnesium	-	35,000	ug/L	**83100**	**120000**	14400	14300	**67400**
Manganese	300	-	ug/L	**432**	216	15.0 U	15.0 U	166
Mercury	0.7	-	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	100	-	ug/L	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U
Potassium	NC	NC	ug/L	5000 U	8580	5000 U	5000 U	5000 U
Selenium	10	-	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	50	-	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	-	20,000	ug/L	**438000**	**277000**	**204000**	**202000**	**84400**
Thallium	-	0.5	ug/L	10.0 U	**21.9**	10.0 U	10.0 U	10.0 U
Vanadium	NC	NC	ug/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc	-	2,000	ug/L	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U
Polychlorinated Biphenyls								
Aroclor-1016 (PCB-1016)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

TABLE 4.11

ANALYTICAL RESULTS SUMMARY
TCL/TAL DATA FOR PERIMETER GROUNDWATER MONITORING WELLS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
JUNE 2008

Sample Location:				*MW-408*	*MW-1B*	*MW-5B*	*MW-5B*	*MW-409B*
Sample ID:				*WG-12635-061908-022*	*WG-12635-061608-003*	*WG-12635-061908-023*	*WG-12635-061908-024*	*WG-12635-061808-021*
Sample Date:				*6/19/2008*	*6/16/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
	New Yrok Ambient Water Quality Standards and Guidance Values [1]						*(Duplicate)*	
	Standard	*Guidance value*						
Stratigraphic Unit:				*Clay*	*Bedrock*	*Bedrock*	*Bedrock*	*Bedrock*
Parameters:			*Units*					
Aroclor-1242 (PCB-1242)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 UJ	**0.56 J**	0.065 U
Aroclor-1254 (PCB-1254)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	0.09[7]	-	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

Notes:
[1] - New York Ambient Water Quality Standards and Guidance Values presented in NYSDEC Technical & Operational dated June 1998 with addenda dated January 1999, April 200, and June 2004.
[2] - Applies to the sum of cis- and trans-1,3-dichloropropene
[3] - Applies to the sum of cis- and trans-1,3-dichloropropene
[4] - Applies to the sum of 1,2-, 1,3- and 1,4-xylene.
[5] - Applies to the sum of phenolic compound substances.
[6] - "ND" means a non-detectable concentration by the approved analytical methods referenced in section 700.3.
[7] - Applies to the sum of these substances.
31 - Result exceeds criteria
R - Result was rejected during data validation. Review data validation report for more information.
J - Estimated concentration.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
µg/L - micrograms per liter.

TABLE 4.12

ANALYTICAL RESULTS SUMMARY
5x9 SEWER AND LATERALS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
SEPTEMBER 2007 - MARCH 2009

Sample Location:		*Delavan Avenue Manhole*				
Sample I.D.:		*WW-12635-042408-009*	*WW-12635-042408-010*	*WW-012635-100608-005*	*W-12635-033109-CMB-001*	*W-12635-033109-CMB-002*
Sample Source:		*5x9 Sewer*	*5x9 Sewer*	*5x9 Sewer*	*5x9 Sewer*	*5x9 Sewer*
Date:		*4/24/2008*	*4/24/2008*	*10/6/2008*	*3/31/2009*	*3/31/2009*
			Duplicate			*Duplicate*
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
Oil and Grease (HEM), Total	mg/L	9.8	7.8	10.5	6.4	5.5

Notes:

µg/L Micrograms per liter.

mg/L Milligrams/liter

U Non-detect at associated value.

TABLE 4.12

ANALYTICAL RESULTS SUMMARY
5x9 SEWER AND LATERALS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
SEPTEMBER 2007 - MARCH 2009

Sample Location:		*Cornwall Avenue Manhole*			
Sample I.D.:		*WW-12635-042408-011*	*WW-012635-100608-003*	*WW-012635-100608-004*	*W-12635-033109-KG-004*
Sample Source:		*36" Sewer*	*36" Sewer*	*36" Sewer*	*36" Sewer*
Date:		*4/24/2008*	*10/6/2008*	*10/6/2008*	*3/31/2009*
				Duplicate	
Parameters	*Units*				
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.14	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry					
Oil and Grease (HEM), Total	mg/L	5.0 U	5.0 U	5.0 U	7.0

Notes:

µg/L	Micrograms per liter.
mg/L	Milligrams/liter
U	Non-detect at associated value.

TABLE 4.12

ANALYTICAL RESULTS SUMMARY
5x9 SEWER AND LATERALS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
SEPTEMBER 2007 - MARCH 2009

	Sample Location:	*Colorado Street Manhole*		
	Sample I.D.:	*WW-12635-042408-001*	*WW-012635-100608-002*	*W-12635-033109-DT-003*
	Sample Source:	*5x9 Sewer*	*5x9 Sewer*	*5x9 Sewer*
	Date:	*4/24/2008*	*10/6/2008*	*3/31/2009*
Parameters	*Units*			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.28	0.08
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U
General Chemistry				
Oil and Grease (HEM), Total	mg/L	12.5	8.0	9.6

Notes:

µg/L	Micrograms per liter.
mg/L	Milligrams/liter
U	Non-detect at associated value.

TABLE 4.12

ANALYTICAL RESULTS SUMMARY
5x9 SEWER AND LATERALS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
SEPTEMBER 2007 - MARCH 2009

Sample Location:		***Bay E-27, West Wall***		
Sample I.D.:		***WW-12635-092507-003***	***WW-12635-042408-006***	***WW-12635-100608-001***
Sample Source:		***Lateral - Bathroom***	***Lateral - Bathroom***	***Lateral - Bathroom***
Date:		***9/25/07***	***4/24/2008***	***10/6/08***
Parameters	***Units***			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.43	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.23
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U
General Chemistry				
Oil and Grease (HEM), Total	mg/L	73.4	6.0	5.0 U

Notes:

µg/L	Micrograms per liter.
mg/L	Milligrams/liter
U	Non-detect at associated value.

TABLE 4.12

ANALYTICAL RESULTS SUMMARY
5x9 SEWER AND LATERALS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
SEPTEMBER 2007 - MARCH 2009

Sample Location:		*Bay E-28, East Wall*			*Bay E-34, East Wall*	*Bay E-36, West Wall*
Sample I.D.:		*WW-12635-092507-002*	*WW-12635-042408-007*	*W-12635-033109-DT-005*	*WW-12635-092507-001*	*WW-12635-042408-008*
Sample Source:		*Lateral - Roof Conductor*	*Lateral - Roof Conductor*	*Lateral - Roof Conductor*	*Lateral - Roof Conductor*	*Lateral - WWTP Discharge*
Date:		*9/25/07*	*4/24/2008*	*3/31/09*	*9/25/07*	*4/24/2008*
Parameters	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	6.5 U	0.099	1.5	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	6.5 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	6.5 U	0.065 U	0.065 U	0.065 U
General Chemistry						
Oil and Grease (HEM), Total	mg/L	5.0 U	728	6.4	29.8	5.5

Notes:

µg/L Micrograms per liter.

mg/L Milligrams/liter

U Non-detect at associated value.

TABLE 4.13

ANALYTICAL RESULTS SUMMARY
SCAJAQUADA CREEK DRAIN WATER
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
APRIL 2008 - MARCH 2009

Sample Location:		*25' East of overflow (Upstream)*	*25' East of overflow (Upstream)*	*25' East of overflow (Upstream)*	*25' West of overflow (Downstream)*	*25' West of overflow (Downstream)*	*100' West of overflow (Downstream)*
Sample ID:		*WS-12635-042408-004*	*W-12635-032509-DT-009*	*W-12635-032509-DT-010*	*WS-12635-042408-002*	*W-12635-032509-DT-007*	*W-12635-032509-DT-004*
Sample Date:		*4/24/2008*	*3/25/2009*	*3/25/2009*	*4/24/2008*	*3/25/2009*	*3/25/2009*
Matrix:		*Water*	*Water*	*Water (Duplicate)*	*Water*	*Water*	*Water*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.065 U	0.065 U	0.065 U	0.083	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

Notes:
U - Not present at or above the associated value.

UJ - Estimated reporting limit.

TABLE 4.13

ANALYTICAL RESULTS SUMMARY
SCAJAQUADA CREEK DRAIN WATER
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
APRIL 2008 - MARCH 2009

Sample Location:		***400' West of overflow (Downstream)***
Sample ID:		***W-12635-032509-DT-002***
Sample Date:		***3/25/2009***
Matrix:		***Water***
Parameters:	***Units***	
Polychlorinated Biphenyls		
Aroclor-1016 (PCB-1016)	ug/L	0.065 U
Aroclor-1221 (PCB-1221)	ug/L	0.065 U
Aroclor-1232 (PCB-1232)	ug/L	0.065 U
Aroclor-1242 (PCB-1242)	ug/L	0.091
Aroclor-1248 (PCB-1248)	ug/L	0.065 U
Aroclor-1254 (PCB-1254)	ug/L	0.065 U
Aroclor-1260 (PCB-1260)	ug/L	0.065 U

Notes:
U - Not present at or above the associated value.

UJ - Estimated reporting limit.

TABLE 4.14

ANALYTICAL RESULTS SUMMARY
SCAJAQUADA CREEK DRAIN SEDIMENTS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
APRIL 2008 - MARCH 2009

Sample Location:		*25' East of overflow (Upstream)*	*25' East of overflow (Upstream)*	*25' West of overflow (Downstream)*	*25' West of overflow (Downstream)*	*25' West of overflow (Downstream)*	*100' West of overflow (Downstream)*
Sample ID:		*SE-12635-042408-005*	*SE-12635-032509-DT-008*	*SE-12635-042408-003*	*SE-12635-032509-DT-005*	*SE-12635-032509-DT-006*	*SE-12635-032509-DT-003*
Sample Date:		*4/24/2008*	*3/25/2009*	*4/24/2008*	*3/25/2009*	*3/25/2009*	*3/25/2009*
Matrix:		*Sediment*	*Sediment*	*Sediment*	*Sediment*	*Sediment (Duplicate)*	*Sediment*
Parameters:	***Units***						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	ug/kg	220 UJ	930 U	140 UJ	530 U	340 U	610 U
Aroclor-1221 (PCB-1221)	ug/kg	220 UJ	930 U	140 UJ	530 U	340 U	610 U
Aroclor-1232 (PCB-1232)	ug/kg	220 UJ	930 U	140 UJ	530 U	340 U	610 U
Aroclor-1242 (PCB-1242)	ug/kg	220 UJ	930 U	140 UJ	530 U	340 U	610 U
Aroclor-1248 (PCB-1248)	ug/kg	220 UJ	930 U	140 UJ	530 U	620	610 U
Aroclor-1254 (PCB-1254)	ug/kg	220 UJ	930 U	140 UJ	530 U	340 U	610 U
Aroclor-1260 (PCB-1260)	ug/kg	220 UJ	930 U	140 UJ	530 U	340 U	610 U
General Chemistry							
Percent Moisture	%	15.0	96.4	24.2	93.8	90.4	94.6

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

TABLE 4.14

ANALYTICAL RESULTS SUMMARY
SCAJAQUADA CREEK DRAIN SEDIMENTS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
APRIL 2008 - MARCH 2009

Sample Location:		***400' West of overflow (Downstream)***
Sample ID:		***SE-12635-032509-DT-001***
Sample Date:		***3/25/2009***
Matrix:		***Sediment***
Parameters:	***Units***	
Polychlorinated Biphenyls		
Aroclor-1016 (PCB-1016)	ug/kg	630 U
Aroclor-1221 (PCB-1221)	ug/kg	630 U
Aroclor-1232 (PCB-1232)	ug/kg	630 U
Aroclor-1242 (PCB-1242)	ug/kg	630 U
Aroclor-1248 (PCB-1248)	ug/kg	630 U
Aroclor-1254 (PCB-1254)	ug/kg	630 U
Aroclor-1260 (PCB-1260)	ug/kg	630 U
General Chemistry		
Percent Moisture	%	94.8

Notes:

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

APPENDIX A

BORING LOGS

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-5
DATE COMPLETED: April 28, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5823.87 EASTING: 5086.56 GROUND SURFACE	67.99					
	CONCRETE and GRAVEL BASE	67.19					
2	FILL, black slag and medium to coarse grained sand		SS1				0
4	- oil observed below 3.5 ft BGS CONCRETE	63.99					
	FILL, black slag and medium to coarse grained sand, oil observed	63.49	SS2				0
6	END OF BOREHOLE @ 5.5ft BGS	62.49					
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-6
DATE COMPLETED: April 28, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5854.23 EASTING: 5207 GROUND SURFACE	67.82					
	CONCRETE and Cinder Block Floor						
	FILL, brick, wood, cinders, slag, oil staining with oil odor	66.82	SS1				0
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, oil in grey mottling	62.32	SS2				0
	END OF BOREHOLE @ 8.0ft BGS	59.82					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-7
DATE COMPLETED: April 29, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5854.66 EASTING: 5064.61 GROUND SURFACE	67.85					
0	CONCRETE and GRAVEL BASE	66.85					
2	FILL, brick, wood, cinders, slag		SS1				0
	SAMPLE REFUSAL (concrete)	64.85					
4	FILL, bricks, wood, cinders, slag	64.35					
			SS2				0
6	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	62.35 61.85					
	END OF BOREHOLE @ 6.0ft BGS						
8	Subsurface conditions would not allow an adequate sample to make the determination about oil presence at this location.						
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-8
DATE COMPLETED: April 29, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5899.87 EASTING: 5084.64 GROUND SURFACE	68.00					
	CONCRETE and GRAVEL BASE						
2	FILL, black ash-like material with gravel	67.00	SS1	X			0
	END OF BOREHOLE @ 3.0ft BGS	65.00					
4	Sampler Refusal (concrete) at 3 ft BGS						
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-9
DATE COMPLETED: April 29, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5857.74 EASTING: 5119.89 GROUND SURFACE	68.07					
0	CONCRETE and GRAVEL BASE						
	FILL, black fine ash-like material/slag (possible flowable fill)	67.07	SS1				0
2							
4							
6			SS2				0
8	CONCRETE	60.07					
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, with oil in grey mottling	59.47					
10			SS3				0
12	END OF BOREHOLE @ 12.0ft BGS	56.07					
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-10
DATE COMPLETED: April 29, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5880.82 EASTING: 5165.66 GROUND SURFACE	67.81					
	CONCRETE	67.31					
	FILL, clay, bricks, cinders						
2			SS1				0
4	- oil staining with oil odor below 4 ft BGS		SS2				0
	END OF BOREHOLE @ 4.7ft BGS	63.11					
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-11
DATE COMPLETED: April 30, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5824 EASTING: 5166.73 GROUND SURFACE	67.89					
	CONCRETE						
2	FILL, brick, wood, cinders, slag, oil staining with oil odor	66.89	SS1				0
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, with oil in grey mottling	64.39					
6			SS2				0
8	END OF BOREHOLE @ 8.0ft BGS	59.89					
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-12
DATE COMPLETED: April 30, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5865.63 EASTING: 5068.54 GROUND SURFACE	67.89					
	CONCRETE						
	FILL, brick, wood, cinders, slag, oil staining with oil odor	66.89	SS1				0
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with little grey silt mottling (micro-fractures), brown, slightly moist	63.39	SS2				0
10	- with gravel, oil observed below 10 ft BGS	57.79	SS3				0
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, with oil in grey mottling						
12	END OF BOREHOLE @ 12.0ft BGS	55.89					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-14
DATE COMPLETED: April 30, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5902.52 EASTING: 5066.92 GROUND SURFACE	68.08					
0	CONCRETE						
	FILL, slag, cinders, possible coal	67.08					
2			SS1				0
4							
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with little grey silt mottling (micro-fractures), brown, slightly moist	63.08					
6			SS2				0
8							
10	- with oil in grey mottling and mottling increases with depth below 9.5 ft BGS		SS3				0
12	END OF BOREHOLE @ 12.0ft BGS	56.08					
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-15
DATE COMPLETED: April 30, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5931.82 EASTING: 5118.95 GROUND SURFACE	68.13					
0	CONCRETE						
	FILL, brick, wood, cinders, slag	67.13	SS1				0
2							
4							
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	63.13	SS2				0
6							
8							
	- with gravel and oil in grey mottling below 9.5 ft BGS - trace gravel below 10 ft BGS		SS3				0
10							
12							
			SS4				0
14							
	END OF BOREHOLE @ 14.5ft BGS	53.63					
16	Bedrock encountered at 14.5 ft BGS						
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-17
DATE COMPLETED: May 14, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5721.92 EASTING: 5092.52 GROUND SURFACE	68.10					
0	CONCRETE						
	FILL, brick, wood, cinders, slag, oil staining with oil odor	67.30					
2			SS1				0
4							
	- saturated with oil below 5.1 ft BGS		SS2				0
6	END OF BOREHOLE @ 5.3ft BGS	62.80					
	Concrete encountered at 5.3 ft BGS						
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-18
DATE COMPLETED: May 14, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5769.69 EASTING: 5088.63 GROUND SURFACE	68.07					
0	CONCRETE						
2	FILL, cinders, black, oil odor	66.47	SS1				0
4							
6	- saturated with oil below 6 ft BGS		SS2				0
	END OF BOREHOLE @ 6.4ft BGS	61.67					
8	Sampler Refusal at 6.4 ft BGS						
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-19
DATE COMPLETED: May 14, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5703.26 EASTING: 5185.43 GROUND SURFACE	67.85					
	CONCRETE						
2	FILL, brick, wood, cinders, slag	66.85	SS1	X			0
	END OF BOREHOLE @ 2.5ft BGS	65.35					
4	Abandoned hole at 2.5 ft BGS due to the presence of pipes.						
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-20
DATE COMPLETED: May 15, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5779.22 EASTING: 5189.85 GROUND SURFACE	67.85					
	CONCRETE						
	FILL, silt, brown/black, oil odor, oil observed	67.05					
2			SS1				0
4							
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, with oil in grey mottling	63.55					
6			SS2				0
8							
10			SS3				0
12							
14	- with bedrock fragments below 14 ft BGS		SS4				0
	END OF BOREHOLE @ 15.0ft BGS	52.85					
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-23
DATE COMPLETED: May 20, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
	NORTHING: 5719.1 EASTING: 5066.32 GROUND SURFACE	68.07					
	CONCRETE	67.47					
	FILL, brick, wood, cinders, slag						
2		65.77	SS1				0
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist						
4							
6	- with oil in grey mottling below 6.5 ft BGS		SS2				0
8							
10			SS3				0
12							
	ML-SILT, firm, slight plasticity, massive, grey, dry, oil observed	55.47					
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, with oil in grey mottling	55.07					
14	- with bedrock fragments below 14 ft BGS		SS4				0
16			SS5				0
	END OF BOREHOLE @ 16.9ft BGS	51.17					
18	Bedrock encountered at 16.9 ft BGS						
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-09-01
DATE COMPLETED: February 2, 2009
DRILLING METHOD: HSA
FIELD PERSONNEL: J. Wind

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 4757.02 EASTING: 5013.8 GROUND SURFACE	66.29				
	CONCRETE					
	FILL	65.29				
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	63.29				
	- moist below 14 ft BGS					
	- oil @ 17.3 ft BGS					
	END OF BOREHOLE @ 17.3ft BGS	48.99				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN.LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-09-05
DATE COMPLETED: February 12, 2009
DRILLING METHOD: HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 4709.88 EASTING: 5044.27 GROUND SURFACE	66.43				
	CONCRETE					
	FILL	65.43				
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	62.43				
16	- wet below 17 ft BGS	▽				
18	- oil observed @ 18.3 ft BGS					
	END OF BOREHOLE @ 18.5ft BGS	47.93				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-29
DATE COMPLETED: February 2, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 5327.72 EASTING: 4953.54 GROUND SURFACE TOP OF CASING TOP OF RISER	67.80 67.80 67.58					
0	CONCRETE	66.80	CONCRETE 2"Ø PVC WELL CASING BENTONITE WELL SCREEN SAND PACK 8"Ø BOREHOLE				
2	FILL-odor						
4							
6							
8	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	60.90 59.80					
10	END OF BOREHOLE @ 8.0ft BGS						
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
Screened interval:
64.80 to 59.80ft Site Datum
3.00 to 8.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
66.80 to 65.80ft Site Datum
1.00 to 2.00ft BGS
Material: Bentonite
Sand Pack:
65.80 to 59.80ft Site Datum
2.00 to 8.00ft BGS
Material: 00 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-30
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5452.99
EASTING: 5027.65

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	GROUND SURFACE	67.98					
	TOP OF CASING	67.97					
	TOP OF RISER	67.58					
0	CONCRETE		CONCRETE				
	#2 CRUSHED STONE	66.98	2"Ø PVC WELL CASING				
2			BENTONITE				
4	FILL	63.98	WELL SCREEN				
			SAND PACK				
6		61.48	8"Ø BOREHOLE				
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	60.98					
8	END OF BOREHOLE @ 7.0ft BGS						
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
Screened interval:
64.98 to 60.98ft Site Datum
3.00 to 7.00ft BGS
Length: 4ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
66.98 to 65.38ft Site Datum
1.00 to 2.60ft BGS
Material: Bentonite
Sand Pack:
65.38 to 60.98ft Site Datum
2.60 to 7.00ft BGS
Material: 00 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-31
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 5578.54 GROUND SURFACE EASTING: 5241.93 TOP OF CASING TOP OF RISER	68.07 68.06 67.75					
0	Not Sampled (Refer to CP-31A for stratigraphy)		CONCRETE 2"Ø PVC WELL CASING BENTONITE WELL SCREEN SAND PACK 8"Ø BOREHOLE				
10	END OF BOREHOLE @ 9.8ft BGS	58.27					

WELL DETAILS
Screened interval:
63.27 to 58.27ft Site Datum
4.80 to 9.80ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
67.07 to 63.87ft Site Datum
1.00 to 4.20ft BGS
Material: Bentonite
Sand Pack:
63.87 to 58.27ft Site Datum
4.20 to 9.80ft BGS
Material: 00 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-32
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 5330.03 TOP OF CASING EASTING: 5240.16 GROUND SURFACE TOP OF RISER	68.05 68.05 67.45					
0	Not Sampled (Refer to CP-32A for stratigraphy)		CONCRETE CEMENT/ BENTONITE GROUT 2"Ø PVC WELL CASING BENTONITE WELL SCREEN SAND PACK 8"Ø BOREHOLE				
10	END OF BOREHOLE @ 9.0ft BGS	59.05					

WELL DETAILS
Screened interval:
64.05 to 59.05ft Site Datum
4.00 to 9.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
66.05 to 64.65ft Site Datum
2.00 to 3.40ft BGS
Material: Bentonite
Sand Pack:
64.65 to 59.05ft Site Datum
3.40 to 9.00ft BGS
Material: 00 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

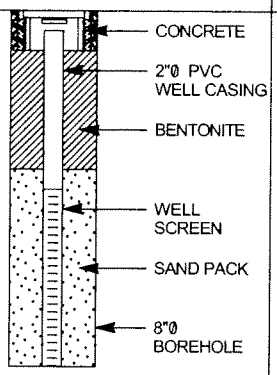
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-33
DATE COMPLETED: February 4, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5139.62
EASTING: 5150.11

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	67.81
	TOP OF CASING	67.76
	TOP OF RISER	67.46
0	CONCRETE	
		66.81
2	#2 GRAVEL FILL	
4		63.81
	FILL	
6		
8		59.31
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	58.81
10	END OF BOREHOLE @ 9.0ft BGS	
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
63.31 to 58.81ft Site Datum
4.50 to 9.00ft BGS
Length: 4.5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
66.81 to 63.81ft Site Datum
1.00 to 4.00ft BGS
Material: Bentonite
Sand Pack:
63.81 to 58.81ft Site Datum
4.00 to 9.00ft BGS
Material: 00 SAND

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-34
DATE COMPLETED: February 4, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 5234.63 TOP OF CASING EASTING: 5086.74 GROUND SURFACE TOP OF RISER	67.81 67.80 67.17					
	Not Sampled (Refer to CP-34A for stratigraphy)		CONCRETE 2"Ø PVC WELL CASING BENTONITE WELL SCREEN SAND PACK 8"Ø BOREHOLE				
8	END OF BOREHOLE @ 8.5ft BGS	59.30	WELL DETAILS Screened interval: 64.80 to 59.30ft Site Datum 3.00 to 8.50ft BGS Length: 5.5ft Diameter: 2in Slot Size: 10 Material: PVC Seal: 66.80 to 65.30ft Site Datum 1.00 to 2.50ft BGS Material: Bentonite Sand Pack: 65.30 to 59.30ft Site Datum 2.50 to 8.50ft BGS Material: 00 SAND				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-409R
DATE COMPLETED: February 10, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Wind

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 5519.66 TOP OF CASING EASTING: 5269.8 GROUND SURFACE TOP OF RISER	64.88 64.86 64.37					
0	Not Sampled (Refer to MW-408R for stratigraphy)		CEMENT BENTONITE 2"Ø PVC WELL CASING 8"Ø BOREHOLE SAND PACK WELL SCREEN				
8	END OF BOREHOLE @ 7.0ft BGS	57.86	WELL DETAILS Screened interval: 62.86 to 57.86ft Site Datum 2.00 to 7.00ft BGS Length: 5ft Diameter: 2in Slot Size: 10 Material: PVC Seal: 64.36 to 63.36ft Site Datum 0.50 to 1.50ft BGS Material: Bentonite Sand Pack: 63.36 to 57.86ft Site Datum 1.50 to 7.00ft BGS Material: 6/20 Silica Sand				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-807
DATE COMPLETED: February 13, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 6104.83 EASTING: 5078.43 TOP OF CASING / GROUND SURFACE / TOP OF RISER	68.15 / 68.14 / 67.75					
0	CONCRETE		CONCRETE				
2	FILL, oil observed	66.64	4"Ø PVC WELL CASING				
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, oil observed in micro-fractures	64.14	WELL SCREEN; SAND PACK; 8"Ø BOREHOLE				
6							
8							
10			BENTONITE				
12	- BEDROCK	56.64					
	END OF BOREHOLE @ 11.5ft BGS						
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
Screened interval:
66.14 to 61.14ft Site Datum
2.00 to 7.00ft BGS
Length: 5ft
Diameter: 4in
Slot Size: 20
Material: PVC
Sand Pack:
67.14 to 61.14ft Site Datum
1.00 to 7.00ft BGS
Material: 00 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

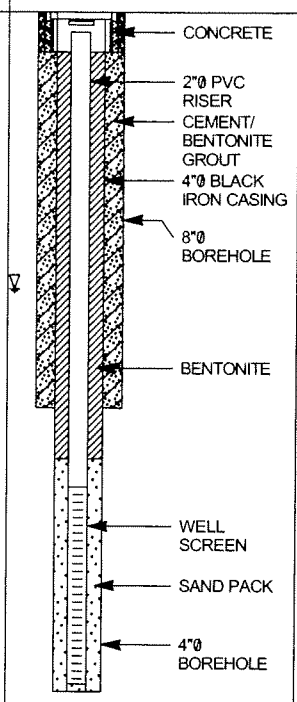
HOLE DESIGNATION: CP-31A
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5574.54
EASTING: 5241.68

	ELEV. ft Site Datum
TOP OF CASING	68.07
GROUND SURFACE	68.07
TOP OF RISER	67.86

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	
	FILL	67.07
6	- dark staining below 6 ft BGS	
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, wet	61.07
16		50.87
17.2	END OF BOREHOLE @ 17.2ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
56.07 to 51.07ft Site Datum
12.00 to 17.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
67.07 to 56.77ft Site Datum
1.00 to 11.30ft BGS
Material: Bentonite
Sand Pack:
56.77 to 50.87ft Site Datum
11.30 to 17.20ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

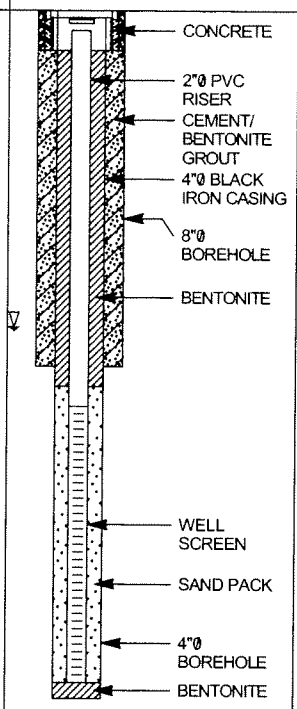
HOLE DESIGNATION: CP-32A
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5325.84
EASTING: 5239.28

	ELEV. ft Site Datum
TOP OF CASING	68.03
GROUND SURFACE	68.03
TOP OF RISER	67.60

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	ASPHALT/CONCRETE	
	FILL	67.03
4	SM-SILTY SAND (FILL), with gravel	64.03
8	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, wet	60.03
16	- Bedrock encountered @ 17.4 ft BGS	50.63
18	END OF BOREHOLE @ 17.4ft BGS	

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
58.03 to 51.03ft Site Datum
10.00 to 17.00ft BGS
Length: 7ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
67.03 to 58.53ft Site Datum
1.00 to 9.50ft BGS
Material: Bentonite
Sand Pack:
58.53 to 51.03ft Site Datum
9.50 to 17.00ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

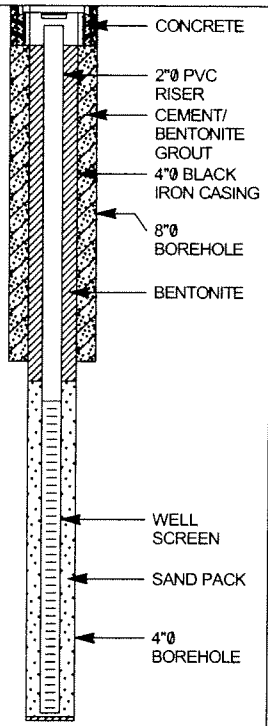
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-34A
DATE COMPLETED: February 4, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5229.05
EASTING: 5086.33

STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
TOP OF CASING	67.81
GROUND SURFACE	67.80
TOP OF RISER	67.54
CONCRETE	
#2 GRAVEL FILL	66.80
FILL	64.80
CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	59.80
- Bedrock encountered @ 18.1 ft BGS	49.70
END OF BOREHOLE @ 18.1ft BGS	



WELL DETAILS
Screened interval:
57.80 to 49.90ft Site Datum
10.00 to 17.90ft BGS
Length: 7.9ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
66.80 to 58.30ft Site Datum
1.00 to 9.50ft BGS
Material: Bentonite
Sand Pack:
58.30 to 49.80ft Site Datum
9.50 to 18.00ft BGS
Material: 00 SAND

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

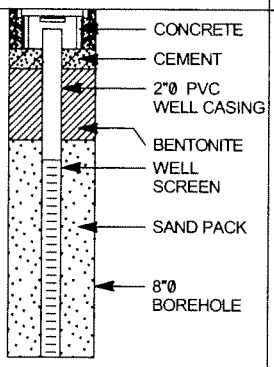
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-6A
DATE COMPLETED: May 8, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 6212.4
EASTING: 5150.98

GROUND SURFACE 67.24
TOP OF RISER 66.96

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	TOPSOIL	66.84
2	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	
4		
6		
8	- with bedrock fragments below 8 ft BGS	58.44
10	END OF BOREHOLE @ 8.8ft BGS Bedrock encountered at 8.8 ft BGS	
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		



WELL DETAILS
Screened interval:
63.44 to 58.44ft Site Datum
3.80 to 8.80ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
65.74 to 63.94ft Site Datum
1.50 to 3.30ft BGS
Material: Bentonite
Sand Pack:
63.94 to 58.44ft Site Datum
3.30 to 8.80ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

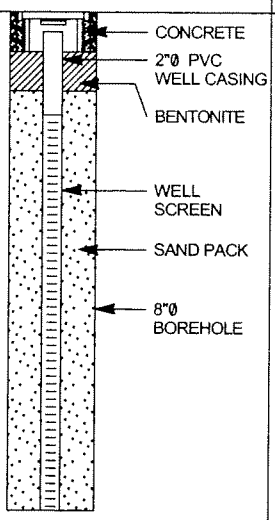
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-107R
DATE COMPLETED: February 14, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5832.18
EASTING: 5272.28

TOP OF CASING 66.02
GROUND SURFACE 66.01
TOP OF RISER 65.42

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
0	CONCRETE						
		64.51					
2	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist						
4							
6							
8							
10							
12							
	END OF BOREHOLE @ 12.6ft BGS	53.41					
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							



WELL DETAILS
Screened interval:
63.41 to 53.41ft Site Datum
2.60 to 12.60ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
65.01 to 64.01ft Site Datum
1.00 to 2.00ft BGS
Material: Bentonite
Sand Pack:
64.01 to 53.41ft Site Datum
2.00 to 12.60ft BGS
Material: 00 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

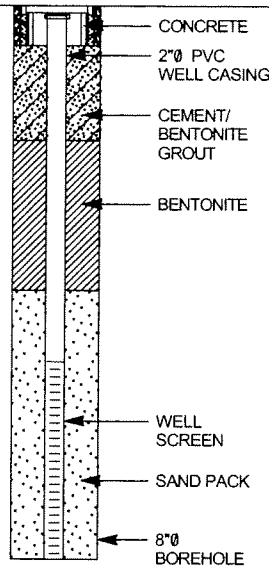
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-13/ MW-402R
DATE COMPLETED: May 1, 2008
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 5850.47
EASTING: 5164.54

GROUND SURFACE 67.88
TOP OF RISER 67.50

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	67.08
2	FILL, brick, wood, cinders, slag	
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	64.38
6	- with oil in grey mottling below 4 ft BGS	
8		
10	- with fine gravel and coarse sand below 10.5 ft BGS	
12	- trace gravel, trace sand below 11.5 ft BGS - with bedrock fragments below 12 ft BGS	
14	END OF BOREHOLE @ 13.8ft BGS	54.08
16	Bedrock encountered at 13.8 ft BGS	
18		
20		
22		
24		
26		
28		
30		
32		
34		



MONITOR INSTALLATION

WELL DETAILS
Screened interval:
58.88 to 53.88ft Site Datum
9.00 to 14.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
64.48 to 60.68ft Site Datum
3.40 to 7.20ft BGS
Material: Bentonite
Sand Pack:
60.68 to 53.88ft Site Datum
7.20 to 14.00ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

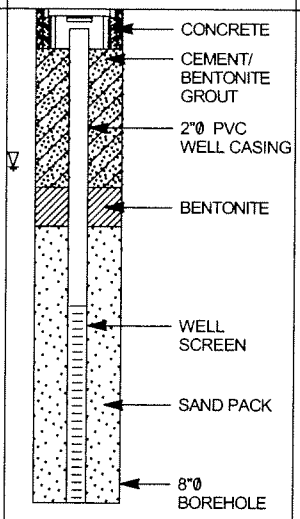
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-408R
DATE COMPLETED: February 10, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Wind

NORTHING: 5525.33
EASTING: 5269.84

TOP OF CASING 64.89
GROUND SURFACE 64.88
TOP OF RISER 64.36

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	64.08
	FILL	
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, wet	60.88
12	END OF BOREHOLE @ 12.5ft BGS	52.08



WELL DETAILS
Screened interval:
57.38 to 52.38ft Site Datum
7.50 to 12.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
60.38 to 59.38ft Site Datum
4.50 to 5.50ft BGS
Material: Bentonite
Sand Pack:
59.38 to 52.38ft Site Datum
5.50 to 12.50ft BGS
Material: Silica Sand Pack

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

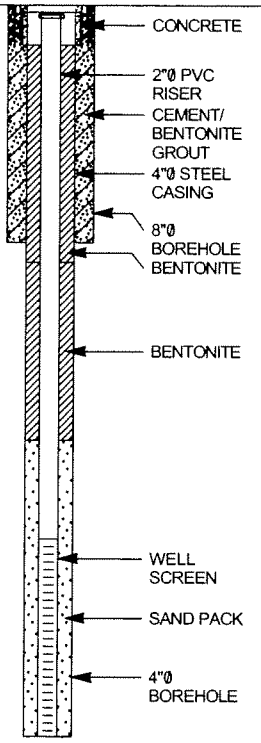
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-1/ MW-801A
DATE COMPLETED: April 21, 2008
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 4797.37
EASTING: 5118.98

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	66.85
	TOP OF RISER	66.44
0	CONCRETE and GRAVEL BASE	
2	FILL, gravel and sand, glass, rubber, brick fragments, brown to black	65.35
4		
6	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	62.05
8		
10	MH-CLAY, with silt, stiff, moderate plasticity, homogeneous brown with grey to yellowish orange mottling (micro-fractures), dry	57.35
12		
14	GC-GRAVEL with clay and silt, some sand, very loose, medium grained sand, light grey, wet	54.15
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, moist	53.35
16	- with bedrock fragments below 16.8 ft BGS	
18		
20	END OF BOREHOLE @ 18.7ft BGS	48.15
	Bedrock encountered at 18.7 ft BGS	
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
53.35 to 48.35ft Site Datum
13.50 to 18.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
60.35 to 55.85ft Site Datum
6.50 to 11.00ft BGS
Material: Bentonite
Sand Pack:
55.85 to 48.35ft Site Datum
11.00 to 18.50ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0
SS5				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

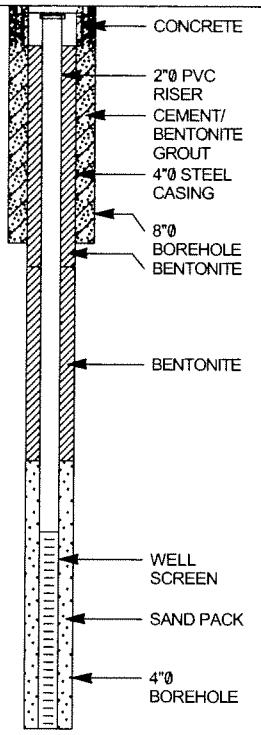
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-2/ MW-802A
DATE COMPLETED: April 23, 2008
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 4839.6
EASTING: 5071.63

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	66.33
	TOP OF RISER	66.00
0	CONCRETE and GRAVEL BASE	
2	FILL, gravel and sand, glass, rubber, brick fragments, brown to black	64.83
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	62.33
6		
8		
10	MH-CLAY, with silt, stiff, moderate plasticity, homogeneous brown with grey to yellowish orange mottling (micro-fractures), dry	56.33
12		
14	- some gravel, wet below 14.5 ft BGS	
16	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	50.83
18	- with bedrock fragments below 18 ft BGS	
	END OF BOREHOLE @ 18.6ft BGS	47.73
20	Bedrock encountered at 18.6 ft BGS	
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
53.03 to 48.03ft Site Datum
13.30 to 18.30ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
59.73 to 54.83ft Site Datum
6.60 to 11.50ft BGS
Material: Bentonite
Sand Pack:
54.83 to 48.03ft Site Datum
11.50 to 18.30ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0
SS5				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

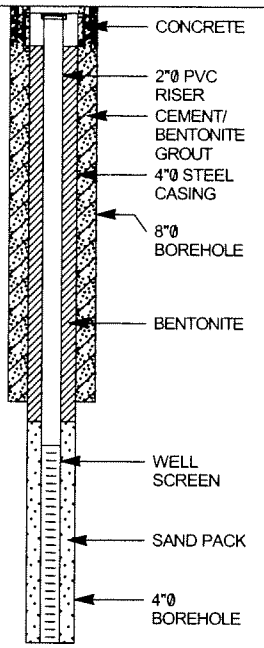
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-3/ MW-803A
DATE COMPLETED: April 23, 2008
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 4797.74
EASTING: 5023.55

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	66.22
	TOP OF RISER	65.84
0	CONCRETE and GRAVEL BASE	
2	SAND (FILL), loose, medium grained, poorly graded, brown, moist	64.72
8	MH-CLAY, with silt, stiff, moderate plasticity, homogeneous brown with grey to yellowish orange mottling (micro-fractures), dry	57.52
12	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	54.22
16	END OF BOREHOLE @ 16.1ft BGS Bedrock encountered at 16.1 ft BGS	50.12

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
55.12 to 50.12ft Site Datum
11.10 to 16.10ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
55.72 to 50.12ft Site Datum
10.50 to 16.10ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0
SS5				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

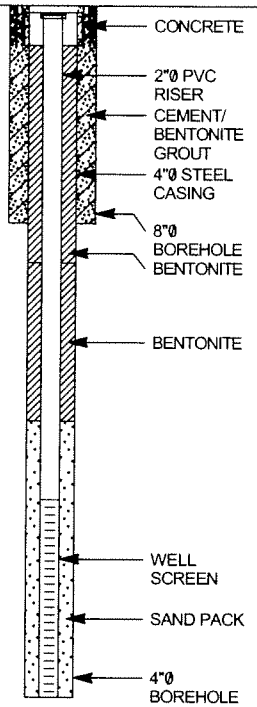
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-4/ MW-804A
DATE COMPLETED: April 23, 2008
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 4746.66
EASTING: 5071.07

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	66.94
	TOP OF RISER	66.69
0	CONCRETE and GRAVEL BASE	
2	FILL, gravel and sand, glass, rubber, brick fragments, brown to black	65.44
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	62.94
8	MH-CLAY, with silt, stiff, moderate plasticity, homogeneous brown with grey to yellowish orange mottling (micro-fractures), dry	58.94
18	END OF BOREHOLE @ 17.7ft BGS Bedrock encountered at 17.7 ft BGS	49.24

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
54.44 to 49.44ft Site Datum
12.50 to 17.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
60.44 to 56.44ft Site Datum
6.50 to 10.50ft BGS
Material: Bentonite
Sand Pack:
56.44 to 49.44ft Site Datum
10.50 to 17.50ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0
SS5				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

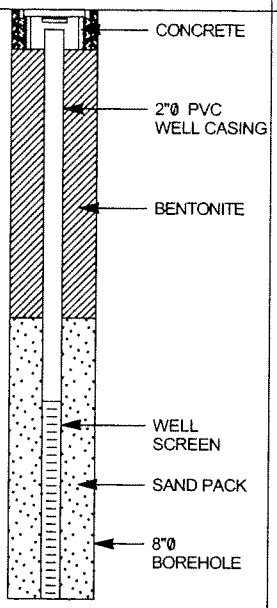
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-22/ MW-805A
DATE COMPLETED: May 19, 2008
DRILLING METHOD: 4.5" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 5813.84
EASTING: 5030.01

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	67.87
	TOP OF RISER	67.42
0	CONCRETE	67.27
	FILL, gravel and sand, brown	66.87
	CONCRETE	66.17
2	FILL, clay, red/brown	
	- gravel fill below 3.5 ft BGS	
4	Sample loose and saturated - could not make additional observations	63.87
6		
8		
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	58.87
10		
12		
14	- moist below 14 ft BGS	
	END OF BOREHOLE @ 14.9ft BGS	52.97
16	Bedrock encountered at 14.9 ft BGS	
18		
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
57.97 to 52.97ft Site Datum
9.90 to 14.90ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
66.87 to 60.07ft Site Datum
1.00 to 7.80ft BGS
Material: Bentonite
Sand Pack:
60.07 to 52.97ft Site Datum
7.80 to 14.90ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

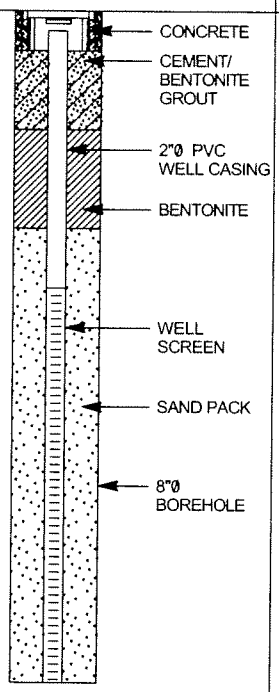
HOLE DESIGNATION: MW-809A
DATE COMPLETED: February 2, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Wind

NORTHING: 4832.08
EASTING: 4966.86

	ELEV. ft Site Datum
TOP OF CASING	65.68
GROUND SURFACE	65.66
TOP OF RISER	65.16

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	
	FILL	64.66
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	61.66
14	- moist below 15 ft BGS	
17	END OF BOREHOLE @ 17.0ft BGS	48.66

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
58.66 to 48.66ft Site Datum
7.00 to 17.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
62.66 to 60.16ft Site Datum
3.00 to 5.50ft BGS
Material: Bentonite
Sand Pack:
60.16 to 48.66ft Site Datum
5.50 to 17.00ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

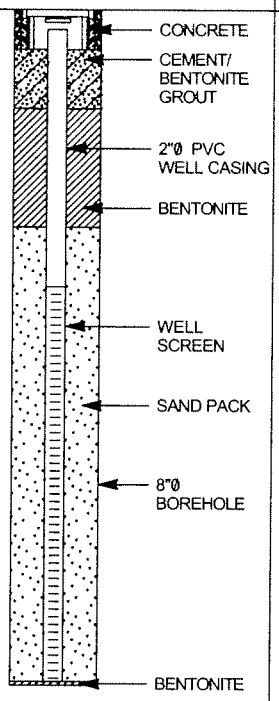
HOLE DESIGNATION: MW-810A
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Wind

NORTHING: 4858.86
EASTING: 4989.51

	ELEV. ft Site Datum
TOP OF CASING	65.81
GROUND SURFACE	65.79
TOP OF RISER	65.24

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	
	FILL	64.79
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	61.79
16	- moist below 16 ft BGS	
	END OF BOREHOLE @ 17.1ft BGS	48.69

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
58.79 to 48.79ft Site Datum
7.00 to 17.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
63.29 to 60.29ft Site Datum
2.50 to 5.50ft BGS
Material: Bentonite
Sand Pack:
60.29 to 48.79ft Site Datum
5.50 to 17.00ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

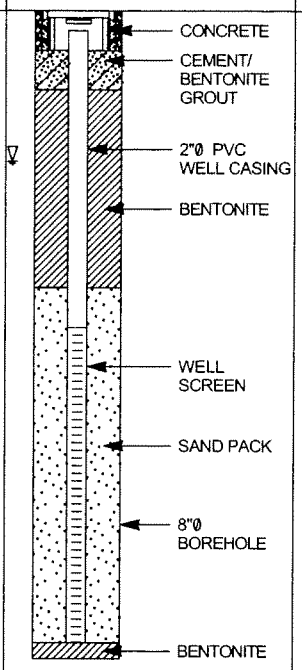
HOLE DESIGNATION: MW-811A
DATE COMPLETED: February 3, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Wind

NORTHING: 4876.95
EASTING: 5076.39

TOP OF CASING 65.94
GROUND SURFACE 65.92
TOP OF RISER 65.41

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	
	FILL	64.92
4	- wet, staining below 3.8 ft BGS	
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	61.92
14	- moist below 14 ft BGS	
16.4	END OF BOREHOLE @ 16.4ft BGS	49.52

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
57.92 to 49.92ft Site Datum
8.00 to 16.00ft BGS
Length: 8ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
63.92 to 58.92ft Site Datum
2.00 to 7.00ft BGS
Material: Bentonite
Sand Pack:
58.92 to 49.92ft Site Datum
7.00 to 16.00ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-812A
DATE COMPLETED: February 12, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 4708.71 EASTING: 4947.86 TOP OF CASING GROUND SURFACE TOP OF RISER	65.89 65.87 65.36					
0	CONCRETE		CONCRETE				
	FILL	64.87	CEMENT/ BENTONITE GROUT				
2							
4			2"Ø PVC WELL CASING				
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	60.87	BENTONITE				
6							
8							
10			WELL SCREEN				
12			SAND PACK				
14			8"Ø BOREHOLE				
16							
18	- wet below 18.5 ft BGS		▽				
	END OF BOREHOLE @ 19.3ft BGS	46.57	BENTONITE				
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
Screened interval:
56.87 to 46.87ft Site Datum
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
63.87 to 58.87ft Site Datum
2.00 to 7.00ft BGS
Material: Bentonite
Sand Pack:
58.87 to 46.87ft Site Datum
7.00 to 19.00ft BGS
Material: 00 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

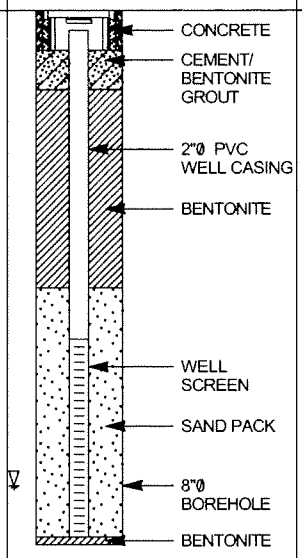
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-813A
DATE COMPLETED: February 14, 2009
DRILLING METHOD: 4.25" HSA
FIELD PERSONNEL: J. Raby

NORTHING: 4520.44
EASTING: 5039.8

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	TOP OF CASING	61.74
	GROUND SURFACE	61.73
	TOP OF RISER	61.18
0	CONCRETE	
	FILL	60.73
6	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	55.73
12	- wet below 12 ft BGS	
14	END OF BOREHOLE @ 13.5ft BGS	48.23

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
53.43 to 48.43ft Site Datum
8.30 to 13.30ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
59.73 to 54.73ft Site Datum
2.00 to 7.00ft BGS
Material: Bentonite
Sand Pack:
54.73 to 48.43ft Site Datum
7.00 to 13.30ft BGS
Material: 00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-21/ CP-1B
DATE COMPLETED: May 19, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 5989
EASTING: 5076.36

GROUND SURFACE 68.10
TOP OF CASING 67.72

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
0	CONCRETE	67.50	CONCRETE					
	FILL, sand and gravel, odor	66.80						
2	Sample Refusal (concrete) - advanced augers to 4 ft BGS		4"Ø STEEL CASING	SS1				0
4	FILL, sand and gravel, odor	64.10						
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with little grey silt mottling (micro-fractures), brown, slightly moist, odor	63.60	CEMENT/ BENTONITE GROUT	SS2				0
6								
8			8"Ø BOREHOLE					
10				SS3				0
12	- Bedrock encountered @ 12.4 ft BGS END OF OVERBURDEN HOLE @ 12.4ft BGS							
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: BH-21/ CP-1B
DATE COMPLETED: May 19, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
12	- Bedrock encountered @ 12.4 ft BGS	55.70				
14	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common - fractures @ 12.5, 13.4, 14.2, 14.4, 15.2, and 15.9 ft BGS		4"Ø COREHOLE	1	92	76
16						
18	END OF BOREHOLE @ 17.4ft BGS	50.70				
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

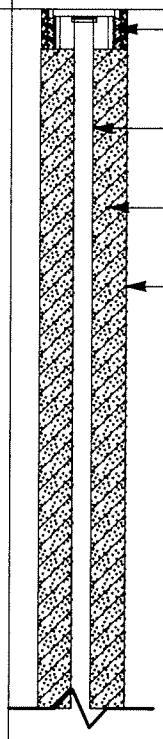
HOLE DESIGNATION: CP-4B/ BH-16
DATE COMPLETED: May 20, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

NORTHING: 5676.07
EASTING: 5090.81

GROUND SURFACE ELEV. (ft Site Datum): 68.13
TOP OF CASING ELEV. (ft Site Datum): 67.80

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	67.33
	FILL, brick, wood, cinders, slag, strong oil odor, no oil observed	66.93
2	Sample Refusal (concrete) - advanced augers to 4 ft BGS	
4	FILL, brick, wood, cinders, slag, strong oil odor, oil observed	64.13
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist, oil in grey mottling, oil odor	63.93
6		
8		
10	- increase in grey mottling and oil observed below 10 ft BGS	
12		
14	- moist, oil odor, no oil observed below 14 ft BGS	
16	- with bedrock fragments below 15.5 ft BGS	
18	- Bedrock encountered @ 17.7 ft BGS END OF OVERBURDEN HOLE @ 17.7ft BGS	
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0
SS4				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: CP-4B/ BH-16
DATE COMPLETED: May 20, 2008
DRILLING METHOD: 4" macro core sampler
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
18	- Bedrock encountered @ 17.7 ft BGS	50.43				
20	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common - fractures @ 18.7, 19.7, 19.9, 20.4, 20.6, 21.1, 21.7, and 22.5 ft BGS - approximately 50% water loss @ ~21 ft BGS		4"Ø COREHOLE	1	100	52
22	END OF BOREHOLE @ 22.7ft BGS	45.43				
24						
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-1B
DATE COMPLETED: May 7, 2008
DRILLING METHOD: 6.25 HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 4561.97
EASTING: 5198.87

GROUND SURFACE ELEV. (ft Site Datum): 63.92
TOP OF CASING ELEV. (ft Site Datum): 63.63

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE and GRAVEL SUBBASE	
	GRAVEL (FILL)	62.92
2	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	62.42
4		
6		
8		
10		
12		
14	- with bedrock fragments below 14 ft BGS	
	- Bedrock encountered @ 15.6 ft BGS	
16	END OF OVERBURDEN HOLE @ 15.6ft BGS	
18		
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION: CONCRETE; 4"Ø STEEL CASING; CEMENT/ BENTONITE GROUT; 8"Ø BOREHOLE

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-1B
DATE COMPLETED: May 7, 2008
DRILLING METHOD: 6.25 HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
16	- Bedrock encountered @ 15.6 ft BGS BEDROCK-(not sampled)	48.32	6"Ø ROCK SOCKET			
18	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common	46.12				
20	- fractures @ 18.1, 18.25, 18.9, 19.2, 19.65, 20.5, 20.7, 21.4, 21.85, 22, and 24 ft BGS - no water return below 20.8 ft BGS		4"Ø COREHOLE	1	100	54
22	END OF BOREHOLE @ 22.8ft BGS	41.12				
24						
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

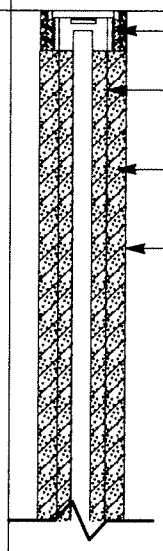
HOLE DESIGNATION: MW-2B
DATE COMPLETED: February 10, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Wind

NORTHING: 4570.99
EASTING: 5070.19

	ELEV. ft Site Datum
TOP OF CASING	61.92
GROUND SURFACE	61.88
TOP OF RISER	61.50

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	
	FILL	60.88
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	57.88
10	- moist below 10 ft BGS	
12	- Bedrock encountered @ 12.9 ft BGS	
	END OF OVERBURDEN HOLE @ 12.9ft BGS	

MONITOR INSTALLATION



SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-2B
DATE COMPLETED: February 10, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Wind

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
12	- Bedrock encountered @ 12.9 ft BGS	48.98	6"Ø ROCK SOCKET			
14	BEDROCK-(not sampled)	46.98		1	98	67
16	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common					
18						
20				2	104	73
22	- fractures @ 13.3, 13.9, 14.5, 14.8, 15.5, 15.8, 16.7, 17.2, 18.2, 18.9, 19.6, 20.1, 20.4, 20.9, 21.4, 21.9, 22.0, 22.6, 23.2, 23.8, 24.2, 24.6, 25.1, 26.4, 26.5, 26.7, 27.9, 28.0, 28.4, 28.7, 29.7, 29.9, 30.3, 30.6, and 31.1 ft BGS		4"Ø STEEL CASING			
24				3	92	69
26						
28						
30				4	82	58
32			4"Ø COREHOLE			
34	END OF BOREHOLE @ 32.9ft BGS	28.98				
36						
38						
40						
42						
44						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-4B
DATE COMPLETED: April 25, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 4979.51 EASTING: 5166.63 GROUND SURFACE TOP OF CASING	65.72 65.20					
	OVERBURDEN-not sampled (see overburden stratigraphy for well MW-4)		CONCRETE; 4"Ø STEEL CASING; CEMENT/ BENTONITE GROUT; 8"Ø BOREHOLE				
16	- Bedrock encountered @ 16.5 ft BGS END OF OVERBURDEN HOLE @ 16.5ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-4B
DATE COMPLETED: April 25, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
16	- Bedrock encountered @ 16.5 ft BGS	49.22	6"Ø ROCK SOCKET			
18	BEDROCK-(not sampled)	47.22				
20	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common - fractures @ 20.1, 20.55, and 21.3 ft BGS		4"Ø COREHOLE	1	85	97
22						
24	END OF BOREHOLE @ 23.5ft BGS	42.22				
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

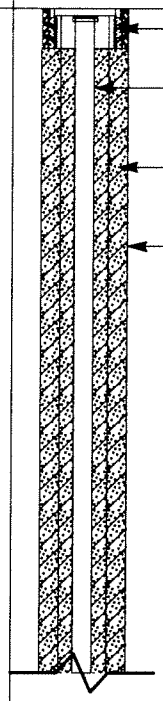
HOLE DESIGNATION: MW-5B
DATE COMPLETED: May 8, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 5380.59
EASTING: 4717.96

GROUND SURFACE 67.64
TOP OF CASING 67.18

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	66.64
	FILL, brick, wood, cinders, slag	65.94
2	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	
4		
6		
8		
10		
12		
14		
16	- with bedrock fragments below 16 ft BGS - Bedrock encountered @ 16.8 ft BGS END OF OVERBURDEN HOLE @ 16.8ft BGS	
18		
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0
SS5				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-5B
DATE COMPLETED: May 8, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
16	- with bedrock fragments below 16 ft BGS - Bedrock encountered @ 16.8 ft BGS	50.84	6"Ø ROCK SOCKET			
18	BEDROCK-(not sampled)					
20	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common, rock is highly fractured	48.14	4"Ø COREHOLE	1	60	20
22						
24	END OF BOREHOLE @ 24.5ft BGS	43.14	BOREHOLE CAVED IN TO 21.8 ft BGS			
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-6B
DATE COMPLETED: May 12, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 6223.21
EASTING: 5150

GROUND SURFACE ELEV. (ft Site Datum): 67.21
TOP OF CASING ELEV. (ft Site Datum): 66.84

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS	SAMPLE PID (ppm)
0	TOPSOIL	66.81	CONCRETE					
	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist		4"Ø STEEL CASING	SS1				0
4			CEMENT/ BENTONITE GROUT					
6			8"Ø BOREHOLE	SS2				0
8	- with bedrock fragments below 8 ft BGS - Bedrock encountered at 8.6 ft BGS			SS3				0
	END OF OVERBURDEN HOLE @ 8.6ft BGS							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-6B
DATE COMPLETED: May 12, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
8	- with bedrock fragments below 8 ft BGS - Bedrock encountered at 8.6 ft BGS	58.61	6"Ø ROCK SOCKET			
10	Bedrock-(not sampled)	56.61				
12	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common			1	85	53
14			4"Ø COREHOLE			
16	- fractures @ 10.8, 11, 11.3, 12.2, 12.3, 13.2, 13.6, 15.5, 16, 16.1, 16.6, 17.3, 18.1, 18.4, 19.5, and 20.2 ft BGS					
18				2	98	83
20						
	END OF BOREHOLE @ 20.6ft BGS	46.61				
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-102B
DATE COMPLETED: February 4, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Raby

NORTHING: 5876.61
EASTING: 5240.05

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	68.13
	TOP OF CASING	68.13
	TOP OF RISER	67.69
0	CONCRETE	
	FILL	67.13
8	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	60.63
14	- moist below 13.8 ft BGS - Bedrock encountered @ 14.1 ft BGS END OF OVERBURDEN HOLE @ 14.1ft BGS	

MONITOR INSTALLATION: CONCRETE; 4"Ø STEEL CASING; CEMENT/ BENTONITE GROUT; 8"Ø BOREHOLE

SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-102B
DATE COMPLETED: February 4, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
14	- moist below 13.8 ft BGS - Bedrock encountered @ 14.1 ft BGS BEDROCK-(not sampled)	54.03	6"Ø ROCK SOCKET			
16	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common - fractures @ 16.7, 18.6, 19.5, 19.6, 19.7, 19.9, and 20.2 ft BGS	52.03	4"Ø COREHOLE	1	102	72
18						
20						
22	END OF BOREHOLE @ 21.1ft BGS	47.03				
24						
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

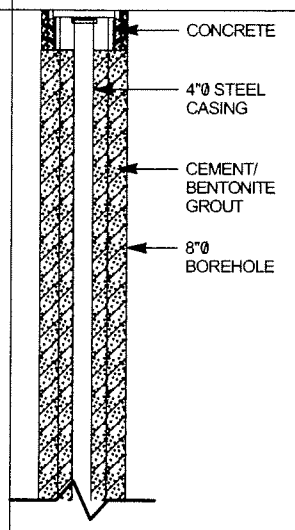
HOLE DESIGNATION: MW-409B
DATE COMPLETED: May 5, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

NORTHING: 5512.66
EASTING: 5270.4

GROUND SURFACE 64.86
TOP OF RISER 64.27

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
0	CONCRETE	
		63.26
2	FILL, brick, wood, cinders, slag	
		61.86
4	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	
6		
8		
10		
12	- Bedrock encountered @ 12.4 ft BGS END OF OVERBURDEN HOLE @ 12.4ft BGS	
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



SAMPLE NUMBER	INTERVAL	REC (ft)	BLOW COUNTS	PID (ppm)
SS1				0
SS2				0
SS3				0
SS4				0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-409B
DATE COMPLETED: May 5, 2008
DRILLING METHOD: 4.25" HSA/ HQ Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
12	- Bedrock encountered @ 12.4 ft BGS	52.46	6"Ø ROCK SOCKET			
	BEDROCK-(not sampled)					
14		50.46				
16	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common - fractures @ 15.25, 15.55, 16.3, 17, and 18.1 ft BGS			1	97	94
18						
20			4"Ø COREHOLE			
22	- fractures @ 20.1, 20.3, 20.5, 21, 22, and 22.5 ft BGS			2	99	91
24						
		39.96		3	100	
	END OF BOREHOLE @ 24.9ft BGS					
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

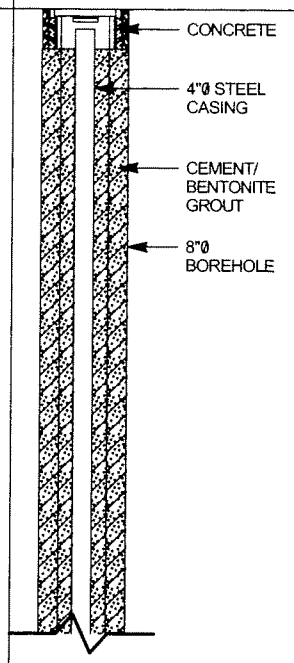
PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-806B
DATE COMPLETED: February 13, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Raby

NORTHING: 5890.31
EASTING: 4955.32

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum
	GROUND SURFACE	67.76
	TOP OF CASING	67.76
	TOP OF RISER	67.56
0	CONCRETE	
	FILL, oily soil	66.76
2		
4	- wood (possible railroad tie) between 4.2 and 5 ft BGS	
	- gravel, oily below 5 ft BGS	
6	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist	61.76
8		
10		
12		
14		
16	- Bedrock encountered @ 15.8 ft BGS END OF OVERBURDEN HOLE @ 15.8ft BGS	
18		
20		
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-806B
DATE COMPLETED: February 13, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
16	- Bedrock encountered @ 15.8 ft BGS BEDROCK-(not sampled)	51.96	6"Ø ROCK SOCKET			
18	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common - fractures @ 18.2, 18.5, 19.9, 20.2, 20.6, 21.5, 21.6, and 22.3 ft BGS	49.96				59
22			4"Ø COREHOLE	1	94	
28	END OF BOREHOLE @ 27.8ft BGS	39.96				
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 12635.GPJ CRA_CORP.GDT 6/24/09

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-808B
DATE COMPLETED: February 17, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE BLOW COUNTS
	NORTHING: 5842.84 EASTING: 5419.53	GROUND SURFACE 71.66 TOP OF CASING 71.64 TOP OF RISER 71.16					
0	ASPHALT/CONCRETE	71.16	CONCRETE				
	NOT SAMPLED		4"Ø STEEL CASING				
4	FILL	67.66	CEMENT/ BENTONITE GROUT				
6			8"Ø BOREHOLE				
		64.66					
8	CH-CLAY, trace silt, firm, high plasticity, homogeneous with grey silt mottling (micro-fractures), brown, slightly moist						
16	- Bedrock encountered @ 16.2 ft BGS						
	END OF OVERBURDEN HOLE @ 16.2ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: American Axle
PROJECT NUMBER: 12635
CLIENT: General Motors
LOCATION: Buffalo, NY

HOLE DESIGNATION: MW-808B
DATE COMPLETED: February 17, 2009
DRILLING METHOD: HSA/Wet Rotary Core
FIELD PERSONNEL: J. Raby

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft Site Datum	MONITOR INSTALLATION	RUN NUMBER	CORE RECOVERY %	RQD %
16	- Bedrock encountered @ 16.2 ft BGS					
	BEDROCK-(not sampled)	55.46	6"Ø ROCK SOCKET			
18						
	LIMESTONE (Onondaga formation), medium to dark grey, fine grained limestone, dark grey chert is abundant, fossils are common	53.16				
20	- fractures @ 19.5, 19.7, 19.9, 21.1, 21.2, and 22.3 ft (vertical fracture) BGS		4"Ø COREHOLE	1	87	58
22	END OF BOREHOLE @ 22.3ft BGS	49.36				
24						
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

APPENDIX B

WELL DEVELOPMENT LOGS

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM Buffalo **PROJECT NO.:** 12635

DATE OF WELL DEVELOPMENT: May 22 2008

DEVELOPMENT CREW MEMBERS: J. Raby

PURGING METHOD: Whale pump

SAMPLE NO.: N/A

SAMPLE TIME: N/A

WELL INFORMATION

WELL NUMBER: MW-1B

WELL TYPE (diameter/material) 4" open core hole

MEASURING POINT ELEVATION: 63.63

STATIC WATER DEPTH: 14.11 **ELEVATION:** 49.52

BOTTOM DEPTH: 22.8 **ELEVATION:** 40.83

WATER COLUMN LENGTH: 8.69

SCREENED INTERVAL:

WELL VOLUME: 5.7 Gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

Dry @ 2 well volumes

	UNITS	*1*	*2*	*3*	*4*	*5*	*TOTAL/ AVERAGE* 6	7
VOLUME PURGED (volume/total volume):	Gal	6	12	18	24	30	36	42
FIELD pH:	S.U.	6.81	7.20	7.2	7.3	7.4	7.4	7.4
FIELD TEMPERATURE:	°F	62.3	65.4	65.7	65.8	65.7	65.8	65.8
FIELD CONDUCTIVITY:	m/s	3210	3220	4020	4000	4010	4010	4030
CLARITY/TURBIDITY VALUES:	NTU	135	105	240	105	95	30	7
COLOR:		lt Gray	lt Gray	lt Gray	Clear	Clear	Clear	Clear
ODOR:		-	-	-	-	-	-	-
COMMENTS:								

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635.03

DATE OF WELL DEVELOPMENT: 3/5/09

DEVELOPMENT CREW MEMBERS: KPC

PURGING METHOD: Peristaltic & Bailer

TOC to Gr = 0.62'

SAMPLE NO.: —

SAMPLE TIME: —

WELL INFORMATION

WELL NUMBER: MW-107R

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 3.22

ELEVATION: _____

BOTTOM DEPTH: 11.88

ELEVATION: _____

WATER COLUMN LENGTH: 8.66

SCREENED INTERVAL: _____

WELL VOLUME: 1.4 Gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gal	3 Gal	5 Gal	7 Gal			
FIELD pH:	SU	NA *	6.48	6.43			
FIELD TEMPERATURE:	°F	46.7°	47.3	47.5			
FIELD CONDUCTIVITY:	µs/cm	4700	4490	4710			
CLARITY/TURBIDITY VALUES:	NTU	43.3	46.4	33.3			
COLOR:	—	Sl. yellow	Sl. yellow	Sl. yellow			
ODOR:	—	Musty	Sl. musty	Sl. musty			
COMMENTS:	—	Clear	Clear	Clear			

8 Gal total

COPIES TO: _____

* Ph Meter stops functioning for pH - unable to span to 10
7 = 7.23 best

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-20204

DATE OF WELL DEVELOPMENT: KPL 2/26/09 & 3/5/09

DEVELOPMENT CREW MEMBERS: 3/5/09

PURGING METHOD: Peristaltic & Bailer to surge

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW 408R

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 1.1'

BOTTOM DEPTH: 12.0 very muddy

WATER COLUMN LENGTH: 11.1' bottom

SCREENED INTERVAL:

WELL VOLUME: 1.77 gal

TOC to Gr 0.5'

Claywell

3/5/09 w/L= 3.78 BTC

ELEVATION: 8.22' water x .16 =

ELEVATION: 1.31 Gal/Vol

2/26/09 pre purge 7 Gal very muddy water 2 w/ bailer, 5 w/ pump Gray

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

No readings! Well goes dry

UNITS	1 3/5/09	2, →	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	3.0	3.0				
FIELD pH:	6.					
°F FIELD TEMPERATURE:	49.4°					
FIELD CONDUCTIVITY:	4720					
CLARITY/TURBIDITY VALUES:	V. Cldy	V. Cldy				
COLOR:	Gray brn					
ODOR:	None					
COMMENTS: Surge before pump	Bailer No Skew	Dry 2gal	Dry 1 Gal			

Dry 5gal Dry 2Gal

COPIES TO:

This Well is not clearing very well.

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635
03-202040

DATE OF WELL DEVELOPMENT: 2/26/09 & 3/5/09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Peristaltic / Bailer

SAMPLE NO.:

SAMPLE TIME:

TOC to Gr. 0.5'

Full Well 3/5/09

Water 5.38 BTOC

WELL INFORMATION

WELL NUMBER: MW-409R

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 5.05

BOTTOM DEPTH: 6.65

WATER COLUMN LENGTH: 1.6 Ft

SCREENED INTERVAL: -

WELL VOLUME: 0.25 Gal

ELEVATION:

ELEVATION:

~~Preparing Blood Drug Activity water~~

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gal	1.0	Dr 1 3.0	Dry 2.0	Dry 1.0	3/5/09 2 gal	
FIELD pH:	S.U.	8.18	8.61	8.59	8.80	8.12	
FIELD TEMPERATURE:	°F	41.8°	43°F	42.8°F	42.2°	42.9°	
FIELD CONDUCTIVITY:	µs/cm	5380	5290	5260	5230	5560	
CLARITY/TURBIDITY VALUES:	NTU	61	74	62	36	227	
COLOR:		lt. yellow	→		Sl. yellow	Yellow	
ODOR:		slight	→		V. Sl musty	Slight	
COMMENTS:		sl. cldy musty odor	→		Clear	Cloudy then Clearing Sandpack	

COPIES TO: trace sandpack

Pumping more sandpack than normal- Total 2 gal
Well clears ok, then becomes cloudy when almost dry.

cz 90° F

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 2/26/09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Peristaltic & Bailer

SAMPLE NO.:

SAMPLE TIME: ~~1345~~

TOC to Gr = 0.5'

WELL INFORMATION

WELL NUMBER: MW-809A

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 5.12

ELEVATION:

BOTTOM DEPTH: 16.3

ELEVATION:

WATER COLUMN LENGTH: 11'

SCREENED INTERVAL:

WELL VOLUME: 1.75 gal +/-

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gal	3	6	10 dry			
FIELD pH:	SU	7.27	7.06	6.86			
FIELD TEMPERATURE:	°F	53.4°	53.7	55.5			
FIELD CONDUCTIVITY:	mS/cm	6000	5650	5900			
CLARITY/TURBIDITY VALUES:	NTU	120	180	24			
COLOR:	-	yell. brn	→	colorless			
ODOR:	-	sl. oily	→	to yellow sl. hint oil			
COMMENTS:	-	sl. cldy	→	Clear			

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 2/26/09

DEVELOPMENT CREW MEMBERS: KPC

PURGING METHOD: Peristaltic & Bailer

SAMPLE NO.: —

SAMPLE TIME: —

~~OTC PROTECTOR~~

TOC to Gr = 0.5'

WELL INFORMATION

WELL NUMBER: MW810A OK

WELL TYPE (diameter/material): ~~PROTECTOR~~ 2" OK PVC

MEASURING POINT ELEVATION: BTOC

STATIC WATER DEPTH: 7.05 ELEVATION: _____

BOTTOM DEPTH: 16.6' ELEVATION: _____

WATER COLUMN LENGTH: 9'

SCREENED INTERVAL: 1

WELL VOLUME: 1.44 gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	Gal	3.0	6.0	9.0 Dry	12.0	15.0	
FIELD pH:	SU	6.96	6.89	6.71			
FIELD TEMPERATURE:	°F	55.1	55.6	55.3°			
FIELD CONDUCTIVITY:	µs/cm	9110	8580	9760			
CLARITY/TURBIDITY VALUES:	NTU	33	66	32			
COLOR:	—	yellow	yellow	Sl. yellow			
ODOR:	—	musty	musty	Sl. musty			
COMMENTS:	—	Sl. cldy	Sl. cldy	Sl. sheen Sl. cldy			

COPIES TO: _____

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 2/26/09

DEVELOPMENT CREW MEMBERS: KPC

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

Small amount of water but recovers ok.

WELL INFORMATION

WELL NUMBER: MW-811A

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: BTOC

STATIC WATER DEPTH: 15.05 ELEVATION:

BOTTOM DEPTH: 15.80' ELEVATION:

WATER COLUMN LENGTH: 0.75'

SCREENED INTERVAL:

WELL VOLUME: < 0.16 gal 2/26/09

Purge 0.25 Gal - dry

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		0.25	0.5	0.75	1.0		
FIELD pH:	SU	6.64	6.89	6.99	7.19		
FIELD TEMPERATURE:	°F	52.4°	52.6°	52.0	53.3		
FIELD CONDUCTIVITY:	~~µs/cm~~	11920	8540	5590	5100		
CLARITY/TURBIDITY VALUES:		197	80.3	95	32		
COLOR:		V. Lt. Brn	None	None	Clear		
ODOR:		oily	sl. oily	sl. oily	sl. oily		
COMMENTS:		sl. sheen sl cldy	sl. sheen v sl. cldy	Clear	Clear Sl. Sheen		

COPIES TO: dry each 8 oz +/-

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: ADM

PROJECT NO.: R635-03-202040

DATE OF WELL DEVELOPMENT: 2/25/09 & 2/26/09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Bailer & Peristaltic

SAMPLE NO.: —

SAMPLE TIME: —

WELL INFORMATION

TOC TO GR = 0.5'

WELL NUMBER: MW 812 A

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 11.65

ELEVATION: _____

BOTTOM DEPTH: 18.85 soft

ELEVATION: _____

WATER COLUMN LENGTH: 7.2 ft

SCREENED INTERVAL: _____

WELL VOLUME: 1.15 Gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

2/25/09 2/26/09

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		1Gal	4 Gal	~~0~~	2	4	
FIELD pH:		5.65	5.70	5.98	5.64	5.77	
FIELD TEMPERATURE:		55°	55	55.5	58.0°	57.5	
FIELD CONDUCTIVITY:	uS/cm	3500	3150	3180	3070	3320	
CLARITY/TURBIDITY VALUES:					41	189	
COLOR:		Brown	Brown	Brown	Clear	lt brn	
ODOR:							
COMMENTS:		sl. cldy	cloudy	V. Cldy Dry 7.5 ft	colorless	~~Clear~~ Cloudy	

COPIES TO: dry Sgel

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 2/25/09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Peristaltic 2/26

SAMPLE NO.:

SAMPLE TIME:

TOC to Ground = 0.5'

WELL INFORMATION

WELL NUMBER: MW 813A

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: BTOC 8.0' 7.97'

ELEVATION:

BOTTOM DEPTH: 13.1'

ELEVATION:

WATER COLUMN LENGTH: 5.1'

SCREENED INTERVAL:

WELL VOLUME: 0.82 Gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

BAIL WHILE

UNITS	2/25/09	2	3	4	5	TOTAL/ AVERAGE 2/26/09 →	
VOLUME PURGED (volume/total volume):	2 Gal	5	8	12	15	2	5
FIELD pH:	6.95	7.02	7.06	6.82	6.94	6.45	6.51
FIELD TEMPERATURE:	48°F	18°	50.5°	51°	51°	46.9	47.1°
FIELD CONDUCTIVITY: ms/cm	12080	15210	14080	13490	14180	13400	4350
CLARITY/TURBIDITY VALUES:						125	90
COLOR:	Brown	Brown	Brown	Brown	Brown	Brown	Lt. Brn.	V. lt. brn
ODOR:			Musty	Musty	Musty	Musty	Musty
COMMENTS:	Very Cloudy	Very Cloudy	Very Cloudy	Clearing	Clearing	Sl. cldy	V. Sl. cldy

COPIES TO:

2/26 → 10 Gal FINAL 12 Gal

15190 16180
47.3° 47.5°
6.49 6.58
97 NTU REALM/ENCORE 127 NTU
V Sl. cldy Sl. Cldy
Lt. brn. Brown

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03
202040

DATE OF WELL DEVELOPMENT: 3-5-09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Whale Pump

SAMPLE NO.: —

SAMPLE TIME: —

WELL INFORMATION

WELL NUMBER: MW-~~B~~2B

WELL TYPE (diameter/material): 4" Steel

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 7.48' BTOC — ELEVATION: _____

BOTTOM DEPTH: 34.28' BTOC — ELEVATION: _____

WATER COLUMN LENGTH: 26.8 X 0.65

SCREENED INTERVAL: _____

WELL VOLUME: 17.5 Gal

* Green-gray color to water from bottom of well.
* Pump rate +/- ~~2~~ GPM - W/L does not change

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

UNITS Pump from	1 ~~Bottom~~	2 ~~Top bottom~~	3 Bottom	4 Top	5 Top	TOTAL/ AVERAGE Bottom	Top
VOLUME PURGED (volume/total volume): Gal	15	30	45	60	75	85	95
FIELD pH: SU	8.60	8.03	7.96	7.78	7.80	7.87	7.84
FIELD TEMPERATURE: °F	51.5°	52.4°	58.5°	56.4°	56.4°	57.0°	57.3°
FIELD CONDUCTIVITY: ~~us~~/cm	1250	1980	2110	2080	2060	2080	2110
CLARITY/TURBIDITY VALUES: NTU	47	34	22	40.5	12.5	81	14
COLOR: —	Green gray	Lt. Brn.	Clear	Green gray	Clear	Green Gray	Clear
ODOR: —	—	Sl. musty	musty	Sl. musty	Sl. musty	Sl. musty	none
COMMENTS: —	Cloudy from bottom	Clear	Clear	Clear	Clear	Sl. cldy than Clear	Clear

COPIES TO: W/L at end of Volume 7.55 7.65

Top Gal: 105

7.80
57.0°
2130
2.5
Clear
no odor

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-2020

DATE OF WELL DEVELOPMENT: 3/6/09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Peristaltic & Bailer

SAMPLE NO.: —

SAMPLE TIME: —

Removed floating layer of brown oil with peristaltic pump - then pump from bottom to clear sediments

WELL INFORMATION

WELL NUMBER: MW-102B

WELL TYPE (diameter/material): 4" Steel

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: NM-OIL

ELEVATION: _____

BOTTOM DEPTH: NM-OIL

ELEVATION: _____

WATER COLUMN LENGTH: —

SCREENED INTERVAL: —

WELL VOLUME: est. 10 Gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		10	30	40	50	60	
FIELD pH:		5.97	6.63	7.48	9.05	9.89	
FIELD TEMPERATURE:		53.9	54.6	54.2	53.9	53.8°	
FIELD CONDUCTIVITY:		2790	2700	2610	2590!	2520	
CLARITY/TURBIDITY VALUES:		402	202	53	122	40.9	
COLOR:		Lt. gray	Sl. brown	colorless	Colorless	Colorless	
ODOR:		Sulfury	Sulfury	sl. sulfur	sulfur	Sulfur	
COMMENTS:		Cloudy	Sl. Cldy	Clear	Sl. Cldy	Clear	

COPIES TO: _____

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: ~~TAM~~

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooler

PURGING METHOD: whale pump

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: MW 806 B

WELL TYPE (diameter/material): 4" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: 8.06 ELEVATION:

BOTTOM DEPTH: 27.11 ELEVATION:

WATER COLUMN LENGTH: 19.05

SCREENED INTERVAL:

WELL VOLUME: 13.33 gal

Note: For 1-inch diameter well: 1 foot = 0.04 US gallons
1 meter = 0.5 liters

For 2-inch diameter well: 1 foot = 0.16 US gallons
1 meter = 2 liters

For 4-inch diameter well: 1 foot = 0.70 US gallons
1 meter = 8.2 liters

UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	~~13.5 gal~~ 13.5 gal	27 gal	41 gal			
FIELD pH:	7.30	7.17	7.42			
FIELD TEMPERATURE:	7.4°	8.9°	7.0°			
FIELD CONDUCTIVITY:	0.877	0.745	1.67			
CLARITY/TURBIDITY VALUES:	999	999	74.5			
COLOR:	Brown	light ~~brown~~ gray	light gray			
ODOR:	~~Musty~~	~~Musty~~	Musty			
COMMENTS:			clearing			

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635

DATE OF WELL DEVELOPMENT: 2/25/09

DEVELOPMENT CREW MEMBERS: KPL

PURGING METHOD: Whale Pump

SAMPLE NO.:

~~SAMPLE~~ TIME: 12:20 Start

No LNAPL

* Surge W/ Bailer to start

WELL INFORMATION

WELL NUMBER: MW 808B

WELL TYPE (diameter/material): 4" ~~PVC~~ Steel

TOC = GR - 0.6' +/-

MEASURING POINT ELEVATION: TOC

STATIC WATER DEPTH: 17.55'

ELEVATION:

BOTTOM DEPTH: 21.40' soft

ELEVATION:

WATER COLUMN LENGTH: 3.85'

SCREENED INTERVAL:

WELL VOLUME: 2.5 Gal/Vol

INITIAL Lt. Brown, sl. cldy sl. sheen

Final Clear, colorless no sheen

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

4" = 0.653 gal/ft

UNITS	1	2	3	4 *	5	~~TOTAL~~ AVERAGE 6	7
VOLUME PURGED (volume/total volume): Gal →	5	9.5	12	15	18+	22	25
FIELD pH: SU	8.41	7.68	7.01	7.01	7.06	7.11	7.21
FIELD TEMPERATURE: °C/M	-	13.50	-	-	-	-	-
FIELD CONDUCTIVITY:	1480	1360	1380	1350	1400	1340	1380
CLARITY/TURBIDITY VALUES: NM	-	-	-	-	-	-	-
COLOR:	Lt Brn	Lt brn	v. lt. brn	V. Lt. Brn	Colorless	Colorless	Colorless
ODOR:	Oily	Sl. oil	none	none	sl. oil	none	none
COMMENTS:	Lt Brn Sl. Cldy Sl. Sheen	cloudy Sed. no sheen	sl. cldy Tr. sed no sheen	v. sl. cldy no sed no sheen	v. sl. cldy no sed sl. sheen	clear no sheen	clear no sheen
		15.0' ~~to water~~ 15'		18'	17.8'	18.0	18.0
	12:25	1240	1305	1318	1330	1350	1400
	Dry	1245	1308	1320	1333	1352	1423
	6.5 gal	Purge	Purge	Purge	Purge	Purge	purge
	Purged.	to dry 3 gal	Dry 2.5 gal	dry 3 gal	dry 3 gal	dry 3 gal	dry 3 gal

COPIES TO: W/L Receipt to:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-020040

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooler

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-29

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: DRY

ELEVATION:

BOTTOM DEPTH: 7.8'

ELEVATION:

WATER COLUMN LENGTH: N/A

SCREENED INTERVAL:

WELL VOLUME:

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	03/05/09	03/06/09				
FIELD pH:	DRY	DRY				
FIELD TEMPERATURE:		- visual check				
FIELD CONDUCTIVITY:		- WL check				
CLARITY/TURBIDITY VALUES:		- Nothing				
COLOR:						
ODOR:						
COMMENTS:						

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooler

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-30

WELL TYPE (diameter/material) 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: DRY

ELEVATION:

BOTTOM DEPTH: 6.80'

ELEVATION:

WATER COLUMN LENGTH:

SCREENED INTERVAL:

WELL VOLUME:

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	03/05/09	03/06/09				
FIELD pH:	DRY	DRY				
FIELD TEMPERATURE:		- visual check				
FIELD CONDUCTIVITY:		- wl check				
CLARITY/TURBIDITY VALUES:		- North, 09				
COLOR:						
ODOR:						
COMMENTS:						

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooler

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-31

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION: ELEVATION:

STATIC WATER DEPTH: 8.51

BOTTOM DEPTH: 9.61 ELEVATION:

WATER COLUMN LENGTH: 1.10

SCREENED INTERVAL:

WELL VOLUME: 0.176 gal

Note: For 1-inch diameter well: 1 foot = 0.04 US gallons
1 meter = 0.5 liters

For 2-inch diameter well: 1 foot = 0.16 US gallons
1 meter = 2 liters

For 4-inch diameter well: 1 foot = 0.70 US gallons
1 meter = 8.2 liters

UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	0.2 gal	0.4 gal DRY	0.6 gal	0.8 gal DRY		
FIELD pH:	7.17	7.12	7.21	7.18		
FIELD TEMPERATURE:	7.1	6.9	6.8	6.8		
FIELD CONDUCTIVITY:	1.11	0.977	0.969	0.979		
CLARITY/TURBIDITY VALUES:	124 Light Brown	110 light Brown	113 clear to cloudy	98 clear		
COLOR:				→		
ODOR:	None					
COMMENTS:						

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooles

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-31A

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: 13.73'

BOTTOM DEPTH: 17.25'

WATER COLUMN LENGTH: 3.52'

SCREENED INTERVAL:

WELL VOLUME: 0.56 gal

ELEVATION:

ELEVATION:

Note: For 1-inch diameter well: 1 foot = 0.04 US gallons
1 meter = 0.5 liters

For 2-inch diameter well: 1 foot = 0.16 US gallons
1 meter = 2 liters

For 4-inch diameter well: 1 foot = 0.70 US gallons
1 meter = 8.2 liters

UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):	0.6 gal	1.2 gal DRY	1.8 gal	2.4 gal DRY		
FIELD pH:	6.90	6.87	6.92	6.76		
FIELD TEMPERATURE:	7.0°	6.7°	6.6°	6.7°		
FIELD CONDUCTIVITY:	1.22	1.34	1.11	1.07		
CLARITY/TURBIDITY VALUES:	999	999	999	999 170		
COLOR:	Brown	Brown	Light Brown	Cloudy		
ODOR:	None	None	None	None		
COMMENTS:						

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635 -03- 20204a

DATE OF WELL DEVELOPMENT: 03/06/09

DEVELOPMENT CREW MEMBERS: S. Pooles

PURGING METHOD: peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-32

WELL TYPE (diameter/material) 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: Dry

ELEVATION:

BOTTOM DEPTH: 9.0'

ELEVATION:

WATER COLUMN LENGTH: N/A

SCREENED INTERVAL:

WELL VOLUME:

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		03/05/09	03/06/09				
FIELD pH:		DRY	DRY				
FIELD TEMPERATURE:			- visual check				
FIELD CONDUCTIVITY:			- WL check				
CLARITY/TURBIDITY VALUES:			- nothing				
COLOR:							
ODOR:							
COMMENTS:							

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-20204-0

DATE OF WELL DEVELOPMENT: 03/09/09

DEVELOPMENT CREW MEMBERS: S. Poole

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-32A

WELL TYPE (diameter/material)

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: 14.35'

ELEVATION:

BOTTOM DEPTH: 16.90'

ELEVATION:

WATER COLUMN LENGTH: 2.55'

SCREENED INTERVAL:

WELL VOLUME: 0.408 gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		0.5 gal DRY	0.5 gal DRY				
FIELD pH:		7.21	7.07				
FIELD TEMPERATURE:		7.0°	6.6°				
FIELD CONDUCTIVITY:		0.930	0.871				
CLARITY/TURBIDITY VALUES:		999	999				
COLOR:		Brown	Light Brown				
ODOR:		None	to None clear				
COMMENTS:							

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-03-202040

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooler

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-33

WELL TYPE (diameter/material) 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: DRY

ELEVATION:

BOTTOM DEPTH: 8.60'

ELEVATION:

WATER COLUMN LENGTH: N/A

SCREENED INTERVAL:

WELL VOLUME:

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		03/05/09	03/06/09				
FIELD pH:		Dry	Dry				
FIELD TEMPERATURE:			- vol. q/ check				
FIELD CONDUCTIVITY:			- WL check				
CLARITY/TURBIDITY VALUES:			- nothing				
COLOR:							
ODOR:							
COMMENTS:							

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12695-03-20204.0

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Pooler

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-34

WELL TYPE (diameter/material) 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: DRY

ELEVATION:

BOTTOM DEPTH: 8.25'

ELEVATION:

WATER COLUMN LENGTH: N/A

SCREENED INTERVAL:

WELL VOLUME:

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	*1*	*2*	*3*	*4*	*5*	*TOTAL/ AVERAGE*
VOLUME PURGED (volume/total volume):		03/05/09	03/06/09				
FIELD pH:		Dry	Dry				
FIELD TEMPERATURE:			- visual check				
FIELD CONDUCTIVITY:			- WL check				
CLARITY/TURBIDITY VALUES:			- slight moisture on sides				
COLOR:			of risers and bottom				
ODOR:							
COMMENTS:							

COPIES TO:

WELL DEVELOPMENT AND STABILIZATION FORM

PROJECT NAME: AAM

PROJECT NO.: 12635-07-020-40

DATE OF WELL DEVELOPMENT: 03/05/09

DEVELOPMENT CREW MEMBERS: S. Poole

PURGING METHOD: Peristaltic

SAMPLE NO.:

SAMPLE TIME:

WELL INFORMATION

WELL NUMBER: CP-34A

WELL TYPE (diameter/material): 2" PVC

MEASURING POINT ELEVATION:

STATIC WATER DEPTH: 14.22 ELEVATION:

BOTTOM DEPTH: 17.20 ELEVATION:

WATER COLUMN LENGTH: ~~2.98~~ 2.98

SCREENED INTERVAL:

WELL VOLUME: 0.48 gal

Note: For 2-inch diameter well: 1 foot = 0.14 gallons (Imp) or 0.16 gallons (US)
1 meter = 2 liters

	UNITS	1	2	3	4	5	TOTAL/ AVERAGE
VOLUME PURGED (volume/total volume):		0.5 gal DRY	0.5 gal DRY				
FIELD pH:		6.92	7.17				
FIELD TEMPERATURE:		6.7°	7.0°				
FIELD CONDUCTIVITY:		1.10	0.977				
CLARITY/TURBIDITY VALUES:		999	999				
COLOR:		Brown	choc milk				
ODOR:		None	None				
COMMENTS:		choc milk	- very silty - batter like paste				

COPIES TO: * Recommend well flush

APPENDIX C

PHASE CHECKS

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 3, 2006				February 9, 2007				May 3, 2007			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
Fill	CP-1	8	67.58		Dry			--	60.77	No Oil	60.77		Dry		
	CP-2	8.5	67.52	--	59.93	No Oil	59.93	--	60.03	No Oil	60.03	--	60.24	No Oil	60.24
	CP-4	8.4	67.59		Dry				Dry				Dry		
	CP-7	8.3	67.31		Dry				Dry				Dry		
	CP-8	8	67.25	62.25	61.90	0.35	62.20	62.14	62.04	0.10	62.13	62.23	62.17	0.06	62.22
	CP-9	8.5	67.64	60.14	59.44	0.70	60.05	59.52	--	0.38	--	62.06	62.04	0.02	62.06
	CP-13	8.9	67.58	61.75	--	3.07	--	61.70	--	3.02	--	62.47	--	3.79	--
	CP-14	10	66.63	61.87	--	5.24	--	61.48	--	4.85	--	60.78	--	4.15	--
	CP-23	6	67.27	--	62.27	No Oil	62.27	--	62.07	No Oil	62.07	--	62.36	No Oil	62.36
	CP-24	7	67.50	--	61.88	No Oil	61.88	--	61.70	No Oil	61.70	--	62.00	No Oil	62.00
	CP-25	7	67.40	--	61.58	No Oil	61.58	--	61.55	No Oil	61.55	--	61.70	No Oil	61.70
	CP-26	8	67.09	61.47	60.94	0.53	61.40	61.29	60.95	0.34	61.25	61.48	61.37	0.11	61.47
	CP-27	7	67.41	--	61.41	No Oil	61.41	--	60.67	No Oil	60.67	--	61.31	No Oil	61.31
	CP-28	8.5	67.43	61.83	--	2.90	--	61.83	--	2.90	--	62.01	59.85	2.16	61.73
	CP-29	8	67.58		Not Installed				Not Installed				Not Installed		
	CP-30	7	67.58		Not Installed				Not Installed				Not Installed		
	CP-31	9.8	67.75		Not Installed				Not Installed				Not Installed		
	CP-32	9	67.45		Not Installed				Not Installed				Not Installed		
	CP-33	9	67.46		Not Installed				Not Installed				Not Installed		
	CP-34	8.5	67.17		Not Installed				Not Installed				Not Installed		
	M-1	10	66.97	58.59	--	1.62	--	58.45	--	1.48	--	59.01	--	2.04	--
	M-2	10.3	67.20	--	58.22	No Oil	58.22	--	58.35	No Oil	58.35	--	58.69	No Oil	58.69
	M-3	11	67.24	59.42	--	3.18	--	59.39	--	3.15	--	59.54	--	3.30	--
	MW-3	11	70.64		Dry				Not Measured			--	57.99	No Oil	57.99
	MW-4	11	64.92	--	61.56	No Oil	61.56		Not Measured			--	61.64	No Oil	61.64
	MW-101	6.4	67.62		Not Measured				Not Measured				Not Measured		
	MW-102	13.5	67.83	--	61.53	No Oil	61.53		Not Measured			--	61.83	No Oil	61.83
	MW-103	11.5	67.85	57.20	56.85	0.35	57.15	57.18	--	0.83	--	57.35	--	1.00	--
	MW-204	11	66.45	--	63.90	No Oil	63.90		Not Measured			--	63.56	No Oil	63.56
	MW-205	11	67.13	--	60.78	No Oil	60.78	--	63.56	No Oil	63.56	--	60.73	No Oil	60.73
	MW-300	6.8	67.45	--	61.81	No Oil	61.81	--	61.35	No Oil	61.35	--	61.75	No Oil	61.75
	MW-301	6.5	67.62		Dry				Dry				Dry		
	MW-303	7.4	67.60	--	61.20	No Oil	61.20	--	60.82	No Oil	60.82	--	60.99	No Oil	60.99
	MW-306	7.5	67.63	60.99	--	0.86	--	60.60	--	0.47	--	62.50	--	2.37	--
	MW-309	9.5	67.67	61.77	--	3.60	--	61.67	--	3.50	--	61.67	--	3.50	--
	MW-401	7	67.47	61.27	--	0.80	--	61.21	--	0.74	--	61.38	--	0.91	--
	MW-403	7	67.84		Dry				Dry				Dry		
	MW-405	7	65.95	--	63.00	No Oil	63.00		Not Measured			--	62.99	No Oil	62.99

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 3, 2006				February 9, 2007				May 3, 2007			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-407	7	67.42	60.64	60.63	0.01	60.64	60.27	60.26	0.01	60.27		*Dry*		
	MW-409/R	7	64.37	--	64.22	*No Oil*	64.22		*Not Measured*			--	64.27	*No Oil*	64.27
	MW-807	7	67.75		*Not Installed*				*Not Installed*				*Not Installed*		
	T-1	15	67.40	56.68	55.76	0.92	56.56	56.60	55.85	0.75	56.50	56.99	55.40	1.59	
Clay	B-1	16.5	67.46	52.49	--	1.53	--	52.16	--	1.20	--	52.26	--	1.30	--
	B-2	17.4	67.37	52.77	52.06	0.71	52.68	52.47	52.12	0.35	52.42	52.82	52.20	0.62	52.74
	CP-2A	15.3	67.77	56.34	56.31	0.03	56.34	56.17	56.02	0.15	56.15	56.20	55.97	0.23	56.17
	CP-4A	17	67.64	55.82	55.57	0.25	55.79	55.30	54.96	0.34	55.26	55.64	55.24	0.40	55.59
	CP-7A	16.1	67.32	52.63	52.62	0.01	52.63	52.57	52.51	0.06	52.56	52.74	52.42	0.32	52.70
	CP-8A	16	67.38	55.03	54.91	0.12	55.01	55.03	54.87	0.16	55.01	55.28	55.26	0.02	55.28
	CP-11A	16	66.94	53.24	53.18	0.06	53.23	52.82	52.19	0.63	52.74	53.13	52.99	0.14	53.11
	CP-12A	16.2	67.51	--	54.83	*No Oil*	54.83	--	54.64	*No Oil*	54.64	--	55.38	*No Oil*	55.38
	CP-13A	18.1	67.70	53.35	53.22	0.13	53.33	53.40	53.30	0.10	53.39	53.36	53.22	0.14	53.34
	CP-14A	16.2	67.35	53.18	52.80	0.38	53.13	53.09	52.35	0.74	52.99	53.84	52.74	1.10	53.70
	CP-14AR	16.7	67.52	52.80	51.42	1.38	52.62	52.45	51.54	0.91	52.33	53.07	51.41	1.66	52.85
	CP-15A	17	67.61	53.39	53.20	0.19	53.37	52.96	52.51	0.45	52.90	53.27	52.91	0.36	53.22
	CP-17A	16.3	67.49	53.17	53.07	0.10	53.16	52.89	52.79	0.10	52.88	53.14	52.88	0.26	53.11
	CP-19A	16.8	67.55	52.80	51.50	1.30	52.63	52.75	51.68	1.07	52.61	52.97	--	2.22	--
	CP-24A	18	67.59	--	57.64	*No Oil*	57.64	--	57.50	*No Oil*	57.50	--	57.79	*No Oil*	57.79
	CP-25A	18	67.42	--	55.74	*No Oil*	55.74	--	55.42	*No Oil*	55.42	--	55.82	*No Oil*	55.82
	CP-26A	16	67.53	56.61	56.31	0.30	56.57	56.28	55.75	0.53	56.21	57.53	56.83	0.70	57.44
	CP-27A	16	67.34	56.93	56.76	0.17	56.91	56.81	56.53	0.28	56.77	57.18	56.96	0.22	57.15
	CP-31A	17	67.86		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-32A	17	67.60		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-34A	17.9	67.54		*Not Installed*				*Not Installed*				*Not Installed*		
	GP-03	16.8	67.64	--	62.29	*No Oil*	62.29	--	62.29	*No Oil*	62.29	--	62.40	*No Oil*	62.40
	GP-06	17	67.71	--	62.22	*No Oil*	62.22	--	61.69	*No Oil*	61.69	--	61.85	*No Oil*	61.85
	GP-08	16	67.79	--	56.08	*No Oil*	56.08	--	55.94	*No Oil*	55.94	--	56.29	*No Oil*	56.29
	GP-09	16.8	67.69	55.68	55.67	0.01	55.68	55.59	55.58	0.01	55.59	--	55.94	*No Oil*	55.94
	GP-12	16.7	67.59	57.32	55.71	1.61	57.11	58.61	55.89	2.72	58.26	59.83	56.69	3.14	59.42
	M-1A	18.3	67.47	53.12	53.07	0.05	53.11		*Not Measured*			53.34	53.19	0.15	53.32
	M-2A	18	67.22	53.12	52.60	0.52	53.05	52.82	52.35	0.47	52.76	53.32	52.37	0.95	53.20
	M-3A	16.7	67.60	--	51.10	*No Oil*	51.10	--	51.15	*No Oil*	51.15	--	51.30	*No Oil*	51.30
	MW-1A	16.1	63.27	--	57.83	*No Oil*	57.83		*Not Measured*			--	57.17	*No Oil*	57.17
	MW-2A	13.1	61.08	--	52.26	*No Oil*	52.26		*Not Measured*			--	52.01	*No Oil*	52.01
	MW-3A	20.7	65.91	--	58.92	*No Oil*	58.92		*Not Measured*			--	58.90	*No Oil*	58.90
	MW-4A	17.2	65.10	--	50.45	*No Oil*	50.45		*Not Measured*			--	50.71	*No Oil*	50.71

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 3, 2006				February 9, 2007				May 3, 2007			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-6A	8.8	66.96		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-106	11.5	66.66	--	60.95	*No Oil*	60.95		*Not Measured*			--	61.53	*No Oil*	61.53
	MW-107/R	12.6	65.42	--	62.60	*No Oil*	62.60		*Not Measured*			--	62.61	*No Oil*	62.61
	MW-300A	19.6	67.55	--	56.83	*No Oil*	56.83	--	56.35	*No Oil*	56.35	--	57.04	*No Oil*	57.04
	MW-305R	17.1	67.33	55.68	54.98	0.70	55.59	55.94	55.63	0.31	55.90	56.68	55.18	1.50	56.49
	MW-307	18.5	67.85	54.27	53.82	0.45	54.21	53.80	53.58	0.22	53.77	54.40	53.64	0.76	54.30
	MW-308	17.5	67.63	53.48	52.62	0.86	53.37	53.13	52.47	0.66	53.04	53.47	52.30	1.17	53.32
	MW-309A	16.8	67.49	53.95	53.17	0.78	53.85	53.59	52.79	0.80	53.49	53.99	53.12	0.87	53.88
	MW-400	18.8	67.58	52.38	50.28	2.10	52.11		*Not Measured*			52.53	--	3.75	--
	MW-402/R	14	67.50		*Dry*				*Dry*				*Dry*		
	MW-404	16.5	65.99	51.12	50.73	0.39	51.07		*Not Measured*			51.17	50.54	0.63	51.09
	MW-406	17.6	67.20	54.90	54.74	0.16	54.88	52.86	52.83	0.03	52.86	53.80	52.70	1.10	53.66
	MW-408/R	12.5	64.36	--	58.95	*No Oil*	58.95		*Not Measured*			--	59.84	*No Oil*	59.84
	MW-801A	18.5	66.44		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-802A	18.3	66.00		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-803A	16.1	65.84		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-804A	17.5	66.69		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-805A	14.9	67.42		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-809A	17	65.16		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-810A	17	65.24		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-811A	16	65.41		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-812A	19	65.36		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-813A	13.3	61.18		*Not Installed*				*Not Installed*				*Not Installed*		
Bedrock	CP-1B	17.4	67.72		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-3B	19	67.70	53.74	53.20	0.54	53.67	53.51	52.95	0.56	53.44	53.94	52.73	1.21	53.78
	CP-4B	22.7	67.80		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-8B	22.9	67.62	52.27	52.24	0.03	52.27	52.02	51.94	0.08	52.01	52.34	52.31	0.03	52.34
	CP-9B	26.8	67.62		*Not Measured*			52.31	52.30	0.01	52.31	52.82	52.71	0.11	52.81
	CP-11B	22.9	67.44	52.62	50.59	2.03	52.36	52.10	50.94	1.16	51.95	52.84	49.52	3.32	52.41
	CP-14B	24	67.55	52.28	52.27	0.01	52.28	51.95	51.89	0.06	51.94	52.37	52.35	0.02	52.37
	CP-16B	22.8	67.53	52.22	52.15	0.07	52.21	51.83	51.79	0.04	51.82	52.23	52.13	0.10	52.22
	CP-18B	27	67.49	52.43	52.37	0.06	52.42	52.04	51.94	0.10	52.03	52.81	52.79	0.02	52.81
	CP-20B	24.45	67.75	52.47	52.44	0.03	52.47	52.14	51.95	0.19	52.12	52.53	52.34	0.19	52.51
	CP-21B	25.8	67.62	--	56.72	*No Oil*	56.72	--	56.21	*No Oil*	56.21	--	56.67	*No Oil*	56.67
	CP-22B	29.1	67.58	--	54.84	*No Oil*	54.84	--	54.28	*No Oil*	54.28	--	54.78	*No Oil*	54.78
	CP-23B	23.5	67.51	52.36	52.34	0.02	52.36	51.93	51.92	0.01	51.93	52.41	52.40	0.01	52.41

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 3, 2006				*February 9, 2007*				*May 3, 2007*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	CP-24B	25.7	67.51	--	52.39	*No Oil*	52.39	--	51.97	*No Oil*	51.97	--	52.41	*No Oil*	52.41
	CP-25B	26.1	67.62	--	52.38	*No Oil*	52.38	--	52.02	*No Oil*	52.02	--	52.42	*No Oil*	52.42
	CP-26B	26	67.42	--	52.48	*No Oil*	52.48	--	52.16	*No Oil*	52.16	--	52.57	*No Oil*	52.57
	CP-27B	24	67.54	--	52.24	*No Oil*	52.24	--	51.94	*No Oil*	51.94	--	52.34	*No Oil*	52.34
	CP-28B	26.5	66.83	52.15	52.14	0.01	52.15	52.33	52.14	0.19	52.31	52.38	52.28	0.10	52.37
	MW-1B	22.8	63.63		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-2B	32.9	61.50		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-4B	23.5	65.20		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-5B	24.5	67.18		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-6B	20.6	66.84		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-102B	21.1	67.69		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-401B	29.8	67.33	52.70	52.69	0.01	52.70	52.22	52.21	0.01	52.22	52.71	52.70	0.01	52.71
	MW-409B	24.9	64.27		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-806B	27.8	67.56		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-808B	22.3	71.16		*Not Installed*				*Not Installed*				*Not Installed*		
	T-1B	39.3	67.55	--	61.07	*No Oil*	61.07	--	59.85	*No Oil*	59.85	--	60.67	*No Oil*	60.67

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				July 26, 2007				November 1, 2007				February 8, 2008			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
Fill	CP-1	8	67.58		*Dry*				*Dry*				*Dry*		
	CP-2	8.5	67.52	--	60.13	*No Oil*	60.13	--	60.14	*No Oil*	60.14	--	59.67	*No Oil*	59.67
	CP-4	8.4	67.59		*Dry*				*Dry*				*Dry*		
	CP-7	8.3	67.31	--	59.12	*No Oil*	59.12	--	59.09	*No Oil*	59.09	--	58.97	*No Oil*	58.97
	CP-8	8	67.25	62.13	62.04	0.09	62.12	62.15	62.05	0.10	62.14	62.05	62.02	0.03	62.05
	CP-9	8.5	67.64	61.89	61.72	0.17	61.87	61.88	61.61	0.27	61.84	61.69	61.24	0.45	61.63
	CP-13	8.9	67.58	61.66	--	2.98	--	61.68	--	3.00	--	61.58	--	2.90	--
	CP-14	10	66.63	61.02	--	4.39	--	60.02	--	3.39	--	60.13	--	3.50	--
	CP-23	6	67.27	62.29	--	1.02	--	--	62.01	*No Oil*	62.01	--	62.27	*No Oil*	62.27
	CP-24	7	67.50	61.90	61.89	0.01	61.90	--	61.88	*No Oil*	61.88		*Dry*		
	CP-25	7	67.40	--	61.60	*No Oil*	61.60	--	61.60	*No Oil*	61.60	--	61.25	*No Oil*	61.25
	CP-26	8	67.09	62.07	61.39	0.68	61.98	61.47	61.39	0.08	61.46	61.29	61.28	0.01	61.29
	CP-27	7	67.41	--	60.76	*No Oil*	60.76	--	61.21	*No Oil*	61.21	--	60.61	*No Oil*	60.61
	CP-28	8.5	67.43	61.92	--	2.99	--	61.82	--	2.89	--	61.85	--	2.92	--
	CP-29	8	67.58		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-30	7	67.58		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-31	9.8	67.75		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-32	9	67.45		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-33	9	67.46		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-34	8.5	67.17		*Not Installed*				*Not Installed*				*Not Installed*		
	M-1	10	66.97	58.46	--	1.49	--	58.47	--	1.50	--	58.60	--	1.63	--
	M-2	10.3	67.20	--	58.42	*No Oil*	58.42	--	58.49	*No Oil*	58.49	--	58.61	*No Oil*	58.61
	M-3	11	67.24	58.76	--	2.52	--	58.33	--	2.09	--	58.71	--	2.47	--
	MW-3	11	70.64		*Dry*				*Dry*			--	59.55	*No Oil*	59.55
	MW-4	11	64.92	--	61.56	*No Oil*	61.56	--	61.67	*No Oil*	61.67	--	62.10	*No Oil*	62.10
	MW-101	6.4	67.62		*Not Measured*				*Not Measured*				*Obstructed*		
	MW-102	13.5	67.83	--	61.44	*No Oil*	61.44	--	61.28	*No Oil*	61.28	--	61.73	*No Oil*	61.73
	MW-103	11.5	67.85	57.23	--	0.88	--	57.20	--	0.85	--	57.15	--	0.80	--
	MW-204	11	66.45	--	62.80	*No Oil*	62.80	--	63.20	*No Oil*	63.20	--	64.15	*No Oil*	64.15
	MW-205	11	67.13	--	60.38	*No Oil*	60.38	--	61.23	*No Oil*	61.23	--	61.33	*No Oil*	61.33
	MW-300	6.8	67.45	--	61.70	*No Oil*	61.70	--	61.80	*No Oil*	61.80	--	61.90	*No Oil*	61.90
	MW-301	6.5	67.62		*Dry*				*Dry*				*Dry*		
	MW-303	7.4	67.60	--	60.80	*No Oil*	60.80	--	60.80	*No Oil*	60.80	--	60.77	*No Oil*	60.77
	MW-306	7.5	67.63	60.97	--	0.84	--	61.21	--	1.08	--	61.43	--	1.30	--
	MW-309	9.5	67.67	61.51	--	3.34	--	61.37	--	3.20	--	61.42	--	3.25	--
	MW-401	7	67.47	61.29	--	0.82	--	61.16	--	0.69	--	61.17	--	0.70	--
	MW-403	7	67.84	*Dry*					*Dry*				*Dry*		
	MW-405	7	65.95	--	62.53	*No Oil*	62.53	--	62.90	*No Oil*	62.90	--	63.55	*No Oil*	63.55

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				July 26, 2007				*November 1, 2007*				*February 8, 2008*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-407	7	67.42		*Dry*				*Dry*			60.32	60.23	0.09	60.31
	MW-409/R	7	64.37	--	63.70	*No Oil*	63.70	--	63.96	*No Oil*	63.96	--	64.37	*No Oil*	64.37
	MW-807	7	67.75		*Not Installed*				*Not Installed*				*Not Installed*		
	T-1	15	67.40	56.88	54.46	2.42	56.57	56.65	54.40	2.25	56.36	56.80	55.10	1.70	56.58
Clay	B-1	16.5	67.46	52.66	--	1.70	--	51.86	--	0.90	--	52.71	--	1.75	--
	B-2	17.4	67.37	53.37	52.62	0.75	53.27	52.57	51.09	1.48	52.38	52.77	51.87	0.90	52.65
	CP-2A	15.3	67.77	56.37	56.34	0.03	56.37	56.47	56.40	0.07	56.46	55.87	55.67	0.20	55.84
	CP-4A	17	67.64	55.55	55.32	0.23	55.52	55.04	54.70	0.34	55.00	55.24	54.74	0.50	55.18
	CP-7A	16.1	67.32	52.12	--	0.90	--	51.72	--	0.50	--	52.57	51.68	0.89	52.45
	CP-8A	16	67.38	52.76	52.73	0.03	52.76	54.67	54.55	0.12	54.65	55.38	55.30	0.08	55.37
	CP-11A	16	66.94	53.05	51.90	1.15	52.90	52.69	51.74	0.95	52.57	53.64	53.59	0.05	53.63
	CP-12A	16.2	67.51	--	55.33	*No Oil*	55.33	--	56.59	*No Oil*	56.59	--	57.31	*No Oil*	57.31
	CP-13A	18.1	67.70	53.70	53.60	0.10	53.69	53.50	53.20	0.30	53.46	53.40	53.33	0.07	53.39
	CP-14A	16.2	67.35	53.15	52.30	0.85	53.04	52.49	51.82	0.67	52.40	53.60	52.25	1.35	53.42
	CP-14AR	16.7	67.52	53.60	51.47	2.13	53.32	52.68	--	1.86	--	53.17	50.78	2.39	52.86
	CP-15A	17	67.61	53.13	52.81	0.32	53.09	53.10	52.86	0.24	53.07	53.21	52.96	0.25	53.18
	CP-17A	16.3	67.49	53.07	53.00	0.07	53.06	52.99	52.96	0.03	52.99	53.04	53.03	0.01	53.04
	CP-19A	16.8	67.55	52.65	--	1.90	--	52.65	51.40	1.25	52.49	53.20	--	2.45	69.68
	CP-24A	18	67.59	57.85	57.84	0.01	57.85	--	57.49	*No Oil*	57.49	--	57.59	*No Oil*	57.59
	CP-25A	18	67.42	--	55.82	*No Oil*	55.82	55.65	55.64	0.01	55.65	--	55.55	*No Oil*	55.55
	CP-26A	16	67.53	56.71	55.83	0.88	56.60	56.13	55.48	0.65	56.05	56.43	55.93	0.50	56.37
	CP-27A	16	67.34	57.03	56.84	0.19	57.01	56.59	56.46	0.13	56.57	56.99	56.74	0.25	56.96
	CP-31A	17	67.86		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-32A	17	67.60		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-34A	17.9	67.54		*Not Installed*				*Not Installed*				*Not Installed*		
	GP-03	16.8	67.64	--	62.29	*No Oil*	62.29	--	62.31	*No Oil*	62.31	--	62.34	*No Oil*	62.34
	GP-06	17	67.71	--	61.81	*No Oil*	61.81	--	61.71	*No Oil*	61.71	--	61.56	*No Oil*	61.56
	GP-08	16	67.79	56.19	56.15	0.04	56.18	56.19	56.17	0.02	56.19	56.19	55.79	0.40	56.14
	GP-09	16.8	67.69	56.08	56.04	0.04	56.07	55.57	55.56	0.01	55.57	55.82	55.81	0.01	55.82
	GP-12	16.7	67.59	60.29	53.89	6.40	59.46	55.61	54.00	1.61	55.40	57.39	55.56	1.83	57.15
	M-1A	18.3	67.47	53.26	53.07	0.19	53.24	52.96	52.65	0.31	52.92	53.17	52.89	0.28	53.13
	M-2A	18	67.22	53.47	53.07	0.40	53.42	52.85	52.09	0.76	52.75	53.19	52.37	0.82	53.08
	M-3A	16.7	67.60	--	51.28	*No Oil*	51.28	--	51.15	*No Oil*	51.15	--	51.16	*No Oil*	51.16
	MW-1A	16.1	63.27	--	57.66	*No Oil*	57.66	--	57.62	*No Oil*	57.62	--	57.65	*No Oil*	57.65
	MW-2A	13.1	61.08	--	51.55	*No Oil*	51.55	--	51.26	*No Oil*	51.26	--	52.13	*No Oil*	52.13
	MW-3A	20.7	65.91	--	58.29	*No Oil*	58.29	--	58.21	*No Oil*	58.21	--	58.93	*No Oil*	*58.93*
	MW-4A	17.2	65.10	--	50.27	*No Oil*	50.27	--	50.22	*No Oil*	50.22	--	51.12	*No Oil*	51.12

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				July 26, 2007				*November 1, 2007*				*February 8, 2008*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-6A	8.8	66.96		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-106	11.5	66.66	--	60.93	*No Oil*	60.93	--	60.84	*No Oil*	60.84	--	60.27	*No Oil*	60.27
	MW-107/R	12.6	65.42	--	61.59	*No Oil*	61.59	--	61.85	*No Oil*	61.85	--	65.42	*No Oil*	65.42
	MW-300A	19.6	67.55	--	56.73	*No Oil*	56.73		*Inaccessible*			--	57.25	*No Oil*	57.25
	MW-305R	17.1	67.33	55.81	55.06	0.75	55.71	56.54	55.14	1.40	56.36	55.23	54.68	0.55	55.16
	MW-307	18.5	67.85	54.70	53.53	1.17	54.55	54.17	53.26	0.91	54.05	54.35	53.05	1.30	54.18
	MW-308	17.5	67.63	53.73	52.78	0.95	53.61	53.11	51.91	1.20	52.95	53.63	53.28	0.35	53.58
	MW-309A	16.8	67.49	53.69	52.74	0.95	53.57	53.44	52.89	0.55	53.37	53.44	52.94	0.50	53.38
	MW-400	18.8	67.58	52.35	50.76	1.59	52.14	52.23	50.38	1.85	51.99	53.28	50.22	3.06	52.88
	MW-402/R	14	67.50		*Dry*				*Dry*				*Dry*		
	MW-404	16.5	65.99	50.79	50.31	0.48	50.73	50.38	50.01	0.37	50.33	51.47	51.16	0.31	51.43
	MW-406	17.6	67.20	53.28	--	3.68	--	52.82	--	3.22	--	53.00	--	3.40	
	MW-408/R	12.5	64.36	--	57.26	*No Oil*	57.26	--	57.57	*No Oil*	57.57	--	60.51	*No Oil*	60.51
	MW-801A	18.5	66.44		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-802A	18.3	66.00		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-803A	16.1	65.84		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-804A	17.5	66.69		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-805A	14.9	67.42		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-809A	17	65.16		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-810A	17	65.24		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-811A	16	65.41		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-812A	19	65.36		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-813A	13.3	61.18		*Not Installed*				*Not Installed*				*Not Installed*		
Bedrock	CP-1B	17.4	67.72		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-3B	19	67.70	54.08	53.79	0.29	54.04	53.52	53.10	0.42	53.47	54.10	52.70	1.40	53.92
	CP-4B	22.7	67.80		*Not Installed*				*Not Installed*				*Not Installed*		
	CP-8B	22.9	67.62	55.49	55.40	0.09	55.48	52.10	52.06	0.04	52.09	52.42	52.37	0.05	52.41
	CP-9B	26.8	67.62	53.21	53.15	0.06	53.20	52.42	52.41	0.01	52.42	52.82	52.77	0.05	52.81
	CP-11B	22.9	67.44	53.14	49.59	3.55	52.68	52.74	49.32	3.42	52.30	52.79	52.04	0.75	52.69
	CP-14B	24	67.55	53.00	52.95	0.05	52.99	52.12	52.11	0.01	52.12	54.50	54.40	0.10	54.49
	CP-16B	22.8	67.53	52.70	51.35	1.35	52.52	52.68	48.53	4.15	52.14	52.63	52.43	0.20	52.60
	CP-18B	27	67.49	53.04	53.01	0.03	53.04	52.71	52.70	0.01	52.71	53.09	53.08	0.01	53.09
	CP-20B	24.45	67.75	52.80	52.79	0.01	52.80	--	52.43	*No Oil*	52.43	--	52.86	*No Oil*	52.86
	CP-21B	25.8	67.62	--	56.50	*No Oil*	56.50	--	56.47	*No Oil*	56.47	--	57.20	*No Oil*	57.20
	CP-22B	29.1	67.58	--	53.68	*No Oil*	53.68	--	54.38	*No Oil*	54.38	--	55.30	*No Oil*	55.30
	CP-23B	23.5	67.51	52.61	52.51	0.10	52.60	52.22	52.21	0.01	52.22	52.73	52.71	0.02	*52.73*

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				July 26, 2007				*November 1, 2007*				*February 8, 2008*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	CP-24B	25.7	67.51	--	52.60	*No Oil*	52.60	--	52.19	*No Oil*	52.19	--	52.71	*No Oil*	52.71
	CP-25B	26.1	67.62	--	52.62	*No Oil*	52.62	--	52.27	*No Oil*	52.27	--	52.82	*No Oil*	52.82
	CP-26B	26	67.42	--	52.87	*No Oil*	52.87	--	52.32	*No Oil*	52.32	--	52.75	*No Oil*	52.75
	CP-27B	24	67.54	--	52.97	*No Oil*	52.97	--	52.04	*No Oil*	52.04	--	54.44	*No Oil*	54.44
	CP-28B	26.5	66.83	55.48	53.98	1.50	55.29	*Filled with coolant from machine leak*				52.08	50.93	1.15	51.93
	MW-1B	22.8	63.63	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-2B	32.9	61.50	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-4B	23.5	65.20	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-5B	24.5	67.18	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-6B	20.6	66.84	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-102B	21.1	67.69	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-401B	29.8	67.33	53.04	53.02	0.02	53.04	52.45	52.42	0.03	52.45	52.91	52.88	0.03	52.91
	MW-409B	24.9	64.27	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-806B	27.8	67.56	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-808B	22.3	71.16	*Not Installed*				*Not Installed*				*Not Installed*			
	T-1B	39.3	67.55	--	60.30	*No Oil*	60.30	--	60.30	*No Oil*	60.30	--	61.55	*No Oil*	61.55

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				June 12, 2008				August 1, 2008				October 7, 2008			
Media	*Well No.*	*Installed Depth of Well* (Feet BGS)	*Reference Point Elevation* (Feet)	*Fluid Surface Elevation* (Feet)	*Water Surface Elevation* (Feet)	*Observed Oil Thickness* (Feet)	*Corrected Water Level Elevation* (Feet)	*Fluid Surface Elevation* (Feet)	*Water Surface Elevation* (Feet)	*Observed Oil Thickness* (Feet)	*Corrected Water Level Elevation* (Feet)	*Fluid Surface Elevation* (Feet)	*Water Surface Elevation* (Feet)	*Observed Oil Thickness* (Feet)	*Corrected Water Level Elevation* (Feet)
Fill	CP-1	8	67.58		Dry				Dry			--	63.58	No Oil	63.58
	CP-2	8.5	67.52	--	59.89	No Oil	59.89	--	59.90	No Oil	59.90	--	59.87	No Oil	59.87
	CP-4	8.4	67.59		Dry				Dry				Dry		
	CP-7	8.3	67.31	--	59.01	No Oil	59.01	--	58.97	No Oil	58.97	--	59.02	No Oil	59.02
	CP-8	8	67.25	61.95	61.93	0.02	61.95	61.99	61.96	0.03	61.99	62.01	61.95	0.06	62.00
	CP-9	8.5	67.64	61.63	61.12	0.51	61.56	61.58	61.12	0.46	61.52	61.53	60.94	0.59	61.45
	CP-13	8.9	67.58	61.58	--	2.90	--	61.62	--	2.94	--	61.66	--	2.98	--
	CP-14	10	66.63	59.13	--	2.50	--	60.23	--	3.60	--	61.33	--	4.70	--
	CP-23	6	67.27	--	62.47	No Oil	62.47	--	62.45	No Oil	62.45	--	62.19	No Oil	62.19
	CP-24	7	67.50	--	61.55	No Oil	61.55	--	62.07	No Oil	62.07	--	61.99	No Oil	61.99
	CP-25	7	67.40	--	61.45	No Oil	61.45		Dry			--	61.32	No Oil	61.32
	CP-26	8	67.09	62.57	62.52	0.05	62.56	61.69	61.43	0.26	61.66	61.39	61.09	0.30	61.35
	CP-27	7	67.41	--	61.33	No Oil	61.33	--	60.53	No Oil	60.53	--	61.18	No Oil	61.18
	CP-28	8.5	67.43	61.63	--	2.70	--	61.80	--	2.87	--	61.75	--	2.82	--
	CP-29	8	67.58		Not Installed				Not Installed				Not Installed		
	CP-30	7	67.58		Not Installed				Not Installed				Not Installed		
	CP-31	9.8	67.75		Not Installed				Not Installed				Not Installed		
	CP-32	9	67.45		Not Installed				Not Installed				Not Installed		
	CP-33	9	67.46		Not Installed				Not Installed				Not Installed		
	CP-34	8.5	67.17		Not Installed				Not Installed				Not Installed		
	M-1	10	66.97	58.13	--	1.16	--	58.25	--	1.28	--	59.52	--	2.55	--
	M-2	10.3	67.20	--	59.10	No Oil	59.10	57.94	57.93	0.01	57.94	--	58.30	No Oil	58.30
	M-3	11	67.24	58.34	--	2.10	--	58.62	--	2.38	--	59.89	--	3.65	--
	MW-3	11	70.64		Dry				Dry				Dry		
	MW-4	11	64.92	--	62.17	No Oil	62.17	--	62.10	No Oil	62.10	--	59.42	No Oil	59.42
	MW-101	6.4	67.62		Dry				Dry				Dry		
	MW-102	13.5	67.83	--	61.63	No Oil	61.63	--	61.78	No Oil	61.78	--	61.53	No Oil	61.53
	MW-103	11.5	67.85	57.08	56.67	0.41	57.03	57.12	56.67	0.45	57.06	57.07	--	0.72	--
	MW-204	11	66.45	--	63.06	No Oil	63.06	--	62.79	No Oil	62.79	--	62.40	No Oil	62.40
	MW-205	11	67.13	--	60.48	No Oil	60.48	--	60.48	No Oil	60.48	--	60.38	No Oil	60.38
	MW-300	6.8	67.45	--	61.85	No Oil	61.85	--	61.73	No Oil	61.73	--	61.73	No Oil	61.73
	MW-301	6.5	67.62	--	60.61	No Oil	60.61		Dry				Dry		
	MW-303	7.4	67.60	--	61.02	No Oil	61.02		Dry			--	60.68	No Oil	60.68
	MW-306	7.5	67.63	61.78	--	1.65	--	61.19	--	1.06	--	61.13	--	1.00	--
	MW-309	9.5	67.67	61.17	--	3.00	--	61.39	--	3.22	--	61.47	--	3.30	--
	MW-401	7	67.47	61.06	--	0.59	--	61.16	--	0.69	--	61.09	--	0.62	--
	MW-403	7	67.84		Dry				Dry				Dry		
	MW-405	7	65.95	--	62.73	No Oil	62.73	--	62.78	No Oil	62.78	--	62.75	No Oil	62.75

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

Media	Well No.	Installed Depth of Well (Feet BGS)	Reference Point Elevation (Feet)	June 12, 2008				August 1, 2008				October 7, 2008			
				Fluid Surface Elevation (Feet)	Water Surface Elevation (Feet)	Observed Oil Thickness (Feet)	Corrected Water Level Elevation (Feet)	Fluid Surface Elevation (Feet)	Water Surface Elevation (Feet)	Observed Oil Thickness (Feet)	Corrected Water Level Elevation (Feet)	Fluid Surface Elevation (Feet)	Water Surface Elevation (Feet)	Observed Oil Thickness (Feet)	Corrected Water Level Elevation (Feet)
	MW-407	7	67.42	--	60.30	No Oil	60.30	--	60.23	No Oil	60.23	--	60.23	No Oil	60.23
	MW-409/R	7	64.37	--	64.14	No Oil	64.14	--	64.27	No Oil	64.27		Inaccessible		
	MW-807	7	67.75		Not Installed				Not Installed				Not Installed		
	T-1	15	67.40	56.49	55.30	1.19	56.34	56.48	55.22	1.26	56.32	56.62	55.17	4.22	58.84
Clay	B-1	16.5	67.46	52.22	--	1.26	--	52.06	--	1.10	--	52.66	--	1.70	--
	B-2	17.4	67.37	52.25	50.97	1.28	52.08	52.51	51.42	1.09	52.37	52.94	52.89	0.05	52.93
	CP-2A	15.3	67.77	55.89	55.61	0.28	55.85	55.81	55.74	0.07	55.80	56.07	56.05	0.02	56.07
	CP-4A	17	67.64	54.42	53.98	0.44	54.36	55.04	54.64	0.40	54.99	55.98	55.44	0.54	55.91
	CP-7A	16.1	67.32	52.06	--	0.84	--	51.87	--	0.65	--	51.95	--	0.73	--
	CP-8A	16	67.38	54.71	54.66	0.05	54.70	55.15	55.13	0.02	55.15	55.20	55.19	0.01	55.20
	CP-11A	16	66.94	54.59	54.57	0.02	54.59	53.38	53.37	0.01	53.38	54.52	54.49	0.03	54.52
	CP-12A	16.2	67.51	--	55.11	No Oil	55.11	--	54.86	No Oil	54.86	--	54.69	No Oil	54.69
	CP-13A	18.1	67.70	52.86	52.70	0.16	52.84	52.47	52.39	0.08	52.46	53.66	53.44	0.22	53.63
	CP-14A	16.2	67.35	52.55	51.25	1.30	52.38	53.32	52.07	1.25	53.16	53.48	52.04	1.44	53.29
	CP-14AR	16.7	67.52	52.74	50.87	1.87	52.50	53.12	51.12	2.00	52.86	52.87	51.76	1.11	52.73
	CP-15A	17	67.61	52.83	52.36	0.47	52.77	52.80	52.56	0.24	52.77	53.10	52.82	0.28	53.06
	CP-17A	16.3	67.49	53.74	53.25	0.49	53.68	52.98	52.97	0.01	52.98	52.91	52.90	0.01	52.91
	CP-19A	16.8	67.55	52.73	--	1.98	--	52.91	--	2.16	--	53.07	--	2.32	--
	CP-24A	18	67.59	58.80	57.70	1.10	58.66	57.93	57.92	0.01	57.93	57.77	57.74	0.03	57.77
	CP-25A	18	67.42	55.54	55.53	0.01	55.54	--	55.73	No Oil	55.73	55.97	55.96	0.01	55.97
	CP-26A	16	67.53	58.37	58.36	0.01	58.37	56.43	55.97	0.46	56.37	57.73	57.05	0.68	57.64
	CP-27A	16	67.34	56.91	56.71	0.20	56.88	56.97	56.93	0.04	56.96	57.04	56.86	0.18	57.02
	CP-31A	17	67.86		Not Installed				Not Installed				Not Installed		
	CP-32A	17	67.60		Not Installed				Not Installed				Not Installed		
	CP-34A	17.9	67.54		Not Installed				Not Installed				Not Installed		
	GP-03	16.8	67.64	--	62.55	No Oil	62.55	--	61.97	No Oil	61.97	--	61.61	No Oil	61.61
	GP-06	17	67.71	--	62.00	No Oil	62.00	--	61.81	No Oil	61.81	--	59.74	No Oil	59.74
	GP-08	16	67.79	56.34	56.29	0.05	56.33	55.80	55.37	0.43	55.74	55.78	55.67	0.11	55.77
	GP-09	16.8	67.69	55.51	54.99	0.52	55.44	57.29	57.28	0.01	57.29	56.49	56.48	0.01	56.49
	GP-12	16.7	67.59	57.74	--	6.85	--	58.86	--	7.97	--	58.46	51.78	6.68	57.59
	M-1A	18.3	67.47	52.71	52.37	0.34	52.67	52.75	52.59	0.16	52.73	52.97	52.80	0.17	52.95
	M-2A	18	67.22	52.64	51.92	0.72	52.55	52.62	52.40	0.22	52.59	53.21	53.20	0.01	53.21
	M-3A	16.7	67.60		Dry			Dry				--	51.40	No Oil	51.40
	MW-1A	16.1	63.27	--	57.67	No Oil	57.67	--	57.74	No Oil	57.74	--	54.87	No Oil	54.87
	MW-2A	13.1	61.08	--	52.05	No Oil	52.05	--	51.66	No Oil	51.66	--	51.78	No Oil	51.78
	MW-3A	20.7	65.91	--	58.59	No Oil	58.59	--	58.29	No Oil	58.29	--	58.33	No Oil	58.33
	MW-4A	17.2	65.10	--	50.65	No Oil	50.65	--	50.68	No Oil	50.68	--	50.58	No Oil	50.58

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				June 12, 2008				*August 1, 2008*				*October 7, 2008*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-6A	8.8	66.96	--	59.44	*No Oil*	59.44	--	59.30	*No Oil*	59.30	--	60.05	*No Oil*	60.05
	MW-106	11.5	66.66	--	60.41	*No Oil*	60.41	--	60.04	*No Oil*	60.04	--	60.31	*No Oil*	60.31
	MW-107/R	12.6	65.42	--	62.12	*No Oil*	62.12	--	61.86	*No Oil*	61.86	--	61.62	*No Oil*	61.62
	MW-300A	19.6	67.55	--	56.93	*No Oil*	56.93	--	57.15	*No Oil*	57.15	--	56.75	*No Oil*	56.75
	MW-305R	17.1	67.33	55.45	54.09	1.36	55.27	55.31	54.24	1.07	55.17	56.71	54.32	2.39	56.40
	MW-307	18.5	67.85	53.63	52.85	0.78	53.53	54.52	53.39	1.13	54.37	54.45	53.74	0.71	54.36
	MW-308	17.5	67.63	52.97	50.99	1.98	52.71	53.01	52.68	0.33	52.97	53.65	--	3.52	--
	MW-309A	16.8	67.49	53.31	52.64	0.67	53.22	53.34	52.81	0.53	53.27	53.33	52.99	0.34	53.29
	MW-400	18.8	67.58	52.16	49.76	2.40	51.85	54.15	49.63	4.52	53.56	58.68	--	9.90	--
	MW-402/R	14	67.50		*Dry*			*Dry*				53.95	--	0.45	--
	MW-404	16.5	65.99	50.73	50.28	0.45	50.67	50.94	50.36	0.58	50.86	50.58	50.00	0.58	50.50
	MW-406	17.6	67.20	--	53.80	*No Oil*	53.80	53.59	53.58	0.01	53.59	53.55	53.52	0.03	53.55
	MW-408/R	12.5	64.36	--	58.78	*No Oil*	58.78	--	57.16	*No Oil*	57.16	--	57.76	*No Oil*	57.76
	MW-801A	18.5	66.44	--	59.21	*No Oil*	59.21	--	59.07	*No Oil*	59.07	--	59.18	*No Oil*	59.18
	MW-802A	18.3	66.00	50.50	50.40	0.10	50.49	50.58	50.47	0.11	50.57	50.35	49.99	0.36	50.30
	MW-803A	16.1	65.84	50.71	49.95	0.76	50.61	50.85	49.96	0.89	50.73	50.49	49.99	0.50	50.43
	MW-804A	17.5	66.69	--	53.06	*No Oil*	53.06	--	53.12	*No Oil*	53.12	--	53.59	*No Oil*	53.59
	MW-805A	14.9	67.42		*Dry*			--	53.07	*No Oil*	53.07	--	53.47	*No Oil*	53.47
	MW-809A	17	65.16		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-810A	17	65.24		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-811A	16	65.41		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-812A	19	65.36		*Not Installed*				*Not Installed*				*Not Installed*		
	MW-813A	13.3	61.18		*Not Installed*				*Not Installed*				*Not Installed*		
Bedrock	CP-1B	17.4	67.72	55.62	53.30	2.32	55.32	55.40	55.17	0.23	55.37	55.71	53.80	1.91	55.46
	CP-3B	19	67.70	53.45	53.43	0.02	53.45	53.53	52.56	0.97	53.40	54.00	52.80	1.20	53.84
	CP-4B	22.7	67.80	52.58	51.62	0.96	52.46	52.78	51.10	1.68	52.56	53.20	51.70	1.50	53.01
	CP-8B	22.9	67.62	52.06	51.98	0.08	52.05	52.06	52.05	0.01	52.06	52.84	52.80	0.04	52.83
	CP-9B	26.8	67.62	52.52	51.41	1.11	52.38	52.41	52.18	0.23	52.38	53.00	52.69	0.31	52.96
	CP-11B	22.9	67.44	52.24	51.49	0.75	52.14	52.55	51.04	1.51	52.35	52.59	52.54	0.05	52.58
	CP-14B	24	67.55	52.09	52.07	0.02	52.09	52.10	52.09	0.01	52.10	52.88	52.87	0.01	52.88
	CP-16B	22.8	67.53	52.03	51.93	0.10	52.02	52.20	52.12	0.08	52.19	52.42	52.31	0.11	52.41
	CP-18B	27	67.49	52.50	52.47	0.03	52.50	--	52.65	*No Oil*	52.65	--	52.87	*No Oil*	52.87
	CP-20B	24.45	67.75	52.35	52.29	0.06	52.34	52.64	52.63	0.01	52.64	52.88	52.87	0.01	52.88
	CP-21B	25.8	67.62	56.32	56.22	0.10	56.31	--	56.82	*No Oil*	56.82	--	56.80	*No Oil*	56.80
	CP-22B	29.1	67.58	--	54.88	*No Oil*	54.88	--	54.93	*No Oil*	54.93	--	54.78	*No Oil*	54.78
	CP-23B	23.5	67.51	52.22	52.21	0.01	52.22	52.24	52.23	0.01	52.24	--	52.47	*No Oil*	52.47

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				June 12, 2008				*August 1, 2008*				*October 7, 2008*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	CP-24B	25.7	67.51	--	52.41	*No Oil*	52.41	--	52.50	*No Oil*	52.50	--	52.78	*No Oil*	52.78
	CP-25B	26.1	67.62	--	52.47	*No Oil*	52.47	--	52.56	*No Oil*	52.56	--	52.80	*No Oil*	52.80
	CP-26B	26	67.42	--	52.52	*No Oil*	52.52	--	52.61	*No Oil*	52.61	--	53.01	*No Oil*	53.01
	CP-27B	24	67.54	--	52.31	*No Oil*	52.31	--	52.34	*No Oil*	52.34	--	53.07	*No Oil*	53.07
	CP-28B	26.5	66.83	52.13	52.12	0.01	52.13	--	52.05	*No Oil*	52.05	--	53.11	*No Oil*	53.11
	MW-1B	22.8	63.63	--	49.57	*No Oil*	49.57	--	49.73	*No Oil*	49.73	--	49.47	*No Oil*	49.47
	MW-2B	32.9	61.50	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-4B	23.5	65.20	50.10	49.69	0.41	50.05	50.20	49.70	0.50	50.14	49.98	49.64	0.34	49.94
	MW-5B	24.5	67.18	--	55.69	*No Oil*	55.69	--	60.18	*No Oil*	60.18	--	59.73	*No Oil*	59.73
	MW-6B	20.6	66.84	--	58.62	*No Oil*	58.62	--	58.46	*No Oil*	58.46	--	58.64	*No Oil*	58.64
	MW-102B	21.1	67.69	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-401B	29.8	67.33	52.35	52.33	0.02	52.35	52.45	52.44	0.01	52.45	52.85	52.84	0.01	52.85
	MW-409B	24.9	64.27	--	52.78	*No Oil*	52.78	--	52.78	*No Oil*	52.78	--	51.22	*No Oil*	51.22
	MW-806B	27.8	67.56	*Not Installed*				*Not Installed*				*Not Installed*			
	MW-808B	22.3	71.16	*Not Installed*				*Not Installed*				*Not Installed*			
	T-1B	39.3	67.55	--	60.69	*No Oil*	60.69	--	60.88	*No Oil*	60.88	--	60.35	*No Oil*	60.35

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 7, 2008				January 21, 2009				March 23, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
Fill	CP-1	8	67.58	--	63.28	*No Oil*	63.28	--	60.84	*No Oil*	60.84			*Dry*	
	CP-2	8.5	67.52	--	59.62	*No Oil*	59.62	--	59.38	*No Oil*	59.38	--	59.87	*No Oil*	59.87
	CP-4	8.4	67.59			*Dry*			*Dry*					*Dry*	
	CP-7	8.3	67.31	--	58.94	*No Oil*	58.94	--	59.02	*No Oil*	59.02			*Dry*	
	CP-8	8	67.25	61.95	61.65	0.30	61.91	61.96	61.95	0.01	61.96	62.1	61.85	0.25	62.07
	CP-9	8.5	67.64	61.47	60.49	0.98	61.34	62.04	61.49	0.55	61.97	62.4	62.04	0.34	62.34
	CP-13	8.9	67.58	61.60	--	2.92	--	61.53	--	2.85	--	61.78	--	3.10	--
	CP-14	10	66.63	61.33	57.62	3.71	60.85	61.23	--	4.60	--	61.5	57.58	3.94	61.01
	CP-23	6	67.27	--	62.25	*No Oil*	62.25		*Dry*					*Dry*	
	CP-24	7	67.50	--	61.84	*No Oil*	61.84	60.78	60.77	0.01	60.78	--	60.82	*No Oil*	60.82
	CP-25	7	67.40	--	61.30	*No Oil*	61.30	--	61.30	*No Oil*	61.30	--	61.84	*No Oil*	61.84
	CP-26	8	67.09	61.19	61.18	0.01	61.19	61.49	59.65	1.84	61.25	61.0	60.70	0.31	60.97
	CP-27	7	67.41	--	61.30	*No Oil*	61.30	--	61.46	*No Oil*	61.46	--	61.19	*No Oil*	61.19
	CP-28	8.5	67.43	61.93	--	3.00	--	62.53	--	3.60	--	61.89	--	2.96	--
	CP-29	8	67.58			*Not Installed*			*Not Installed*					*Dry*	
	CP-30	7	67.58			*Not Installed*			*Not Installed*					*Dry*	
	CP-31	9.8	67.75			*Not Installed*			*Not Installed*			--	59.44	*No Oil*	59.44
	CP-32	9	67.45			*Not Installed*			*Not Installed*					*Dry*	
	CP-33	9	67.46			*Not Installed*			*Not Installed*					*Dry*	
	CP-34	8.5	67.17			*Not Installed*			*Not Installed*					*Dry*	
	M-1	10	66.97	60.17	--	3.20	--	60.97	--	4.00	--	61.29	--	4.32	--
	M-2	10.3	67.20	--	58.30	*No Oil*	58.30	--	57.91	*No Oil*	57.91	--	57.60	*No Oil*	57.60
	M-3	11	67.24	60.04	--	3.80	--	59.84	--	3.60	--	59.99	--	3.75	--
	MW-3	11	70.64	--	58.44	*No Oil*	58.44		*Inaccessible*			--	58.15	*No Oil*	58.15
	MW-4	11	64.92	--	62.72	*No Oil*	62.72		*Inaccessible*			--	63.07	*No Oil*	63.07
	MW-101	6.4	67.62			*Dry*			*Dry*					*Dry*	
	MW-102	13.5	67.83	--	61.91	*No Oil*	61.91	--	61.77	*No Oil*	61.77	--	61.69	*No Oil*	61.69
	MW-103	11.5	67.85	57.15	56.70	0.45	57.09	57.00	--	0.65	--	57.2	57.00	0.19	57.17
	MW-204	11	66.45	--	62.45	*No Oil*	62.45		*Inaccessible*			--	63.34	*No Oil*	63.34
	MW-205	11	67.13	--	60.63	*No Oil*	60.63	--	60.21	*No Oil*	60.21	--	56.93	*No Oil*	56.93
	MW-300	6.8	67.45	--	61.53	*No Oil*	61.53	--	61.46	*No Oil*	61.46	--	61.75	*No Oil*	61.75
	MW-301	6.5	67.62	--	60.53	*No Oil*	60.53		*Dry*					*Dry*	
	MW-303	7.4	67.60	--	60.66	*No Oil*	60.66		*Dry*			--	61.25	*No Oil*	61.25
	MW-306	7.5	67.63	61.08	59.99	1.09	60.94	60.94	--	0.81	--	61.23	--	1.10	--
	MW-309	9.5	67.67	61.39	--	3.22		61.37	--	3.20	--	5.90	7.49	1.59	61.56
	MW-401	7	67.47	60.97	60.79	0.18	60.95	61.05	--	0.58	--	61.26	--	0.79	--
	MW-403	7	67.84			*Dry*			*Dry*					*Dry*	
	MW-405	7	65.95	--	62.65	*No Oil*	62.65		*Inaccessible*			--	62.84	*No Oil*	62.84

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 7, 2008				January 21, 2009				March 23, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-407	7	67.42	60.26	60.25	0.01	60.26	--	60.23	*No Oil*	60.23	60.6	60.47	0.10	60.56
	MW-409/R	7	64.37		*Inaccessible*				*Inaccessible*			--	63.52	*No Oil*	63.52
	MW-807	7	67.75		*Not Installed*				*Not Installed*				*Dry*		
	T-1	15	67.40	56.51	54.72	1.79	56.28	56.30	53.90	2.40	55.99	56.6	53.30	3.29	56.16
Clay	B-1	16.5	67.46	52.33	--	1.37	--	52.65	--	1.19	--	53.19	--	2.23	--
	B-2	17.4	67.37	52.62	50.88	1.74	52.39	53.12	50.96	2.16	52.84	53.6	51.17	2.40	53.26
	CP-2A	15.3	67.77	55.99	55.87	0.12	55.97	55.42	54.92	0.50	55.36	55.2	54.62	0.60	55.14
	CP-4A	17	67.64	55.62	54.90	0.72	55.53	55.04	54.69	0.35	54.99	55.3	54.74	0.55	55.22
	CP-7A	16.1	67.32	52.04	--	0.82	--	52.82	52.37	0.45	52.76	53.1	52.50	0.60	53.02
	CP-8A	16	67.38	54.73	54.72	0.01	54.73	55.78	55.77	0.01	55.78	57.0	56.58	0.45	56.97
	CP-11A	16	66.94	54.14	54.12	0.02	54.14	53.14	53.13	0.01	53.14	--	53.39	*No Oil*	53.39
	CP-12A	16.2	67.51	--	54.46	*No Oil*	54.46	--	54.21	*No Oil*	54.21	--	55.17	*No Oil*	55.17
	CP-13A	18.1	67.70	53.77	52.98	0.79	53.67	53.70	53.69	0.01	53.70	54.6	54.39	0.16	54.53
	CP-14A	16.2	67.35	53.87	52.02	1.85	53.63	54.15	52.06	2.09	53.88	54.7	51.75	2.99	54.35
	CP-14AR	16.7	67.52	52.57	52.42	0.15	52.55	52.17	50.73	1.44	51.98	52.7	51.07	1.58	52.44
	CP-15A	17	67.61	53.01	52.63	0.38	52.96	52.91	52.61	0.30	52.87	52.9	52.40	0.49	52.83
	CP-17A	16.3	67.49	52.79	52.69	0.10	52.78	53.99	53.98	0.01	53.99	54.1	53.99	0.09	54.07
	CP-19A	16.8	67.55	52.80	--	2.05	--	52.50	51.36	1.14	52.35	53.06	--	2.31	--
	CP-24A	18	67.59	57.05	57.04	0.01	57.05	55.40	55.39	0.01	55.40	54.9	54.79	0.09	54.87
	CP-25A	18	67.42	55.56	55.55	0.01	55.56	54.48	54.47	0.01	54.48	--	54.39	*No Oil*	54.39
	CP-26A	16	67.53	57.23	56.58	0.65	57.15	54.53	54.13	0.40	54.48	54.8	53.08	1.70	54.56
	CP-27A	16	67.34	56.89	56.64	0.25	56.86	56.54	56.52	0.02	56.54	56.8	56.54	0.30	56.80
	CP-31A	17	67.86		*Not Installed*				*Not Installed*			--	54.31	*No Oil*	54.31
	CP-32A	17	67.60		*Not Installed*				*Not Installed*			--	54.05	*No Oil*	54.05
	CP-34A	17.9	67.54		*Not Installed*				*Not Installed*			--	53.54	*No Oil*	53.54
	GP-03	16.8	67.64	--	61.92	*No Oil*	61.92	--	57.34	*No Oil*	57.34	--	55.62	*No Oil*	55.62
	GP-06	17	67.71	--	60.83	*No Oil*	60.83	--	55.71	*No Oil*	55.71	--	54.99	*No Oil*	54.99
	GP-08	16	67.79	55.59	55.54	0.05	55.58	55.59	55.42	0.17	55.57	55.3	54.03	1.22	55.09
	GP-09	16.8	67.69	55.50	55.49	0.01	55.50	54.79	54.54	0.25	54.76	54.6	54.62	0.02	54.64
	GP-12	16.7	67.59	60.61	54.09	6.52	59.76		*Inaccessible*			59.0	52.44	6.56	58.15
	M-1A	18.3	67.47	52.77	52.72	0.05	52.76	52.67	52.07	0.60	52.59	52.7	52.13	0.59	52.64
	M-2A	18	67.22	52.72	52.27	0.45	52.66	52.62	52.37	0.25	52.59	52.9	51.81	1.10	52.77
	M-3A	16.7	67.60	--	51.30	*No Oil*	51.30	--	51.46	*No Oil*	51.46	--	51.30	*No Oil*	51.30
	MW-1A	16.1	63.27	--	57.95	*No Oil*	57.95		*Inaccessible*			--	58.41	*No Oil*	58.41
	MW-2A	13.1	61.08	--	51.96	*No Oil*	51.96		*Inaccessible*			--	53.38	*No Oil*	53.38
	MW-3A	20.7	65.91	--	58.51	*No Oil*	58.51		*Inaccessible*			--	58.74	*No Oil*	58.74
	MW-4A	17.2	65.10	--	50.70	*No Oil*	50.70		*Inaccessible*			--	50.69	*No Oil*	50.69

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 7, 2008				January 21, 2009				March 23, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-6A	8.8	66.96	--	60.21	*No Oil*	60.21		*Inaccessible*			--	60.41	*No Oil*	60.41
	MW-106	11.5	66.66	--	60.44	*No Oil*	60.44		*Inaccessible*			--	60.25	*No Oil*	60.25
	MW-107/R	12.6	65.42	--	62.37	*No Oil*	62.37		*Inaccessible*			--	61.82	*No Oil*	61.82
	MW-300A	19.6	67.55	--	56.60	*No Oil*	56.60	--	56.60	*No Oil*	56.60	--	56.78	*No Oil*	56.78
	MW-305R	17.1	67.33	56.53	54.13	2.40	56.22	56.28	53.58	2.70	55.93	56.7	53.49	3.22	56.29
	MW-307	18.5	67.85	54.00	52.88	1.12	53.85	55.25	54.03	1.22	55.09	56.3	52.60	3.74	55.85
	MW-308	17.5	67.63	53.48	--	3.35	--	53.01	51.13	1.88	52.77	53.2	51.05	2.18	52.95
	MW-309A	16.8	67.49	53.29	52.69	0.60	53.21	53.13	52.64	0.49	53.07	54.0	53.00	0.98	53.85
	MW-400	18.8	67.58	60.58	49.38	11.20	59.12	61.08	--	11.80	--	61.28	--	12.50	--
	MW-402/R	14	67.50	53.75	--	0.25	--	53.71	--	0.01	--	54.05	--	0.55	--
	MW-404	16.5	65.99	50.77	50.17	0.60	50.69		*Inaccessible*			51.1	50.04	1.05	50.95
	MW-406	17.6	67.20	53.23	53.22	0.01	53.23	--	53.20	*No Oil*	53.20	53.4	53.37	0.03	53.40
	MW-408/R	12.5	64.36	--	58.42	*No Oil*	58.42		*Inaccessible*			--	61.26	*No Oil*	61.26
	MW-801A	18.5	66.44	--	60.56	*No Oil*	60.56		*Inaccessible*			--	59.85	*No Oil*	59.85
	MW-802A	18.3	66.00	50.55	50.10	0.45	50.49		*Inaccessible*			50.8	50.05	0.75	50.70
	MW-803A	16.1	65.84	50.52	50.12	0.40	50.47		*Inaccessible*			50.87	--	1.13	--
	MW-804A	17.5	66.69	--	53.89	*No Oil*	53.89		*Inaccessible*			--	52.88	*No Oil*	52.88
	MW-805A	14.9	67.42	--	53.53	*No Oil*	53.53	--	53.62	*No Oil*	53.62	53.9	53.66	0.25	53.88
	MW-809A	17	65.16		*Not Installed*				*Not Installed*			--	59.86	*No Oil*	59.86
	MW-810A	17	65.24		*Not Installed*				*Not Installed*			--	59.97	*No Oil*	59.97
	MW-811A	16	65.41		*Not Installed*				*Not Installed*			--	50.71	*No Oil*	50.71
	MW-812A	19	65.36		*Not Installed*				*Not Installed*			--	54.91	*No Oil*	54.91
	MW-813A	13.3	61.18		*Not Installed*				*Not Installed*			--	53.22	*No Oil*	53.22
Bedrock	CP-1B	17.4	67.72	55.77	53.24	2.53	55.44	55.42	53.10	2.32	55.12	56.1	55.22	0.91	56.01
	CP-3B	19	67.70	53.70	52.55	1.15	53.55	53.45	52.60	0.85	53.34	54.1	52.45	1.64	53.88
	CP-4B	22.7	67.80	53.00	51.10	1.90	52.75	52.71	50.95	1.76	52.48	53.4	50.20	3.15	52.94
	CP-8B	22.9	67.62	52.37	52.27	0.10	52.36	52.02	52.01	0.01	52.02	52.5	52.40	0.06	52.45
	CP-9B	26.8	67.62	52.57	52.12	0.45	52.51	52.57	52.52	0.05	52.56	52.9	52.43	0.48	52.85
	CP-11B	22.9	67.44	52.64	50.09	2.55	52.31	52.44	49.39	3.05	52.04	52.8	49.38	3.46	52.39
	CP-14B	24	67.55	52.37	52.30	0.07	52.36	--	52.08	*No Oil*	52.08	--	52.45	*No Oil*	52.45
	CP-16B	22.8	67.53	52.23	52.03	0.20	52.20	51.85	51.81	0.04	51.84	52.3	52.15	0.16	52.29
	CP-18B	27	67.49	--	52.69	*No Oil*	52.69	--	52.31	*No Oil*	52.31	--	52.87	*No Oil*	52.87
	CP-20B	24.45	67.75	--	52.70	*No Oil*	52.70	--	52.10	*No Oil*	52.10	--	52.50	*No Oil*	52.50
	CP-21B	25.8	67.62	--	56.72	*No Oil*	56.72	--	56.32	*No Oil*	56.32	--	56.52	*No Oil*	56.52
	CP-22B	29.1	67.58	--	54.83	*No Oil*	54.83	--	54.60	*No Oil*	54.60	--	54.58	*No Oil*	54.58
	CP-23B	23.5	67.51	--	52.21	*No Oil*	52.21	--	51.91	*No Oil*	51.91	--	52.41	*No Oil*	52.41

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				November 7, 2008				*January 21, 2009*				*March 23, 2009*			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	CP-24B	25.7	67.51	--	52.56	*No Oil*	52.56	--	52.21	*No Oil*	52.21	--	52.50	*No Oil*	52.50
	CP-25B	26.1	67.62	--	52.62	*No Oil*	52.62	--	52.27	*No Oil*	52.27	--	52.47	*No Oil*	52.47
	CP-26B	26	67.42	--	52.72	*No Oil*	52.72	--	52.44	*No Oil*	52.44	--	52.71	*No Oil*	52.71
	CP-27B	24	67.54	--	52.64	*No Oil*	52.64	--	52.22	*No Oil*	52.22	--	52.44	*No Oil*	52.44
	CP-28B	26.5	66.83	52.98	52.95	0.03	52.98	--	53.02	*No Oil*	53.02	--	55.02	*No Oil*	55.02
	MW-1B	22.8	63.63	--	49.63	*No Oil*	49.63		*Inaccessible*			--	49.43	*No Oil*	49.43
	MW-2B	32.9	61.50		*Not Installed*				*Not Installed*			--	53.90	*No Oil*	53.90
	MW-4B	23.5	65.20	50.09	49.59	0.50	50.03		*Inaccessible*			50.8	47.58	3.17	50.34
	MW-5B	24.5	67.18	--	59.78	*No Oil*	59.78		*Inaccessible*			--	59.67	*No Oil*	59.67
	MW-6B	20.6	66.84	--	58.84	*No Oil*	58.84		*Inaccessible*			--	59.53	*No Oil*	59.53
	MW-102B	21.1	67.69		*Not Installed*				*Not Installed*			56.3	55.58	0.71	56.20
	MW-401B	29.8	67.33	52.58	52.55	0.03	52.58	52.32	52.31	0.01	52.32	--	52.84	*No Oil*	52.84
	MW-409B	24.9	64.27	--	52.89	*No Oil*	52.89		*Inaccessible*			--	52.97	*No Oil*	52.97
	MW-806B	27.8	67.56		*Not Installed*				*Not Installed*			--	57.51	*No Oil*	57.51
	MW-808B	22.3	71.16		*Not Installed*				*Not Installed*			--	54.11	*No Oil*	54.11
	T-1B	39.3	67.55	--	60.39	*No Oil*	60.39	--	60.25	*No Oil*	60.25	--	60.25	*No Oil*	60.25

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				May 18, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
Fill	CP-1	8	67.58			*Dry*	
	CP-2	8.5	67.52	--	59.86	*No Oil*	59.86
	CP-4	8.4	67.59			*Dry*	
	CP-7	8.3	67.31			*Dry*	
	CP-8	8	67.25	62.10	62.05	0.05	62.09
	CP-9	8.5	67.64	62.24	62.19	0.05	62.23
	CP-13	8.9	67.58	61.77	--	3.09	--
	CP-14	10	66.63	61.69	57.91	3.78	61.20
	CP-23	6	67.27			*Dry*	
	CP-24	7	67.50			*Dry*	
	CP-25	7	67.40			*Dry*	
	CP-26	8	67.09	61.01	60.98	0.03	61.01
	CP-27	7	67.41	--	61.03	*No Oil*	61.03
	CP-28	8.5	67.43	61.91	59.93	1.98	61.65
	CP-29	8	67.58			*Dry*	
	CP-30	7	67.58			*Dry*	
	CP-31	9.8	67.75	--	59.43	*No Oil*	59.43
	CP-32	9	67.45	--	58.85	*No Oil*	58.85
	CP-33	9	67.46			*Dry*	
	CP-34	8.5	67.17			*Dry*	
	M-1	10	66.97	61.39	--	4.42	--
	M-2	10.3	67.20			*Dry*	
	M-3	11	67.24	60.26	--	4.02	--
	MW-3	11	70.64			*Dry*	
	MW-4	11	64.92	--	62.73	*No Oil*	62.73
	MW-101	6.4	67.62			*Dry*	
	MW-102	13.5	67.83	--	61.60	*No Oil*	61.60
	MW-103	11.5	67.85	57.19	--	0.84	--
	MW-204	11	66.45	--	62.90	*No Oil*	62.90
	MW-205	11	67.13	60.13	59.53	0.60	60.05
	MW-300	6.8	67.45	--	61.83	*No Oil*	61.83
	MW-301	6.5	67.62			*Dry*	
	MW-303	7.4	67.60			*Dry*	
	MW-306	7.5	67.63	61.18	--	1.05	--
	MW-309	9.5	67.67	61.74	60.01	1.73	61.52
	MW-401	7	67.47	61.60	61.47	0.13	61.58
	MW-403	7	67.84			*Dry*	
	MW-405	7	65.95	--	62.71	*No Oil*	62.71

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				May 18, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-407	7	67.42	--	60.49	*No Oil*	60.49
	MW-409/R	7	64.37	--	61.94	*No Oil*	61.94
	MW-807	7	67.75			*Dry*	
	T-1	15	67.40	56.80	53.74	3.06	56.40
Clay	B-1	16.5	67.46	53.00	--	2.04	--
	B-2	17.4	67.37	53.40	51.42	1.98	53.14
	CP-2A	15.3	67.77	55.09	54.72	0.37	55.04
	CP-4A	17	67.64	55.62	55.29	0.33	55.58
	CP-7A	16.1	67.32	52.84	52.41	0.43	52.78
	CP-8A	16	67.38	57.02	57.00	0.02	57.02
	CP-11A	16	66.94	51.97	51.96	0.01	51.97
	CP-12A	16.2	67.51	--	56.16	*No Oil*	56.16
	CP-13A	18.1	67.70	54.35	54.25	0.10	54.34
	CP-14A	16.2	67.35	55.32	52.35	2.97	54.93
	CP-14AR	16.7	67.52	51.90	51.27	0.63	51.82
	CP-15A	17	67.61	52.84	52.63	0.21	52.81
	CP-17A	16.3	67.49	53.43	53.42	0.01	53.43
	CP-19A	16.8	67.55	53.12	51.57	1.55	52.92
	CP-24A	18	67.59	54.73	54.72	0.01	54.73
	CP-25A	18	67.42	53.40	53.39	0.01	53.40
	CP-26A	16	67.53	54.94	53.10	1.84	54.70
	CP-27A	16	67.34	56.96	56.83	0.13	56.94
	CP-31A	17	67.86	--	54.27	*No Oil*	54.27
	CP-32A	17	67.60	--	53.68	*No Oil*	53.68
	CP-34A	17.9	67.54	--	53.62	*No Oil*	53.62
	GP-03	16.8	67.64	--	55.55	*No Oil*	55.55
	GP-06	17	67.71	--	55.07	*No Oil*	55.07
	GP-08	16	67.79	55.06	--	3.27	--
	GP-09	16.8	67.69	54.39	54.38	0.01	54.39
	GP-12	16.7	67.59	60.13	54.44	5.69	59.39
	M-1A	18.3	67.47	52.95	52.71	0.24	52.92
	M-2A	18	67.22	52.99	52.30	0.69	52.90
	M-3A	16.7	67.60			*Dry*	
	MW-1A	16.1	63.27	--	58.26	*No Oil*	58.26
	MW-2A	13.1	61.08	--	52.50	*No Oil*	52.50
	MW-3A	20.7	65.91	--	58.52	*No Oil*	58.52
	MW-4A	17.2	65.10	--	50.57	*No Oil*	50.57

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				May 18, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	MW-6A	8.8	66.96	--	59.74	*No Oil*	59.74
	MW-106	11.5	66.66	--	59.09	*No Oil*	59.09
	MW-107/R	12.6	65.42	--	62.44	*No Oil*	62.44
	MW-300A	19.6	67.55	--	56.86	*No Oil*	56.86
	MW-305R	17.1	67.33	57.05	53.47	3.58	56.58
	MW-307	18.5	67.85	55.65	53.54	2.11	55.38
	MW-308	17.5	67.63	53.22	51.12	2.10	52.95
	MW-309A	16.8	67.49	54.70	54.12	0.58	54.62
	MW-400	18.8	67.58	61.46	--	12.68	--
	MW-402/R	14	67.50	54.07	--	0.57	--
	MW-404	16.5	65.99	14.95	15.84	0.89	50.92
	MW-406	17.6	67.20	13.95	13.96	0.01	53.25
	MW-408/R	12.5	64.36	--	61.17	*No Oil*	61.17
	MW-801A	18.5	66.44	--	59.38	*No Oil*	59.38
	MW-802A	18.3	66.00	50.71	49.82	0.89	50.59
	MW-803A	16.1	65.84	50.78	50.28	0.50	50.72
	MW-804A	17.5	66.69	--	52.77	*No Oil*	52.77
	MW-805A	14.9	67.42	54.02	54.01	0.01	54.02
	MW-809A	17	65.16	--	59.89	*No Oil*	59.89
	MW-810A	17	65.24	--	59.99	*No Oil*	59.99
	MW-811A	16	65.41	--	51.55	*No Oil*	51.55
	MW-812A	19	65.36	--	54.67	*No Oil*	54.67
	MW-813A	13.3	61.18	--	52.99	*No Oil*	52.99
Bedrock	CP-1B	17.4	67.72	56.13	53.41	2.72	55.78
	CP-3B	19	67.70	54.00	52.74	1.26	53.84
	CP-4B	22.7	67.80	53.36	49.80	3.56	52.90
	CP-8B	22.9	67.62	52.37	52.31	0.06	52.36
	CP-9B	26.8	67.62	52.80	52.20	0.60	52.72
	CP-11B	22.9	67.44	52.92	49.12	3.80	52.43
	CP-14B	24	67.55	52.42	52.38	0.04	52.41
	CP-16B	22.8	67.53	52.50	50.46	2.04	52.23
	CP-18B	27	67.49	--	52.87	*No Oil*	52.87
	CP-20B	24.45	67.75	--	52.50	*No Oil*	52.50
	CP-21B	25.8	67.62	--	56.44	*No Oil*	56.44
	CP-22B	29.1	67.58	--	54.61	*No Oil*	54.61
	CP-23B	23.5	67.51	--	52.46	*No Oil*	52.46

TABLE C.1

IRM OIL RECOVERY PHASE MEASUREMENTS NOVEMBER 2006 TO MAY 2009
AMERICAN AXLE PLANT SITE #915196
BUFFALO, NEW YORK

				May 18, 2009			
Media	*Well No.*	*Installed Depth of Well (Feet BGS)*	*Reference Point Elevation (Feet)*	*Fluid Surface Elevation (Feet)*	*Water Surface Elevation (Feet)*	*Observed Oil Thickness (Feet)*	*Corrected Water Level Elevation (Feet)*
	CP-24B	25.7	67.51	--	52.45	*No Oil*	52.45
	CP-25B	26.1	67.62	--	52.43	*No Oil*	52.43
	CP-26B	26	67.42	--	52.61	*No Oil*	52.61
	CP-27B	24	67.54	--	52.36	*No Oil*	52.36
	CP-28B	26.5	66.83	52.37	52.36	0.01	52.37
	MW-1B	22.8	63.63	--	49.41	*No Oil*	49.41
	MW-2B	32.9	61.50	--	53.93	*No Oil*	53.93
	MW-4B	23.5	65.20	50.48	49.79	0.69	50.39
	MW-5B	24.5	67.18	--	59.68	*No Oil*	59.68
	MW-6B	20.6	66.84	--	59.11	*No Oil*	59.11
	MW-102B	21.1	67.69	56.23	56.16	0.07	56.22
	MW-401B	29.8	67.33	52.77	52.76	0.01	52.77
	MW-409B	24.9	64.27	--	52.94	*No Oil*	52.94
	MW-806B	27.8	67.56	--	57.73	*No Oil*	57.73
	MW-808B	22.3	71.16	--	54.04	*No Oil*	54.04
	T-1B	39.3	67.55	--	60.39	*No Oil*	60.39

APPENDIX D

SAMPLING LOGS

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400241

Date: 11/13/06
Personnel: S McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CP-24B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 22.43'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 18'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol: 4.8 gal
Initial Depth to Water (ft): 15.08'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1018	400	15.12	.04	7.26	23.91	1.78	-191	4.21	121	0.6	
1023	500	15.12	.04	7.10	24.09	1.79	-239	.46	90.2	1.2	
1028	500	15.12	.04	7.06	24.15	1.78	-249	.41	84.70	1.7	
1033	450	15.13	.05	7.05	24.20	1.77	-257	.41	104.0	2.8	
1043	350	15.14	.06	7.04	24.21	1.75	-266	.38	77.7	3.2	
1048	460	15.14	.06	7.04	24.20	1.78	-271	.36	71.7	3.7	
1053	450	15.14	.06	7.04	24.20	1.76	-275	.34	77.6	4.2	
1058	400	15.14	.06	7.04	24.21	1.77	-276	.34	86.4	4.8	

Purged 5.0 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM semi-annual sampling
Ref. No.: 12635-03-410041

Date: 11/13/06 ~~1205~~ 1205
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CB-25 B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 25.58'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 22'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol: 6.8 gal
Initial Depth to Water (ft): 15.14'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1210	225	15.15	.01	7.70	24.09	1.36	-160	3.72	174	.20	
1215	470	15.17	.03	7.38	23.78	1.54	-241	.61	27.6	.80	
1220	460	15.17		7.15	23.82	1.63	-294	.36	15.4	1.60	
1225	460	15.17		7.10	23.92	1.68	-291	.39	37.1	2.1	
1230	330	15.17		7.08	23.95	1.71	-292	.44	26.4	2.5	
1235	350	15.17		7.07	23.91	1.69	-295	.37	24.1	2.95	
1240	350	15.17	↓	7.06	23.91	1.73	-298	.36	34.4	3.40	
1245	340	15.18	.04	7.06	23.96	1.76	-297	.37	31.1	4.05	
1250	330	15.18	.04	7.06	23.93	1.72	-298	.37	41.7	4.60	
1255	330	15.19	.05	7.06	23.88	1.73	-301	.33	41.3	5.10	
1305	480	15.21	.07	7.08	23.80	1.75	-305	.32	48.6	6.70	
1310	460	15.21	.07	7.08	23.81	1.76	-304	.28	45.8	7.20	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

Purged 7.2 gal

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/14/06 9:14
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CP-12A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 15.7'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 15.0'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 0.47 gal
Initial Depth to Water (ft): 12.83'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
9:19	115	13.1	.27	6.55	23.47	1.60	-81	1.75	3.1		
9:24	115	13.24	.41	6.71	24.74	1.63	-84	1.18	5.4		
9:29	125	13.42	.59	6.73	25.11	1.64	-88	.79	2.5		
9:34	125	13.52	.69	6.74	25.16	1.64	-94	.80	0.0		
9:39	100	13.67	.84	6.75	25.32	1.64	-92	.68	1.7		
9:44	120			6.76	25.68	1.62	-99	.55	0.0		
9:49	120	14.02	1.19	6.76	25.69	1.63	-99	.53	0.0	.80	
9:55	115	14.20	1.37	6.77	25.67	1.62	-102	.49	0.0		
9:59	115	14.40	1.57	6.76	25.70	1.62	-104	.49	0.0	1.0	

Purged 1.2 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03.40004.1

Date: 11/14/06 10:54
Personnel: S McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-106
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.3'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 8'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 0.80 gal
Initial Depth to Water (ft): 5.41'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1059	270	5.44	.03	6.92	17.46	2.16	-23	1.09	15		
1104	270	5.52	.11	6.81	17.91	3.05	-36	0.50	14.3		
1109	270	5.54	.13	6.78	17.89	3.82	-44	0.45	4.8	.6	
1114	140	5.55	.14	6.77	17.87	4.26	-60	.43	3.0	.9	
1119	235	5.61	.20	6.77	18.06	4.17	-66	.41	3.4	1.2	
1124	235	5.64	.23	6.76	18.05	4.45	-74	.41	1.6	1.5	
1129	235	5.67	.26	6.76	18.09	4.75	-81	.37	2.1	1.8	
1134	235	5.69	.28	6.76	18.10	4.87	-85	.36	2.8	2.10	
1139	200	5.67	.26	6.76	18.15	5.03	-89	.33	0.6	2.40	
1144	210	5.68	.27	6.76	18.16	5.05	-93	.32	0.3	2.70	
1149	210	5.68	.27	6.76	18.18	5.05	-95	.32	0.5	2.90	

Purged 2.90 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400241

Date: 11/14/06 12:46
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-107
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 7.35'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 5.3'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 1.09 gal
Initial Depth to Water (ft): 6.61'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged[4]
12:47	50	2.0	1.39	7.75	13.80	.388	46	7.09	129		
12:52	80	2.56	1.95	7.70	13.96	.358	50	6.93	136	.25	
13:02	80	3.49	2.88	7.65	14.09	.339	57	6.81	119	.50	
13:07	80	3.62	3.01	7.59	14.40	.332	58	6.19	85	.60	
13:12	80	3.71	3.10	7.53	14.19	.341	52	5.44	74.9	.70	
13:22	80	3.91	3.30	7.46	14.53	.354	47	4.98	60.6	.80	
13:27	80	4.02	3.41	7.44	14.45	.366	42	4.99	628	.90	
13:32	80	4.21	3.60	7.40	14.71	.369	32	4.96	575	1.00	
13:37	80	4.32	3.71	7.35	14.87	.403	20	4.68	476	1.10	
13:53	80	4.51	3.90	7.28	14.89	.358	-3	3.07	30.0	1.40	

Purged 1.50 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/15/06 8157
Personnel: S McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-408
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 11.9'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 8.5'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 1.11 gal
Initial Depth to Water (ft): 5.07'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged[4]
09:00	60	5.30	.23	6.94	16.91	11.3	-112	3.29	73.3		
9:05	60	5.70	.63	7.22	16.33	6.98	-124	.92	53.1		
9:10	115	5.81	.74	7.26	17.21	5.66	-130	.64	25.2		
9:15	115	6.03	.96	7.28	17.20	5.12	-136	.56	50.5		
9:20	110	6.30	1.23	7.28	17.22	5.30	-133	.50	46.9		
9:25	110	6.48	1.41	7.28	16.99	4.77	-136	.50	34.8	.60	
9:30	110	6.70	1.63	7.35	16.83	4.60	-143	.49	27.3		
9:35	110	6.89	1.82	7.39	16.84	4.69	-152	.46	27.6	.80	
9:40	110	7.26	2.19	7.42	16.89	4.38	-164	.49	21.8		
9:45	110	7.51	2.44	7.42	17.03	4.27	-157	.49	14.1	1.05	
9:50	110	7.61	2.54	7.45	16.87	4.16	-162	.46	14.8	1.15	
9:55	110	7.71	2.64	7.48	16.99	4.14	-165	.47	14.4		
1000	110	7.78	2.71	7.48	17.03	4.15	-166	.48	15.7	1.4	

Purged 1.5 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/15/06 10:45
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-409
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 6.54'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 4.6'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 1.02
Initial Depth to Water (ft): 0.28'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1050	155	.46	.18	7.05	15.89	13.8	-97	.98	84.4		
1055	155	.39	.11	7.13	14.56	11.1	-86	.64	45.2	.2	
1100	150	.48	.20	7.11	14.66	10.7	-84	.52	33.5	.45	
1105	150	.48	.20	7.13	14.36	10.4	-95	.47	22.5	.60	
1110	150	.47	.19	7.13	14.46	10.3	-100	.43	16.1	.80	
1115	150	.47	.19	7.14	14.52	10.3	-113	.43	13.4		
1120	150	.47	.19	7.16	14.53	10.0	-124	.43	8.1		
1125	150	.47	.19	7.18	14.53	9.8	-129	.41	8.4	1.40	
1130	155	.48	.20	7.25	14.50	9.1	-139	.40	2.3	1.60	
1135	155	.48	.20	7.34	14.33	6.22	-147	.40	2.9		
1140	155	.48	.20	7.39	14.26	5.69	-147	.41	3.4		
1145	155	.48	.20	7.44	14.44	5.13	-150	.42	1.8	2.25	
1150	155	.48	.20	7.42	14.32	5.14	-144	.42	2.3	2.40	
1155	155	.48	.20	7.44	14.50	4.73	-147	.44	1.9	2.60	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/15/06 10:45
Personnel: S. McEvoy
A. Falbo

Monitoring Well Data:

Well No.: MW-409
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 6.54
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 4.6'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 1.02 gal
Initial Depth to Water (ft): 0.28'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1200	155	.48	.20	7.54	14.17	4.51	-148	.42	9.7	2.75	
1205	155	.48	.20	7.54	14.14	4.34	-148	.41	2.0	2.95	
1210	155	.48	.20	7.55	14.13	4.33	-147	.41	2.6	3.15	
1215	155	.48	.20	7.54	14.18	4.32	-152	.42	1.8	3.30	

Purged 3.3 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= V_p/V_s.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 11/15/06 13:00
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-4A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 16.83
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 15.7
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: .41565 gal
Initial Depth to Water (ft): 14.28

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	3% Temperature °C	0.01 Conductivity (mS/cm)	10mV ORP (mV)	10% DO (mg/L)	10% Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1305	90	14.35	0.07	6.92	18.83	12.7	228	6.62	17.2		
1310	90	14.35	0.07	6.94	19.39	13.3	267	4.23	8.1	.15	
1315	90	14.36	0.08	6.95	19.58	13.5	274	3.95	4.1	.20	
1320	90	14.37	0.09	6.94	19.88	13.4	277	3.56	5.9		
1325	90	14.36	0.08	6.94	19.93	12.9	279	3.13	1.4	.40	
1330	105	14.37	0.09	6.92	20.34	11.5	276	2.45	0.0	.65	
1335	140	14.40	0.12	6.91	20.55	10.5	271	1.81	1.3	0.80	
1340	140	14.41	0.13	6.90	20.57	7.18	259	1.36	0.0		
1345	140	14.41	0.13	6.89	20.54	6.20	242	1.04	0.0		
1350	180	14.43	0.15	6.88	20.63	5.94	223	.77	0.0		
1355	180	14.44	0.16	6.88	20.52	5.36	192	0.60	0.0	1.80	
1400	180	14.45	0.17	6.87	20.31	4.88	169	0.50	0.0	1.90	
1405	180	14.45	0.17	6.87	20.54	4.52	145	0.45	0.0	2.15	
1410	210	14.48	0.20	6.87	20.56	4.26	138	.42	0.0	2.40	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

023

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 11/15/06 13:00
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-4A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 16.83
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 15.7'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: .416 gal
Initial Depth to Water (ft): 14.28'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_P (mL)	No. of Well Screen Volumes Purged[4]
1415	210	14.49	.21	6.87	20.51	4.12	81	.37	0.0	2.70	
1420	210	14.48	.20	6.87	20.44	3.76	47	.35	0.0	3.10	
1425	210	14.48	.20	6.87	20.49	3.51	37	.31	0.0	3.30	
1430	210	14.49	.21	6.87	20.37	3.36	28	.30		3.60	
1435	210	14.49	.21	6.87	20.40	3.26	22	.31		3.90	
1440	210	14.50	.22	6.86	20.38	3.17	18	.30		4.10	
1445	210	14.49	.21	6.86	20.30	3.10	13	.30		4.40	
1450	210	14.49	.21	6.86	20.26	3.09	12	.30		4.70	
1455	210	14.49	.21	6.86	20.24	3.08	11	.30	↓	4.95	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

Purged 4.95 gal

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/16/06 0815Z
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CP-26B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 26.27'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 21'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol 7.68
Initial Depth to Water (ft): 14.51'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
0859	110	14.74	0.23	7.39	23.68	1.37	-210	1.16	115		
0904	110	14.85	.34	7.47	23.70	1.40	-228	.62	109		
0909	110	14.92	.41	7.52	23.83	1.40	-228	.53	101		
0914	110	14.94	.43	7.52	23.86	1.40	-225	.60	95	.60	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = P*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= V_p/V_s.

Purged 0.7 gal

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-4xxx41

Date: 11/16/06 10:06
Personnel:

Monitoring Well Data:

Well No.: CP-27B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 22.3'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 20'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol: 4.82 gal
Initial Depth to Water (ft): 14.91'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1018	480	14.85	0.04	7.34	23.72	.888	-217	.43	93.5	1.6	
1023	380	14.85	↓	7.30	23.81	.886	-252	.40	35.6	2.2	
1028	340	14.85	↓	7.28	23.80	.883	-275	.39	29.7	2.7	
1033	440	14.86	0.05	7.25	23.73	.890	-296	.38	117.0		
1038	350	14.86	↓	7.22	23.81	.891	-303	.39	26.3	4.0	
1043	450	14.86	↓	7.20	23.79	.920	-309	.37	23.6	4.6	
1048	420	14.87	0.06	7.18	23.79	.921	-313	.34	25.3	5.20	
1053	420	14.87	0.06	7.16	23.80	.940	-316	.33	29.0	5.70	
1058	420	14.86	0.05	7.14	23.89	.942	-315	.36	29.1	6.25	
1103	420	14.86	0.05	7.14	23.93	.937	-315	.36	27.4	6.70	

Purged 6.8 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

1320

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/16/06 1215
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-300A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 18.74'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 15'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 1.33 gal
Initial Depth to Water (ft): 10.55'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1220	80	11.02	.47	6.18	22.0	2.37	65	5.03	0.0		
1225	80	11.33	.78	6.29	22.0	2.46	18	0.0			
1230	80	11.63	1.08	6.32	22.0	2.54	-7	0.0			
1235	80	11.91	1.36	6.36	22.0	2.55	-22				
1240	70	12.18	1.63	6.39	22.0	2.55	-31				
1245	90	12.51	1.96	6.41	21.9	2.53	-36			0.50	
1250	80	12.75	2.20	6.42	21.9	2.53	-41				
1255	80	12.97	2.42	6.43	21.9	2.53	-45			0.80	

Purged 0.8 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-410.041

Date: 11/16/06 13:51
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: T-1B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 38.6'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 28'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol: 21.97 gal
Initial Depth to Water (ft): 4.91'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
13:56	460	4.92	0.01	7.46	25.22	1.55	-151	.55	39.6	4.50*	
14:01		4.91	0.0	7.32	25.14	1.57	-141	.40	39.4		
14:06		4.91		7.28	25.08	1.57	-130	.35	30.7		
14:11		4.91		7.27	25.04	1.58	-131	.34	23.0	6.0	
14:16		4.91		7.26	24.97	1.58	-113	.33	16.2	6.80	
14:21		4.91		7.25	24.91	1.58	-105	.33	9.1	7.65	
14:26		4.91		7.25	24.86	1.58	-98	.32	5.5	8.30	
14:31		4.91		7.24	24.82	1.58	-94	.32	1.6	8.90	
14:36		4.91		7.24	24.77	1.57	-97	.31	1.5	9.45	
14:41		4.91		7.24	24.77	1.57	-103	.30	1.3	10.0	

Notes:

* Purged 4 gal prior to recording parameters

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

Purged 10 gal

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/17/06 9:10
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: MW-204
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.4'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 8.4'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: 1.19 gal
Initial Depth to Water (ft): 3.07'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
0915	120	3.27	.20	6.37	12.2	7.18	-52	0.0	63.3		
0920	120	3.37	.30	6.53	12.1	6.37	-73	0.0	48.5		
0925	80	3.47	.40	6.62	11.0	5.94	-76	0.0	42.5		
0930	90			6.63	11.1	5.14	-76	0.0	70.2		
0935	90	3.65	.58	6.69	11.1	5.17	-79	0.0	59.2		
0940	90	3.77	.70	6.73	11.1	5.22	-69	0.0	64.2	0.60	
0945	90	3.85	.78	6.74	11.3	5.17	-65	0.0	54.0		
0955	90			6.76	11.1	5.17	-64	0.0	53.2		
1000	90	4.03	.96	6.78	11.0	5.16	-64	0.0	50.6	0.90	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

Purged 1.0 gal

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/17/06 11:07
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: CP-21B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 25.55
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 21'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol: 10.2 gal
Initial Depth to Water (ft): 9.89'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1112	120	10.07	.24	6.72	20.6	1.25	-57	0.0	26.1		
1117	120	10.20	.37	6.75	21.2	1.26	-74	0.0	24.2		
1122	120	10.31	.48	6.76	21.70	1.27	-83	0.0	23.3	.35	
1127	120	10.39	.56	6.78	22.0	1.27	-86	0.0	19.0	.55	
1132	120	10.45	.62	6.80	23.1	1.28	-89	0.0	16.3	.70	
1137	120	10.51	.68	6.81	22.2	1.28	-91	0.0	14.1		
1142	120	10.54	.71	6.82	22.3	1.28	-92	0.0	12.1	1.0	
1147	160	10.70	.87	6.82	22.4	1.28	-98	0.0	11.9	1.2	
1152	160	10.81	.98	6.84	22.3	1.28	-102	0.0	11.4	1.4	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

Purged 1.8 gal

640

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/17/06 12:50
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: CP-22B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 28.96'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 25'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: well vol: 11.27 gal
Initial Depth to Water (ft): 11.70

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
12:55	130	12.03	.33	6.84	22.0	1.56	-94	0.0	11.6	.20	
13:00	110	12.16	.46	6.85	22.1	1.55	-105	0.0	12.1	.30	
13:05	110	12.36	.66	6.88	22.1	1.56	-113	0.0	11.1	.40	
13:10	110	12.43	.73	6.88	22.1	1.56	-113	0.0	9.4	.50	
13:15	110	12.61	.91	6.89	22.1	1.57	-114	0.0	9.5	.60	
13:20	110	12.72	1.02	6.89	22.2	1.56	-115	0.0	10.1	.70	

Purged 0.75 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/20/06 9:22
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: MW-405
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 6.21'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 5.2'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 0.51 gal
Initial Depth to Water (ft): 3.07'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
9:27	80	3.26	.19	6.87	12.48	10.6	117	3.78	38.8		
9:32	80	3.37	.30	6.93	13.05	10.9	93	.77	38.9		
9:37	100	3.51	.44	6.97	13.42	10.6	77	.60	16.8		
9:42	100	3.61	.54	6.98	13.29	10.3	50	.55	5.1		
9:47	100	3.81	.74	7.00	13.47	10.0	24	.54	0.0		
9:52	100	3.97	.90	7.01	13.53	9.8	-4	.53	0.0		
9:57	100	4.10	1.03	7.01	13.58	9.5	-5	.49	0.0	.8	
10:02	100	4.27	1.20	7.02	13.75	9.5	-9	.48	0.0		
10:07	100	4.42	1.35	7.02	13.85	9.5	-16	.49	0.0	1.0	

Purged 1.1 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

052

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/20/06 14:25
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: MW-2A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 13.1'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 11.0'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 0.76 gal
Initial Depth to Water (ft): 8.42'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
11:23	70	8.71	.29	7.28	12.87	5.42	-102	6.37	61.9		
11:28	70	8.77	.35	7.06	13.24	4.44	-97	.94	95.0		
11:33	110	8.96	.54	6.98	14.47	3.20	-105	.62	59.4		
11:38	110	9.17	.75	6.97	14.40	3.13	-110	.57	34.5		
11:43	110	9.31	.89	6.97	13.51	3.82	-117	.59	25.4		
11:48	110	9.49	1.07	6.99	13.60	3.81	-121	.55	27.5		
11:53	110	9.61	1.19	6.99	13.43	3.83	-124	.52	25.6	.60	
11:58	110	9.76	1.34	6.99	13.52	3.83	-129	.51	24.2	.70	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

Purged 0.8 gal

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 11/20/06 12:32
Personnel: S. McEvoy
J. Wood

Monitoring Well Data:

Well No.: MW-1A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 14.84
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 12.50'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol.: 1.58 gal
Initial Depth to Water (ft): 5.40'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
12:37	70	5.73	.63	6.61	9.5	.836	-28	0.0	4.9		
12:42	70	6.18	1.08	6.64	9.6	.874	-45	0.0	6.8		
12:47	70	6.64	1.54	6.64	10.0	.913	-50	0.0	8.0	.20	
12:52	70	7.14	2.04	6.65	9.9	.933	-53	0.0	6.3		
12:57	70	7.46	2.36	6.66	9.8	.931	-54	0.0	7.5		
1302	70	7.86	2.76	6.66	9.9	.925	-52	0.0	7.2	.50	

Purged 0.6 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

0516

0521

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 11/20/06 14:25
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: MW-3A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 19.98
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 17.50'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 2.12 gal
Initial Depth to Water (ft): 7.00

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1430	110	7.11	0.11	7.15	15.13	.751	-54	5.01	25.1		
1435	110	7.11	0.11	7.12	15.25	1.53	-57	.92	7.2		
1440	165	7.19	0.19	7.15	17.9	1.53	-61	.76	11.7		
1445	165	7.21	0.21	7.19	17.46	1.49	-59	.99	11.4		
1450	165	7.18	0.18	7.20	17.12	1.52	-57	1.00	0.0	1.00	
1455	210	7.25	0.25	7.20	17.65	1.55	-60	.80	0.0		
1500	210	7.25	0.25	7.18	17.58	1.57	-64	.67	0.0		
1505	210	7.25	0.25	7.20	17.70	1.60	-65	.52	0.0	1.60	
1510	210	7.25	0.25	7.20	17.34	1.61	-67	.49	0.0		
1515	210	7.25	0.25	7.20	17.48	1.61	-67	.46	0.0	2.20	

Purged 2.25 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/21/06 8:42
Personnel: S. McEvoy
J. Wood

Monitoring Well Data:

Well No.: MW-205
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 11.18
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 9.0'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: Well vol: 0.8 gal
Initial Depth to Water (ft): 6.24'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
8:47	85	6.36	.12	6.99	20.85	4.93	-169	4.81	0.0		
8:52	85	6.42	.18	7.02	21.46	4.86	-186	.72	4.6	.15	
8:57	110	6.53	.29	7.05	22.26	4.46	-194	.53	2.7	.25	
9:02	110	6.59	.35	7.07	22.33	4.39	-193	.49	10.4	.35	
9:07	110	6.66	.42	7.09	22.38	4.11	-182	.50	9.7	.50	
9:12	110	6.77	.53	7.07	22.37	4.02	-186	.46	0.0	.65	
9:17	110	6.81	.57	7.07	22.41	3.96	-189	.47	0.0	.75	
9:22	110	6.89	.65	7.07	22.38	3.94	-190	.46	0.0	.90	
9:27	110	6.96	.72	7.07	22.39	3.94	-191	.45	0.0	1.0	
9:32	110	7.05	.81	7.07	22.44	3.94	-188	.44	0.0	1.1	

Purged 1.2 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

GW1

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/21/06 10:00
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: MW-102
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 13.00
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]:
Well Diameter, D (in): 11" 2"
Well Screen Volume, V_s (mL)[2]: 1.08 gal
Initial Depth to Water (ft): 6.38

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1005	70	6.44	.06	7.26	20.25	2.39	-123	8.25	33.4		
1010	70	6.48	.10	7.21	20.29	2.26	-131	.86	24.9		
1015	105	6.53	.15	7.20	20.42	2.24	-135	.61	28.4		
1020	110	6.55	.17	7.18	20.35	2.02	-134	.58	16.70		
1025	110	6.58	.20	7.18	20.33	2.01	-135	.55	7.4	.40	
1030	110	6.60	.22	7.20	20.37	2.05	-138	.50	3.4	.50	
1035	110	6.61	.23	7.22	20.35	2.12	-144	.47	2.9	.65	
1040	110	6.62	.24	7.23	20.33	2.14	-146	.46	0.0		
1045	110	6.63	.25	7.25	20.34	2.25	-148	.47	0.0	.95	
1050	110	6.64	.26	7.24	20.34	2.25	-148	.46	0.0	1.00	
1055	110	6.65	.27	7.25	20.37	2.26	-149	.43	0.0	1.40	

Purged 1.3 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= V_p/V_s.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 11/21/06 11:33
Personnel: S. McEvoy
J. Wind

Monitoring Well Data:

Well No.: MW-4
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.23
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 8'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: well vol: 1.08'
Initial Depth to Water (ft): 3.59

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1138	100	4.12	.53	9.44	16.77	15.8	-190	2.44	0.9		
1143	80	4.44	.85	9.46	16.38	15.4	-206	.83	0.0		
1148	80	4.69	1.10	9.44	16.22	14.1	-203	.79	9.4		
1153	80	4.93	1.34	9.46	16.36	13.4	-204	.73	12.2		
1158	80	5.14	1.55	9.52	16.03	11.9	-209	.75	12.9		
1203	110	5.37	1.78	9.50	16.86	11.3	-215	.63	16.4		
1208	110	5.60	2.01	9.51	17.01	11.2	-216	.65	17.2	.80	
1213	110	5.77	2.18	9.54	16.95	11.2	-216	.67	17.5		
1218	110	5.96	2.37	9.57	16.84	11.5	-218	.69	12.4	1.0	
1223	110	6.14	2.55	9.59	16.69	12.1	-221	.68	7.7		
1228	110	6.38	2.79	9.60	16.94	12.1	-222	.62	7.3		
1233	100	6.70	3.11	9.59	17.01	12.1	-222	.61	6.8	1.45	

Purged 1.6 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual
Ref. No.: 12635-03-400041

Date: 5/7/07
Personnel: S McEvoy
J. Faibo

Monitoring Well Data:

Well No.: CR24B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 22.4'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 18'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: 12355.6 mL 3.26 gal
Initial Depth to Water (ft): 15.1

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged[4]
1106	460	15.12	.02	7.16	19.86	1.69	-245	.76	35.6		
1111		15.12	.02	7.17	19.83	1.72	-265	.48	38.1	1.05	
1116		15.15	.05	7.07	19.85	1.74	-282	.39	30.2	1.60	
1121		15.15	.05	7.02	19.95	1.88	-301	.35	12.3	2.15	
1126		15.16	.06	7.01	19.99	1.93	-307	.30	6.2	2.75	
1131		15.16	.06	7.00	20.00	1.95	-311	.29	6.7	3.50	
1136		15.17	.07	6.99	20.00	1.96	-309	.27	2.90	4.15	
1141		15.17	.07	6.99	20.02	1.97	-310	.27	4.4	4.90	

Total purged vol = 5.0 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: ABM Semi-annual sampling
Ref. No.: 12635-03-400411

Date: 5/7/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CP-25B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 25.5
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 22.0'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL)[2]: 3.265 gal
Initial Depth to Water (ft): 15.13

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged[4]
Start at 1327											
1332	360	15.16	.03	7.16	19.11	1.73	-224	.71	39.3	.35	
1337	495	15.18	.05	7.10	18.78	1.72	-272	.30	25.9		
1342	↓	15.20	.07	7.06	18.80	1.72	-303	.31	27.8	1.6	
1347	↓	15.21	.08	7.04	18.83	1.74	-313	.21	21.6	2.4	
1352	↓	↓	.08	7.02	18.86	1.76	-317	.20	26.2	3.0	
1357	↓	↓	↓	7.02	18.88	1.79	-319	.24	33.1	3.65	
1402	↓	↓	↓	7.02	18.92	1.80	-319	.17	7.1	4.3	
1407	↓	↓	↓	7.01	18.95	1.81	-319	.17	13.4	4.95	
1412	↓	↓	↓	7.01	18.98	1.82	-320	.17	11.2	5.65	
1417	↓	↓	↓	7.00	19.00	1.83	-320	.15	10.3	6.35	

Notes: Total purged vol = 6.45

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/8/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CP-26B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 26.1
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 23'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (~~mL~~ gal)[2]: 3.265
Initial Depth to Water (ft):

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
0855	160	15.13	.33	7.74	18.22	.979	-255	.59	50.8		
0900	100	15.23	.43	7.78	18.32	.974	-253	.41	55.4	.3	
0905	100	15.33	.53	7.78	18.45	1.14	-251	1.50	49.6	.45	
0910	100	15.41	.61	7.74	18.51	1.13	-243	1.38	46.2	.55	
0915	100	15.45	.65	7.71	18.56	1.14	-238	1.32	41.0	.65	
0920	100	15.48	.68	7.68	18.56	1.15	-237	1.27	39.9	.80	

Notes:

Total vol purged = 0.90 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400XX11

Date: 5/8/07
Personnel: S. McEvoy
J. Felbo

Monitoring Well Data:

Well No.: CP-27B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 22.1'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 18'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL/gal)[2]: 3265
Initial Depth to Water (ft): 15.21

Start: 1014

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL/gal)	No. of Well Screen Volumes Purged[4]
1019	380	15.23	.02	7.29	19.67	.932	-182	.57	65.8	.35 gal	
1024	420	15.26	.05	7.29	19.67	1.23	-246	.52	33.2	.90	
1029	↓	15.26	.05	7.23	19.70	1.23	-285	.32	28.6	1.45	
1034		15.27	.06	7.19	19.70	1.23	-322	.21	31.1	2.0	
1039		15.27	.06	7.18	19.73	1.23	-338	.13	31.1	2.5	
1044	↓	15.28	.07	7.17	19.75	1.24	-341	.15	29.3	3.05	
1049	420	15.28	.07	7.16	19.73	1.25	-343	.15	30.8	3.60	

Total vol purged = 3.9 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/8/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-300A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 18.61
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 17'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]:
Initial Depth to Water (ft): 10.46

Start: 1249

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~) 921	No. of Well Screen Volumes Purged[4]
1254	125	11.28	.82	6.76	21.30	2.40	-87	1.06	1.0		
1259	90	11.69	1.23	6.76	21.45	2.39	-82	.71	↓	.15	
1304	↓	11.97	1.51	6.76	21.51	2.39	-68	.59			
1309		12.28	1.82	6.75	21.47	2.45	-69	.67			
1314		12.54	2.08	6.75	21.49	2.45	-70	1.06		.45	
1319		12.81	2.35	6.75	21.44	2.43	-75	1.40		.55	
1324		13.03	2.57	6.76	21.45	2.41	-78	1.49			
1329	↓	13.26	2.80	6.76	21.38	2.40	-82	1.53	↓	.80	
1334	90	13.44	2.98	6.76	21.42	2.39	-80	1.54	0.0	.90	

Total vol purged = 1.0 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

024

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/9/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-106
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.11
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 9'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 4.98

Start 9:04

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~) 991	No. of Well Screen Volumes Purged[4]
0909	135	5.10	.12	6.87	13.12	1.84	18	8.36	106		
0914	↓	5.20	.22	6.89	12.84	1.94	-6	.62	101		
0919		5.22	.24	6.90	13.05	2.08	-14	.48	689		
0924	↓	5.25	.27	6.89	13.20	2.72	-29	.26	43.2		
0929	135	5.27	.29	6.89	12.95	3.18	-46	.13	36.8	.75	
0934	100	5.25	.27	6.87	13.62	3.76	-59	.10	15.6	.90	
0939	100	5.24	.26	6.89	13.60	3.82	-67	.08	18.8		
0944	100	5.23	.25	6.89	13.76	3.93	-75	.07	6.2	1.15	
0949	125	5.27	.29	6.91	13.49	3.83	-81	.04	9.6	1.30	
0954	110	5.28	.30	6.90	13.59	4.15	-89	0.0	6.0	1.50	
0959	↓	5.28	.30	6.90	13.61	4.23	-93	↓	5.6	1.60	
1004		5.28	.30	6.91	13.46	4.27	-95		7.0	1.80	
1009	↓	5.29	.31	6.91	13.61	4.24	-98		3.8	1.95	
1014	110	5.30	.32	6.91	13.80	4.38	-101	↓	2.4	2.10	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

024

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: ADM Semi-annual sampling
Ref. No.: ~~300~~ 12635-03-400041

Date: 5/9/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-106
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.11
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 9'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 4.98

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1019	110	5.29	.31	6.91	14.08	4.47	-104	0.0	.8	2.20	
1024	110	5.28	.30	6.91	13.79	4.48	-105	0.0	4.0	240	
1029	110	5.28	.30	6.93	14.05	4.47	-106	0.0	2.7	2.50	

Notes:

Total vol purged = 2.6 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual samplings
Ref. No.: 12635-03- 400041

Date: 5/10/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: CP-12A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 15.5
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 15'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 12.12

Start: 0833

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
0838	100	12.42	.30	6.82	21.99	1.74	-156	1.81	0.0		
0843	↓	12.59	.37	6.80	22.12	1.72	-148	.65	↓		
0848		12.73	.61	6.80	22.24	1.71	-144	.48			
0853		12.88	.76	6.79	22.32	1.72	-142	1.20			
0858		13.13	1.01	6.80	22.29	1.72	-144	1.33			
0903		13.16	1.04	6.81	22.31	1.73	-144	1.52			
0908	↓	13.30	1.18	6.81	22.35	1.72	-143	1.61	↓	.80	
0913	100	13.44	1.32	6.82	22.36	1.72	-142	1.64	0.0	.95	

Notes:

Total vol purged = 1.05 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/9/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-107
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 7.34
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 7.0
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 2.61

Start: 1124

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1129	120	3.34	.73	7.72	14.68	.746	-182	1.38	164		
1134	95	3.42	.81	7.54	15.35	.965	-190	.46	116		
1139	95	3.57	.96	7.53	15.30	.975	-188	.37	89.1	.35	
1144	85	3.66	1.05	7.51	16.04	1.06	-186	.26	73.3		
1149	↓	3.82	1.21	7.50	15.92	1.06	-183	.21	57.2		
1154		3.97	1.36	7.50	16.27	1.05	-181	.18	42.9	.60	
1159		4.09	1.48	7.50	15.92	1.06	-179	.13	37.7	.75	
1204		4.18	1.57	7.49	16.47	1.06	-178	.12	31.3		
1209		4.28	1.67	↓	16.05	1.09	-176	.16	25.5	.90	
1214		4.38	1.77		16.31	1.08	-175	.10	25.8		
1219	↓	4.48	1.87	↓	16.14	1.09	-173	.09	23.9	1.10	
1224	85	4.58	1.97	7.49	15.43	1.10	-171	.09	23.7	1.20	

Total vol purged = 1.3 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

045

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 5/10/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-408
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 12.15
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 11.5
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: .815 gal
Initial Depth to Water (ft): 3.82

Start: 10:32

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL) 9gl	No. of Well Screen Volumes Purged[4]
1039	95	4.2	.38	7.30	15.71	12.40	-190	2.96	149		
1044	100	4.52	.70	7.43	15.27	10.0	-173	.24	131		
1049	100	4.81	.99	7.34	15.21	9.35	-142	.15	141	.30	
1054	100	5.13	1.31	7.31	14.79	9.15	-119	.06	131		
1059	80	5.30	1.48	7.30	16.29	8.99	-116	.13	118	.55	
1104	85	5.48	1.66	7.32	15.70	8.95	-108	.05	120		
1109	↓	5.62	1.80	7.37	15.80	8.54	-119	.03	124		
1114		5.74	1.92	7.42	15.73	8.17	-127	.03	129	.85	
1119		5.87	2.05	7.46	16.06	7.82	-134	.02	120	1.0	
1124		5.98	2.16	7.49	15.97	7.50	-146	0.0	117		
1129		6.11	2.29	7.53	16.02	7.21	-155	0.0	112	1.20	
1134		6.19	2.37	7.56	15.98	6.99	-165	0.0	117		
1139	↓	6.28	2.46	7.60	16.18	6.76	-173	.03	110	1.40	
1144	85	6.41	2.59	7.63	15.83	6.53	-180	.03	117		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AA M Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/10/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-408
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 12.15
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 11.5
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 3.82

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1149	85	6.50	2.68	7.67	16.19	6.33	-187	0.01	102	1.55	
1154	↓	6.60	2.78	7.69	15.98	6.27	-192	0.0	103		
1159		6.66	2.84	7.71	16.26	6.20	-197		108	1.75	
1204		6.75	2.93	7.73	16.20	6.20	-198		110		
1209		6.88	3.06	7.72	15.87	6.19	-197	↓	119	2.0	

Total vol purged = 2.0 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

547

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400641

Date: 5/10/07
Personnel: S. McEvoy
J. Fallo

Monitoring Well Data:

Well No.: MW-409
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 6.54
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 6.0
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 0.0

Start 12:30

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1235	175	.02	.02	7.04	13.76	18.5	-101	.35	302	991	
1240	190	.03	.03	7.04	13.83	17.3	-114	.03	173	.50	
1245	190	.03	.03	7.03	14.38	16.80	-122	0.0	116	.75	
1250	215	.05	.05	7.05	14.86	15.60	-135		92.9	1.05	
1255		.05	.05	7.12	15.24	14.20	-149		79.9	1.35	
1300		.07	.07	7.24	15.55	12.30	-170		70.8	1.70	
1305		.07	.07	7.36	15.72	10.60	-184		63.9	1.95	
1310		.09	.09	7.49	15.83	9.2	-196		63.3	2.30	
1315		.09	.09	7.61	16.06	9.03	-203		60.3	2.55	
1325		.10	.10	7.88	16.27	8.23	-225		60.2	3.10	
1330				8.01	16.30	8.02	-238		57.8	3.40	
1335				8.13	16.43	7.88	-248		55.7	3.65	
1340				8.20	16.56	7.87	-254		50.4	4.0	
1345	215	.10	.10	8.28	16.55	7.73	-264	0.0	52.8	4.25	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

041

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 5/10/07
Personnel: S. McEvoy
J. Falso

Monitoring Well Data:

Well No.: MW-409
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 6.54
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 6.0
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 0.0

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1350	215	.10	.10	8.36	16.54	7.66	-269	0.0	47.1	4.55	
1355	↓	↓	↓	8.37	16.67	7.75	-269	↓	41.6	4.85	
1400				8.39	16.67	7.75	-271		39.7	5.10	
1405	↓	↓	↓	8.40	16.73	7.74	-272	↓	38.2	5.45	

Notes:

Total vol purged = 5.45 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

051

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/11/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-4A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 17.05
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 16.5
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 14.41

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
Start 8:59											
~~0904~~	140	14.53	.12	6.97	15.31	11.2	246	5.77	64.2		
0909	140	14.54	.13	7.00	14.86	11.1	260	4.11	38.9		
0914	140	14.55	.14	7.01	14.84	11.1	268	3.33	19.2		
0919	130	14.55	.14	7.02	15.05	11.0	~~276~~ 268	2.83	10.6		
0924	165	14.58	.17	7.01	14.88	10.5	~~278~~ 270	2.09	7.6	.85	
0929	165	14.58	.17	7.00	15.29	9.2	~~268~~ 270	1.48	4.9	1.05	
0934	165	14.59	.18	6.98	15.53	8.42	~~256~~ 266	.99	4.7	1.30	
0939	200	14.62	.21	6.97	15.47	7.04	~~249~~ 250	.53	5.6	1.55	
0944	200	14.62	.21	↓	15.43	6.02	~~229~~ 244	.28	4.2	1.80	
0949	200	14.63	.22	↓	15.42	5.23	~~207~~ 229	.13	3.9	2.10	
0954	235	14.67	.26	↓	15.28	4.89	~~175~~ 207	.04	1.5		
~~0959~~ 1000	↓	14.68	.27	↓	15.13	4.42	175	0.0	1.6	2.65	
1004	↓	14.68	.27	6.96	15.13	4.13	128	0.0	1.9	3.05	
1009	↓	14.69	.28	~~6.96~~	15.19	3.81	51	0.0	3.5	3.35	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

051

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/11/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-4A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 17.05
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 16.5
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 14.41

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1014	235	14.69	.28	6.96	15.17	3.64	22	0.0	6.2	3.65	
1019	↓	↓	↓	↓	15.08	3.49	10	0.0	5.7	3.95	
1024					15.16	3.35	1	.02	6.1	4.25	
1029				6.95	15.06	3.29	-4	.16	5.6	4.60	
1034					15.25	3.17	-9	.23	7.5	4.90	
1039					15.21	3.08	-12	.23	5.4	5.25	
1044					15.27	3.04	-15	.25	7.0	5.55	
1049	↓	↓	↓	↓	15.27	3.03	-16	.29	7.0	5.85	
1054	235	14.69	.28	6.96	15.44	3.05	-20	.30	8.0	6.20	

Notes:

Total vol purged = 6.3 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/11/07
Personnel: S. McEvoy
J. Falso

Monitoring Well Data:

Well No.: MW-4
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.45
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 10.0
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 3.38

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
Start 1120											
1125	120	3.91	.53	8.69	14.02	14.9	-158	2.56	176		
1130	80	4.23	.85	8.76	14.45	14.7	-177	.40	94.9	.20	
1135	↓	4.43	1.05	8.75	15.27	14.8	-167	.32	87.4		
1140		4.64	1.26	8.74	15.63	14.8	-162	.11	62.9		
1145		4.77	1.39	8.76	15.72	14.7	-160	.28	61.0	.45	
1150		4.90	1.52	8.76	15.57	14.5	-159	.91	48.4		
1155		4.99	1.61	8.72	15.78	14.2	-148	.87	46.1		
1200		5.05	1.67	8.70	16.25	12.8	-138	.79	79.7	.70	
1205		5.12	1.74	8.69	16.40	11.8	-129	.74	86.4	.80	
1210		5.18	1.80	8.74	16.47	10.9	-119	.70	88.2		
1215		5.24	1.86	9.12	16.54	10.7	-126	.68	76.5	1.0	
1220		5.27	1.89	9.16	16.36	10.6	-138	.66	58.4		
1225	↓	5.28	1.90	9.19	16.36	10.6	-141	.65	54.6	1.15	
1230	80	5.32	1.93	9.21	16.32	10.6	-147	.62	57.4	1.20	

Total vol purged = 1.2 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/11/07
Personnel: S. McEvoy
J. Falbo

Monitoring Well Data:

Well No.: MW-405
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 6.18
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 6'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: .815 gal
Initial Depth to Water (ft): 3.11

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL) 9al	No. of Well Screen Volumes Purged[4]
Start 1303											
1308	120	3.42	.31	6.89	12.21	11.8	-14	.47	159		
1313	90	3.59	.48	6.92	12.80	11.2	-19	.23	109		
1318	↓	3.69	.58	6.95	12.95	10.7	-16	.17	83.7	.55	
1323		3.81	.70	6.95	13.06	10.0	-26	.30	65.8		
1328		3.92	.81	6.97	12.95	9.7	-29	.32	54.1	.70	
1333		4.03	.92	6.95	13.22	9.6	-38	.22	50.2	.80	
1338		4.14	1.03	6.95	13.06	9.6	-43	.20	47.4		
1343		4.27	1.16	6.94	12.92	9.8	-43	.17	41.3		
1348	↓	4.36	1.25	6.93	13.11	9.8	-45	.14	38.7	1.1	
1353	90	4.46	1.35	6.94	13.11	9.8	-45	.15	36.8	1.2	

Notes: Total vol purged = 1.2 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041
Date: 5/14/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: MW-1A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 15.09
Depth of Sediment (ft):
Screen Length (ft):
Depth to Pump Intake (ft)[1]: 14'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (gal)[2]: .815
Initial Depth to Water (ft): 5.90

Start: 0916

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (gal)	No. of Well Screen Volumes Purged[4]
0921	115	6.58	.68	7.04	11.33	1.22	20	4.26	4.2		
0926	85	7.11	1.21	7.08	11.49	1.21	-9	2.36	0.0		
0931	↓	7.57	1.67	7.09	11.46	1.22	-34	2.10	↓	.40	
0936		8.01	2.11	7.10	11.41	↓	-43	1.89			
0941		8.44	2.54	7.10	11.51		-47	1.70			
0946		8.85	2.95	7.10	11.62		-49	1.50			
0951	↓	9.26	3.36	7.11	11.68	↓	-50	1.44	↓		
0956	85	9.63	3.73	7.11	11.74	1.22	-58	1.41	0.0	.90	

Notes: Total vol purged = .90 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/14/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: MW-2A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 12.26
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 12'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 9.20

Start: 1024

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1029	90	9.53	.33	6.79	13.07	18.5	-156	.90	26.6		
1034		9.64	.44	6.81	13.11	18.4	-157	.66	36.8		
1039		9.78	.58	6.80	13.27	16.9	-156	.60	45.7		
1044		9.90	.70	6.81	13.50	16.5	-153	.54	42.1	.45	
1049		10.04	.84	6.80	13.27	16.3	-152	.90	30.7	.60	
1054		10.16	.96	6.81	13.37	16.2	-152	.70	29.3		
1059		10.28	1.08	6.81	13.52	16.2	-151	.64	28.7	.75	
1104		10.40	1.20	6.81	13.32	16.3	-150	.36	15.1		
1109		10.51	1.31	6.81	13.32	16.3	-149	.34	16.7	.95	
1114	90	10.61	1.41	6.81	13.37	16.3	-146	.36	14.2	1.10	

Total vol purged = 1.1 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041
Date: 5/14/07
Personnel: S.McEvoy

Monitoring Well Data:

Well No.: MW-3A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 20.21
Depth of Sediment (ft):
Screen Length (ft):
Depth to Pump Intake (ft)[1]: 19'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (gal)[2]: .815
Initial Depth to Water (ft): 7.23

Start: 1149

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (gal)	No. of Well Screen Volumes Purged[4]
1154	135	7.48	.25	7.41	12.91	1.79	29	3.84	143		
1159	135	7.47	.24	7.26	13.01	1.85	13	2.10	92.2	.25	
1204	135	7.44	.21	7.25	13.19	1.91	5	1.71	49.7	.45	
1209	145	7.50	.27	7.26	12.83	1.96	1	1.12	36.0	.60	
1214	155	7.52	.29	7.27	12.70	2.02	-5	0.87	26.2		
1219	155	7.53	.30	7.27	12.72	2.07	-10	.62	15.7	1.0	
1224	150	7.52	.29	7.26	12.75	2.11	-21	.38	10.8		
1229	↓	7.51	.28	7.26	12.76	2.15	-20	.34	6.2	1.4	
1234		↓	.28	7.23	12.78	2.16	-30	.25	7.2	1.6	
1239			↓	7.25	12.83	2.18	-31	.20	5.6	1.75	
1244				7.25	12.89	2.21	-34	.16	0.9	1.95	
1249		↓	↓	7.26	12.73	2.23	-33	.10	0.0	2.1	
1254		7.51	.28	7.27	12.92	2.26	-31	.05	0.0	2.35	
1259	↓	7.50	.27	7.27	13.04	2.27	-34	.03	0.0	2.55	
1304	150	7.50	.27	7.27	13.23	2.28	-35	0.0	0.0	2.75	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

Total vol purged = 2.75 gal

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041
Date: 5/15/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: CP-21B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 25.8
Depth of Sediment (ft):
Screen Length (ft):
Depth to Pump Intake (ft)[1]: 21'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (~~mL~~ gal)[2]: 3.265
Initial Depth to Water (ft): 10.96

Start: 0946

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
0951	120	11.18	.22	7.52	21.89	1.35	-280	1.17	184		
0956	120	11.34	.38	7.58	21.89	1.35	-287	.24	32.4		
1001	100	11.38	.42	7.56	21.92	1.38	-276	.20	28.7		
1006	110	11.48	.52	7.59	21.95	1.43	-293	.09	27.3	.55	
1011	↓	11.58	.62	7.59	21.96	1.42	-289	.04	17.3	.70	
1016		11.64	.68	7.58	21.96	1.38	-285	.04	18.9	.85	
1021		11.70	.74	7.59	21.98	1.36	-293	.02	20.5	1.03	
1026		11.75	.79	7.60	21.99	1.34	-293	-.02	16.4	1.15	
1031		11.77	.81	7.60	22.0	1.35	-287	.01	12.0	1.30	
1036	↓	11.79	.83	7.59	22.03	1.35	-286	0.0	11.6	1.45	
1041	110	11.81	.85	7.60	22.0	1.35	-288	0.0	10.8	1.55	

Total vol purged = 1.55 gal

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-700091

Date: 5/15/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: CP-22B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 29.11
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 25'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (mL/gal)[2]: 3265
Initial Depth to Water (ft): 12.81

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL/gal)	No. of Well Screen Volumes Purged[4]
1150	100	13.14	.33	7.24	21.89	1.81	-231	1.16	5.1		
1155	↓	13.25	.44	7.25	21.87	1.81	-235	1.06	8.1	.30	
1200	↓	13.37	.56	7.25	21.86	1.92	-237	1.00	10.1	.45	
1205	↓	13.52	.71	7.27	21.81	1.95	-239	.97	12.8	.60	
1210	↓	13.67	.86	7.27	21.78	1.94	-239	.93	13.0	.75	
1215	↓	13.80	.99	7.27	21.81	1.81	-238	.86	13.1	.90	
1220	↓	13.91	1.10	7.27	21.82	1.82	-234	.82	12.6	1.05	
1225	100	14.00	1.19	7.28	21.80	1.82	-235	.79	12.0	1.20	

Notes: Total vol purged = 1.3 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.:

Date: 5/16/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: T-1B
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 38.8'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[2]: 30'
Well Diameter, D (in): 4"
Well Screen Volume, V_s (~~mL~~ gal)[2]: 3.265
Initial Depth to Water (ft): 6.25

Start: 0900

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
0912	445	6.25	—	7.36	21.05	3.41	-106	7.04	52.2	.50	
0917	445	6.25	—	7.17	20.41	3.51	-96	0.16	48.2	1.2	
0922	445	6.25	—	7.16	20.33	3.57	-84	.09	34.1	1.85	
0927	445	6.25	—	7.17	20.28	~~3.48~~ 3.54	-81	.06	40.1	2.55	
0932	445	6.25	—	↓	20.26	~~3.48~~ 3.51	-79	.06	31.5	3.20	
0937	445	6.23	-.02		20.27	3.48	-77	.07	23.1	3.85	
0942	445	6.23	-.02		20.24	3.48	-74	.08	28.7	4.55	
0947	445	6.22	-.03		20.25	3.48	-72	.07	17.0	5.20	
0952	445	6.22	-.03	↓	20.23	3.47	-71	.06	17.0	5.90	
0957	445	6.21	-.04	7.17	20.24	3.46	-71	.06	18.7	6.55	

Notes:

Total vol purged = 6.7 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/16/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: MW-02
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 12.85
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 11.85
Well Diameter, D (in): 2
Well Screen Volume, V_s (~~mL~~ gal)[2]: 0.815
Initial Depth to Water (ft): 5.57

Start: 1055

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
1100	130	5.68	.11	7.22	16.01	4.04	-195	1.53	58.9		
1105	130	5.72	.15	7.22	15.94	3.76	-199	.14	15.6	.35	
1110	130	5.77	.20	7.14	15.91	3.29	-199	.04	1.1	.50	
1115	130	5.78	.21	7.12	15.96	2.89	-200	.03	0.0	.65	
1120	↓	5.80	.23	7.11	15.96	2.74	-198	.06	4.4	.80	
1125		5.82	.25	7.10	15.91	2.74	-199	.02	5.4	1.0	
1130	↓	5.83	.26	7.11	15.94	2.74	-198	0.0	5.2	1.1	
1135	130	5.85	.28	7.10	15.92	2.75	-198	0.0	6.0	1.25	

Notes:

Total vol purged = 1.3 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual Sampling
Ref. No.: 12635-03-400041

Date: 5/17/07
Personnel: S McEvoy

Monitoring Well Data:

Well No.: MW-204
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 10.4
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 10'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 3.12

Start: 0833

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
0838	110	3.27	.15	7.30	12.61	7.09	-131	1.91	376		
0843	90	3.35	.23	7.06	12.18	6.93	-121	.31	197		
0848	↓	3.50	.38	7.07	12.32	6.80	-116	.21	148	.35	
0853		3.57	.45	7.07	12.36	6.81	-116	.18	135	.50	
0858		3.61	.49	7.07	12.38	6.77	-117	.16	95.9	.60	
0903	↓	3.68	.56	7.07	12.39	6.66	-112	.16	67.1	.65	
0908	100	3.78	.66	7.08	12.48	6.53	-98	.14	59.3	.75	
0913	↓	3.88	.76	7.06	12.40	6.36	-93	.14	61.7	.90	
0918	↓	3.98	.86	7.05	12.53	6.26	-93	.17	489	1.0	
0923	↓	4.07	.95	7.05	12.52	6.18	-93	.19	46.0	1.1	
0928	95	4.17	1.05	7.05	12.54	6.10	-96	.21	39.9	1.2	
0933	95	4.27	1.15	7.03	12.62	6.08	-97	.17	26.3	1.3	
0938	95	4.36	1.24	7.02	12.59	6.06	-98	.18	17.8	1.45	
0943	95	4.45	1.33	7.02	12.42	6.06	-99	.17	17.0	1.55	
0948	95	4.53	1.41	7.02	12.47	6.05	-100	.16	16.2	1.60	

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

Total vol purged = 1.65 gal

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/17/07
Personnel: S. McEvoy

Monitoring Well Data:

Well No.: MW-205
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 11.46
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 11.0'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL/gal)[2]: .815
Initial Depth to Water (ft): 6.54

Start: 1059

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL/gal)	No. of Well Screen Volumes Purged[4]
1104	100	6.66	.12	7.30	17.35	1.50	-191	1.44	9.1		
1109	100	6.73	.19	7.33	17.45	1.58	-204	.32	10.3	.30	
1114	100	6.81	.27	7.31	17.54	1.57	-208	.21	18.2	.40	
1119	95	6.87	.33	7.26	17.08	1.44	-205	.17	9.1	.50	
1124	100	6.95	.41	7.19	16.86	1.20	-198	.13	12.3	.60	
1129	↓	7.03	.49	7.15	16.74	1.13	-192	.11	8.0	.75	
1134	↓	7.11	.57	7.12	17.37	1.11	-188	.10	10.4	.90	
1139	↓	7.17	.63	↓	17.37	1.11	-186	.12	9.5	1.0	
1144	↓	7.24	.70	↓	17.46	1.11	-185	.12	9.0	1.1	
1149	↓	7.31	.77	7.12	17.48	1.12	-184	.09	3.8	1.2	
1154	100	7.37	.83	7.13	17.40	1.12	-184	.07	3.2	1.3	
1159	100	7.43	.89	7.13	17.52	1.13	-182	.07	3.3	1.4	

Notes: Total vol purged = 1.4 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

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MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: AAM Semi-annual sampling
Ref. No.: 12635-03-400041

Date: 5/7/07
Personnel: S. McEvoy
J. Falso

Monitoring Well Data:

Well No.: CP-25A
Measurement Point:
Constructed Well Depth (ft):
Measured Well Depth (ft): 16.42'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 16'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (~~mL~~ gal)[2]: .815
Initial Depth to Water (ft): 11.71'

Start: 12:24

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (~~mL~~ gal)	No. of Well Screen Volumes Purged[4]
12:31	110	12.68	0.97	6.97	19.56	1.54	-133	3.72	0.0		
1236	85	13.18	1.47	6.95	20.02	1.50	-132	0.78	0.0	.20	
1241	85	13.74	2.03	6.94	20.19	1.51	-129	0.59	0.0	.30	
1246	85	14.27	2.56	6.94	20.14	1.50	-125	0.53	0.0	.40	
1251	85	14.71	3.00	6.94	20.10	1.50	-127	0.52	0.0	.50	
~~1253~~											
5/15/07	1330		DTW =	14.75'		Recovered	1.67'	(35.5%)			
5/17/07	1245		DTW =	14.48'		Recovered	1.94'	(41.2%)			

Notes:

Total vol purged = 0.63 gal

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11/5/07

Time Start Purge: 0908
Time end Purge: 0931
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 45°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 204
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.80
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.13

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x 1L Amber
Sample ID: MW-12635-110507-001
Sample Time 1015
Sample Date: 11.5.07

COC #: GM 06004
Lab:

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0914	110	3.50	0.37	6.99	17.1	>99.9	-95	0.00	0.8	
0919	100	3.58	0.45	7.16	17.0	799.9	-69	0.00	1.2	
0924		3.71	0.58	7.16	16.9	>99.9	-59	0.00	0.0	
0929		3.85	0.72	7.15	16.8	>99.9	-62	0.00	0.0	

Comments:

Signature: David J Tynan

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11/5/07

Time Start Purge: 1043
Time end Purge: 1110
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 48

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 106
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.36
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.19

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x1L Amber
Sample ID: WG-12635-110507-002
Sample Time 1145
Sample Date: 11/5/07

COC #: GM 06004
Lab:

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1050	110	6.62	0.43	7.15	16.1	1.92	28	4.98	0.0	
1055	110	6.74	0.55	7.15	16.5	1.93	-18	3.71	0.0	
1100		6.86	0.67	7.11	16.6	1.95	-30	3.01	0.0	
1105	110	6.90	0.71	7.13	16.5	1.96	-31	2.93	0.0	
1110		6.96	0.77	7.11	16.6	1.96	-30	2.89	0.0	

Comments:

Signature: Daniel J Tyron

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11/5/07

Time Start Purge: 1407
Time end Purge: 1453
Purge Method: Peristaltic
Weather Conditions: Cloudy 48°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW409
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.71
Depth of Sediment(ft):
Initial Depth of Water (ft): 0.67

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x1L Ambers
Sample ID: WG-12635-110507-003
Sample Time 1515
Sample Date: 11-5-07

COC #: G0106004
Lab:

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1413	125	1.28	0.61	6.94	15.1	9.18	-112	1.83	0.0	
1418	100	1.49	0.82	6.99	14.9	8.72	-116	1.03	0.0	
1423		1.62	0.95	7.00	14.6	7.93	-119	0.76	0.0	
1428		1.78	1.11	7.01	14.5	7.57	-119	0.74	0.1	
1433	100	1.91	1.24	7.01	14.5	7.33	-118	0.77	0.3	
1438		2.06	1.39	7.01	14.6	7.11	-119	0.49	0.0	
1443		2.21	1.54	7.01	14.6	6.96	-119	0.55	1.1	
1448		2.31	1.64	7.02	14.6	6.84	-121	0.59	0.0	
1453				7.03	14.5	6.74	-123	0.60	0.0	

Comments:

Signature: David J Tyra

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635.03.400041
Personnel: DST
Date: 11.5.07

Time Start Purge: 1204
Time end Purge: 1252
Purge Method: Peristaltic
Weather Conditions: Overcast 49°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Inte.face Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 107
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.05
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.68

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4 X 1L Ambers
Sample ID: WG-12635 110607-004
Sample Time 0920
Sample Date: 11-6-07

COC #: GM ~~06004~~ ~~DST~~ 06008
Lab: Test America N. Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1219	110	4.38	0.70	7.44	15.0	0.776	-123	4.70	652	
1224	100	4.50	0.82	7.43	15.0	0.789	-125	3.58	367	
1229		4.61	0.93	7.42	15.0	0.795	-125	3.19	301	
1234		4.76	1.08	7.40	14.8	0.799	-129	3.05	157	
1239	100	4.89	1.21	7.39	14.4	0.811	-130	2.89	115	
1244		5.11	1.43	7.39	14.3	0.818	-130	2.95	136	
1249		5.22	1.54	7.39	14.2	0.833	-128	2.91	175	

Comments: Well Dry Final w/L 5.24 11/6/07 well recovered - fill sample bottles

Signature: David J Tynan

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11/5/07

Time Start Purge: 1306
Time end Purge: 1355
Purge Method: Peristaltic
Weather Conditions: Rain 48°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 408
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 12.36
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.32

Sample Record:

Sampling Method: Peristaltic
Sample Volume: ~~3~~ 4 x 1L Amber
Sample ID: MW-12635-110607-005
Sample Time 1015
Sample Date: 11-6-07

COC #: GM ~~06004~~ DJT 06008
Lab: Test America N. Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
* 1314	100		7.65	0.33	7.31 15.1	2.81	-128	3.70	9.7	
1319		7.88	0.56	7.34	15.2	3.27	-136	2.97	8.2	
1324				7.14	15.3	>99.9	-480	0.00	6.9	
1333	100	8.23	0.91	6.08	15.4	3.72	-61	0.98	4.7	
1338		8.37	1.05	6.43	15.6	3.71	-121	0.59	2.3	
1343	95	8.49	1.17	6.65	15.5	3.92	-139	0.54	0.3	
1348		8.68	1.36	6.77	15.4	4.06	-144	0.56	0.0	
1353										

Comments: * Disregard readings meter acting up switch out meters start readings @ 1333
well Dry Final w/l 8.80 11/6/07 w/l 8.01 Fill Sample Bottles
1½ L taken for PCBs
1 L taken for O&G
well now underwater from rain & Snow

Signature: Dave J Tyler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-6-07

Time Start Purge: 1057
Time end Purge: 1137
Purge Method: Peristaltic
Weather Conditions: Rain/Snow 36°

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW-4
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.72
Depth of Sediment(ft):
Initial Depth of Water (ft): 2.96

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4 x 1L Amber
Sample ID: WG-12635-110607-006
Sample Time 1140
Sample Date: 11-6-07

COC #: GM 06008
Lab: Test America N. Canton

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1107	80	3.88	0.92	8.42	14.8	15.3	-184	1.03	4.7	
1112		4.26	1.30	8.78	14.9	15.3	-192	0.81	4.5	
1117	120	4.70	1.74	8.83	15.9	14.6	-184	0.71	6.1	
1122	100	5.04	2.08	9.13	16.2	10.3	-200	1.91	7.4	
1127		5.32	2.36	9.30	15.9	9.3	-199	2.60	8.7	
1132		5.49	2.53	9.35	15.9	9.1	-198	2.63	8.7	
1137		5.78	2.82	9.44	15.7	9.2	-200	2.61	8.1	

Comments:

Signature: David J Tyra

DJT

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-6-07

Time Start Purge: 1230
Time end Purge: 1346
Purge Method: Peristaltic
Weather Conditions: Rain/Snow 36

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW-4A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 17.10
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.66

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 8x1L Amber
Sample ID: WG-12635-110607-007
Sample Time 1315
Sample Date: 11-6-07

COC #: GM06008
Lab: Test America N. Canton

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1236		14.77	0.11	7.37	14.5	12.5	251	5.38	14.9	
1241	135	14.79	0.13	7.19	15.6	12.6	274	4.34	7.7	
1246	170	14.79	0.13	7.13	15.9	11.7	280	3.10	4.9	
1251	320	14.88	0.22	7.04	17.1	9.2	276	1.73	9.0	
1256		14.92	0.26	6.99	17.2	6.57	263	1.04	11.9	
1301		14.94	0.28	6.93	17.2	5.08	237	0.57	3.3	
1306		14.94	0.28	6.90	17.2	4.24	209	0.42	3.9	
1311		14.94	0.28	6.90	17.0	3.87	169	0.36	9.1	
1316		14.94	0.28	6.90	16.8	3.67	117	0.37	5.7	
1321		14.94	0.28	6.89	17.0	3.58	69	0.35	9.2	
1326				6.90	17.0	3.47	41	0.34	8.7	
1331		14.94	0.28	6.89	17.0	3.39	-16	0.30	7.9	

Comments: Blind Duplicate WG-12635-110607-008 1445

Signature: Dave Tyron

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400641
Personnel: DST
Date: 11-6-07

Time Start Purge:
Time end Purge:
Purge Method:
Weather Conditions:

Presence of Immiscible Layers:

Yes No
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-4A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.66

Sample Record:

Sampling Method:
Sample Volume:
Sample ID:
Sample Time
Sample Date:

COC #:
Lab:

Well Yield:

High Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1336				6.89	17.1	3.33	-31	0.31	9.0	
1341				6.89	17.0	3.29	-40	0.31	12.5	
1346				6.91	17.0	3.24	-48	0.30	15.5	

Comments:

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004.1
Personnel: DJT
Date: 11/7/07

Time Start Purge: 0710
Time end Purge: 0750
Purge Method: Peristaltic
Weather Conditions: Cloudy 36

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 405
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.60
Depth of Sediment(ft):
Initial Depth of Water (ft): 2.46

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x1L Amber
Sample ID: GW-12635-110707-009
Sample Time 0810
Sample Date: 11/7/07

COC#: GM06145
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0719	100	2.73	0.27	6.48	16.2	7.45	-85	0.72	14.7	
0724		2.82	0.36	6.62	15.8	6.40	-85	1.01	12.5	
0729	100	2.89	0.43	6.69	15.4	3.63	-70	3.24	18.0	
0734	100			6.67	14.6	2.66	-38	4.76	20.9	
0739		3.02	0.56	6.67	14.5	2.34	-22	5.60	24.2	
0744		3.06	0.60	6.66	14.1	2.36	-17	5.64	18.5	
0749		3.09	0.63	6.68	13.9	2.31	-20	5.58	18.6	

Comments:

Signature: Dave Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DST
Date: 11-7-07

Time Start Purge: 0849
Time end Purge: 0944
Purge Method: Peristaltic
Weather Conditions: Cloudy 36°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW-3A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 20.30
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.46

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x1L Amber
Sample ID: WG-12635-110707-010
Sample Time 1000
Sample Date: 11-7-07

COC #: GM06145
Lab: Test America N. Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0859	95	7.58	0.12	6.66	14.0	1.71	-40	1.07	53.2	
0904		7.59	0.13	6.66	13.2	1.74	-52	0.82	34.9	
0909	120	7.64	0.18	6.67	13.1	1.76	-53	0.68	44.0	
0914		7.63	0.17	6.67	13.5	1.76	-54	0.60	28.2	
0919	160	7.69	0.23	6.66	13.9	1.75	-54	0.50	26.5	
0924		7.69	0.23	6.72	14.3	1.75	-56	0.42	22.7	
0929		7.69	0.23	6.72	14.5	1.86	-56	0.39	20.8	
0934		7.69	0.23	6.74	14.5	1.95	-55	0.36	19.0	
0939		7.69	0.23	6.75	14.4	2.00	-54	0.38	19.2	
0944		7.69	0.23	6.77	14.6	2.01	-55	0.36	18.2	

Comments:

Signature: David J Tyra

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11/7/07

Time Start Purge: 1030
Time end Purge:
Purge Method: Peristaltic
Weather Conditions: Mostly cloudy 36

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW-1A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 15.27
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.71

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4X1L Amber
Sample ID: WG-12635-110707-011
Sample Time 1300
Sample Date: 11-7-07

COC #: GM06145
Lab: Test America, North Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1040	105	7.10	1.39	6.75	13.2	1.19	-108	0.86	15.3	
1045		7.71	2.00	6.70	13.3	1.14	-104	0.76	17.7	
1050		8.07	2.36	6.74	13.4	1.08	-101	0.82	18.6	
1055	95	8.65	2.94	6.73	13.0	1.01	-95	1.47	18.4	
1100		8.99	3.28	6.71	12.9	0.90	-87	2.41	20.1	
1105		9.49	3.78	6.71	12.9	0.729	-76	3.57	18.8	
1110		9.91	4.20	6.71	12.8	0.623	-65	4.32	20.3	
1115		10.46	4.74	6.66	12.7	0.588	-55	5.09	20.8	
1120	90	10.61	4.90	6.66	12.8	0.537	-48	5.38	23.9	
1125		10.56	4.85	6.64	12.6	0.582	-55	4.60	20.7	
1130		10.57	4.86	6.57	12.4	0.658	-61	3.94	20.2	
1135		10.56	4.85	6.66	12.1	0.752	-73	3.29	19.5	

Comments:

Signature: Dave J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635.03.400041

Personnel: DJT

Date: 11-7-07

Time Start Purge: _____

Time end Purge: _____

Purge Method: _____

Weather Conditions: _____

Presence of Immiscible Layers:

Yes No

Detection method: _____

Collection Method: _____

Monitoring Well Data:

Well ID: MW-1A

t point _____

Constructed Well Depth (ft): _____

Sounded Well Depth (ft): _____

Depth of Sediment(ft): _____

Initial Depth of Water (ft): 5.71

Sample Record:

Sampling Method: _____

Sample Volume: _____

Sample ID: _____

Sample Time _____

Sample Date: _____

COC #: _____

Lab: _____

Well Yield:

High Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1140		10.56	4.85	6.64	12.3	0.788	-76	2.94	18.4	
1145	75	10.56	4.85	6.68	12.1	0.815	-79	2.51	18.0	
1150				6.70	11.9	0.870	-85	2.19	17.7	
1155		10.58	4.87	6.75	11.9	0903	-87	1.69	17.0	
1200		10.58	4.87	6.71	11.9	0.947	-89	1.68	17.2	
1205				6.80	11.9	0.970	-94	1.52	16.8	
1210				6.81	11.9	0.982	-95	1.34	16.7	

Comments:

Signature: Dave J Tyra

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-7-07

Time Start Purge: 1314
Time end Purge: 1421
Purge Method: Peristaltic
Weather Conditions: Overcast 35

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 2A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 12.57
Depth of Sediment(ft):
Initial Depth of Water (ft): 9.30

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x 1L Ambers
Sample ID: WG-12635-110707-012
Sample Time 1500
Sample Date: 11-707 & 11-8-07

COC #: GM061486 (EST)
Lab: Test America, North Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1326	95	9.61	0.31	6.81	14.1	20.0	-120	0.84	26.6	
1331		9.78	0.48	6.82	13.6	19.5	-122	0.78	27.1	
1336		9.94	0.64	6.82	13.8	18.7	-122	0.72	30.2	
1341	100	10.09	0.79	6.86	13.5	16.1	-118	1.82	64.8	
1346		10.23	0.93	6.83	13.3	15.1	-110	1.93	91.2	
1351		10.40	1.10	6.82	13.7	15.1	-110	1.69	80.0	
1356				6.81	14.1	16.0	-113	1.52	62.0	
1401	95	10.69	1.39	6.81	14.4	17.2	-117	1.10	48.4	
1406				6.83	14.4	17.8	-119	0.94	38.4	
1411		10.93	1.63	6.82	14.9	18.3	-122	0.84	33.2	
1416		11.16	1.86	6.83	14.6	19.0	-124	0.73	29.1	
1421				6.83	14.6	19.3	-126	0.64	24.8	

Comments: Well dry after filling 1L for PCBs will check on 11/8/07
11/8/07 @ 1L 10:36 continue to fill bottles

Signature: David J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-8-07

Time Start Purge: 1043
Time end Purge: 1109
Purge Method: Peristaltic
Weather Conditions: Cloudy 35

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-24
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.82
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.49

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 1x1L Amber
Sample ID: WG-12635-110807-013
Sample Time 1130
Sample Date: 11-8-07

COC #: GM06146
Lab: Test America North Canton

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1049		5.73	0.24	6.60	21.9	1.59	-121	3.71	2.2	
1054	100	5.87	0.38	6.67	21.9	1.56	-124	2.48	5.0	
1059		6.06	0.57	6.68	22.0	1.54	-125	2.17	6.6	
1104	95	6.22	0.73	6.68	22.0	1.51	-125	2.06	6.7	
1109		6.33	0.84	6.69	22.1	1.49	-125	2.00	6.7	

Comments: Filled 1st bottle 3/4 well went dry and oil was present just before going dry will ship the one Bottle for PCB's No further Sampling

Signature: Dave Tyson

MS | MSD

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-8-07

Time Start Purge: 1216
Time end Purge: 1254
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 36

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: T-1B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 39.08
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.52

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 12x1L Ambers
Sample ID: GW-12635-110807-014
Sample Time 1330
Sample Date: 11-8-07

COC #: GM06146
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1219		6.53	0.01	7.15	21.0	1.65	4	3.86	64.5	
1224	490	6.53	0.01	7.06	20.6	1.64	-1	2.18	75.7	
1229		6.53	0.01	7.08	20.6	1.64	-6	1.89	45.7	
1234		6.53	0.01	7.11	20.6	1.64	-10	1.81	23.2	
1239		6.54	0.02	7.14	20.6	1.65	-11	1.78	15.2	
1244	490	6.55	0.03	7.14	20.5	1.64	-10	1.74	10.0	
1249		6.54	0.02	7.16	20.5	1.65	-11	1.73	10.3	
1254		6.54	0.02	7.17	20.6		-10	1.72	10.1	

Comments:

Signature: David J. Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004|
Personnel: DJT
Date: 11-8-07

Time Start Purge: 1403
Time end Purge: 1438
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 39

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-24B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 22.55
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.88

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4X1L Ambers
Sample ID: WG-12635-110807-015
Sample Time 1500
Sample Date: 11-8-07

COC #: GM06146
Lab: Test America, North Canton

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1408	340	14.92	0.04	7.04	20.7	1.42	-199	2.08	106	
1413		14.93	0.05	7.09	20.7	1.41	-238	1.66	115	
1418		14.94	0.06	7.08	20.7	1.40	-262	1.59	94.4	
1423	345	14.95	0.07	7.05	20.7	1.41	-273	1.56	98.9	
1428				7.00	20.7	1.42	-288	1.55	91.9	
1433		14.95	0.07	6.99	20.7	1.42	-290	1.54	93.1	
1438		14.95	0.07	6.98	20.7	1.42	-296	1.54	94.7	

Comments:

Signature: David J Tyron

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635.03-400041
Personnel: DJT
Date: 11-9-07

Time Start Purge: 0903
Time end Purge: 0931
Purge Method: Peristaltic
Weather Conditions: Cloudy 38°F

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-25B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 25.70
Depth of Sediment(ft):
Initial Depth of Water (ft): 15.04

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x1L Amber
Sample ID: WG-12635-110907-016
Sample Time 1015
Sample Date: 11-9-07

COC #: GM06148
Lab: Test America North Canton

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0906	340	15.07	0.03	6.80	20.4	1.45	-163	2.06	20.3	
0911		15.08	0.04	6.95	20.4	1.45	-201	1.67	28.2	
0916		15.09	0.05	7.02	20.4	1.44	-231	1.57	38.3	
0921	335	15.09	0.05	7.04	20.4	1.44	-247	1.52	55.4	
0926		15.09	0.05	7.05	20.4	1.44	-261	1.50	57.1	
0931		15.10	0.06	7.03	20.4	1.45	-269	1.51	60.9	

Comments:

Signature: Dave J Tyran

DUP

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-9-07

Time Start Purge: 1016
Time end Purge: 1051
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 40°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-26B
t point:
Constructed Well Depth (ft):
Sounded Well Depth (ft): 26.30
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.78

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 8x1L Ambes
Sample ID: WG-12635-110907-017
Sample Time: 1120
Sample Date: 11-9-07

COC #: GM06148
Lab: Test America, North Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1021	105	15.02	0.24	7.06	20.4	1.21	-137	2.97	23.8	
1026	105	15.11	0.33	7.05	20.4	1.20	-140	2.59	23.9	
1031		15.22	0.44	7.07	20.4	1.20	-138	2.19	23.2	
1040		15.32	0.54	7.09	20.4	1.19	-152	1.97	22.8	
1046		15.38	0.60	7.10	20.4	1.19	-159	1.78	24.8	
1051				7.09	20.3	1.19	-165	1.74	24.5	

Comments: Blind Duplicate WG-12635-110907-018 1330

Signature: Dave J Tyran

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: RBN/ DJT
Date: 11/13/07

Time Start Purge: 0954
Time end Purge: 1040
Purge Method: Peristaltic Pump
Weather Conditions: 50°F Sunny

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-22B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 29.25
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.87

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 4 X 1 L
Sample ID: WG-12635-111307-019
Sample Time 1040
Sample Date: 11/13/07

COC #: 06150
Lab: Test America North Canton

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1015	110	13.36	0.58	6.48	21.90	2.16	-117	1.75	6.8	Clear / colorless
1020	105	13.59	0.72	6.70	21.95	2.13	-131	1.62	12.2	
1025	100	13.72	0.85	6.78	21.94	2.12	-135	1.58	17.0	
1030	100	13.90	1.03	6.82	21.95	2.12	-136	1.54	21.0	
1035	100	14.00	1.13	6.86	21.95	2.11	-135	1.51	21.2	

Comments:

Signature: Rachel B. Nash

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041

Personnel: RBN/DJT

Date: 11/13/07

Time Start Purge: 1210

Time end Purge: 1245

Purge Method: PARASTALTIC PUMP

Weather Conditions: 50° sunny

Presence of Immiscible Layers:

Yes (No)

Detection method: interface probe

Collection Method:

Monitoring Well Data:

Well ID: MW-205

t point

Constructed Well Depth (ft):

Sounded Well Depth (ft): 11.68

Depth of Sediment(ft):

Initial Depth of Water (ft): 6.72

Sample Record:

Sampling Method: Parastaltic pump

Sample Volume: 4 X 1L oil/grease & PCB

Sample ID: DG-12635-111307-020

Sample Time 1245

Sample Date: 11/13/07

COC #: 06150

Lab: TEST AMERICA, NORTH CANTON

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1215	100	6.79	0.07	6.80	19.30	2.49	~~19.30~~ -130	1.62	7.4	slightly cloudy, light gray
1220	100	6.91	0.12	6.82	19.25	2.44	-155	1.46	7.9	
1225	105	7.03	0.31	6.87	19.28	2.34	-183	1.40	8.0	
1230	104	7.16	0.44	6.95	19.27	2.18	-209	1.38	7.4	
1235	109	7.26	0.54	6.93	19.28	2.06	-208	1.35	4.3	
1240	107	7.39	0.67	6.88	19.29	2.00	-200	1.35	3.2	

Comments:

Signature: Rachel B. Nash

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635.03.400041
Personnel: DJT/RBN
Date: 11/13/07

Time Start Purge: 1223
Time end Purge: 1305
Purge Method: Peristaltic
Weather Conditions: Sunny 55°F

Presence of Immiscible Layers:
Yes (No)
Detection method: InterFace Probe
Collection Method:

Monitoring Well Data:

Well ID: MW102
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 13.06
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.41

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 4x1L Amber
Sample ID: WG-12635-111307-021
Sample Time 1400
Sample Date: 11-13-07

COC #: GM 06150
Lab: Test America, North Canton

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1240	140	6.57	0.16	7.10	18.7	3.06	-129	2.51	39.5	
1245				7.06	18.6	2.88	-129	1.62	28.2	
1250		6.67	0.26	6.98	18.5	2.69	-131	1.44	9.7	
1255	125	6.67	0.26	6.96	18.4	2.66	-131	1.31	7.4	
1300				6.96	18.4	2.65	-131	1.24	6.8	
1305		6.68	0.27	6.97	18.4	2.65	-133	1.30	6.5	

Comments:

Signature: Dave Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 126035-03-40041
Personnel: RBN/DST
Date: 11/13/07

Time Start Purge: 1340
Time end Purge: 1400
Purge Method: Peristaltic pump
Weather Conditions: 50° sunny

Presence of Immiscible Layers:
Yes (No)
Detection method: Interphase probe
Collection Method:

Monitoring Well Data:

Well ID: CP-12A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 15.54
Depth of Sediment(ft):
Initial Depth of Water (ft): 9.23

Sample Record:

Sampling Method: PARASTALTIC PUMP
Sample Volume: 4 x 1L AMBER 2 x PCB 2 x G.W. GREASE
Sample ID: WG-126035-[illegible]-022-111307
Sample Time 1400
Sample Date: 11/13/07

COC #: 61150
Lab: TEST AMERICA, NORTH CANTON

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1345	101	9.85	0.62	6.46	24.09	1.75	-152	1.67	38.5	Clear colorless
1350	98	10.21	0.98	6.51	24.25	1.76	-160	1.56	37.0	
1355	95	10.57	1.34	6.50	24.46	1.76	-166	1.46	37.1	

Comments:

Signature: Rachel B. [illegible]

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT
Date: 11-8-07

Time Start Purge: 0928
Time end Purge: 0942
Purge Method: Peristaltic
Weather Conditions: Cloudy 33°F

Presence of Immiscible Layers:
Yes (NO)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-23
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 5.61
Depth of Sediment(ft):
Initial Depth of Water (ft): 4.83

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 3x1L Amber
Sample ID: ~~WG-12635-110807-016~~ WG-12635-111307-023 (EST)
Sample Time ~~0815~~ 1410 (EST)
Sample Date: ~~11-8-07~~ 11/13/07 (EST)

COC #: ~~GM06148~~ GM06153 (EST)
Lab: Test America North Canton

Well Yield:
High (Low)

Sample ID WG-12635-111307-023

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0936	90	5.31	0.48	6.32	21.1	1.20	-117	3.34	8.0	
0941				6.36	21.8	1.22	-114	2.64	5.1	
07 0822		5.35	0.44	6.35	22.4	1.18	-89	3.34	13.7	
			well	Dry						
3/07 1045				6.63	22.5	1.18	-100	2.84	4.5	
1050	110			6.64	22.6	1.16	-106	1.29	3.4	
0955				6.64	22.6	1.18	-119	1.61	5.2	

Comments: well Dry 11/9/07 0750 w/l 4.91, 11/13/07 w/l 4.87 well Dry
2x1L for PCB's 1x1L 0.1 & Grease

Signature: Daniel J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-16-08

Time Start Purge: 0951
Time end Purge: 1045
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-205
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.59

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBs 2x1L O&G
Sample ID: GG-12635-061608-001
Sample Time 11:00
Sample Date: 6-16-08

COC #: 06159
Lab: TEST AMERICA-N.C

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1004	70	6.83	0.24	6.82	19.6	2.98	54	1.15	-1.9	
1009	70	6.90	0.31	6.92	19.6	2.94	7	0.31	-1.4	
1014	70	6.98	0.39	6.91	19.6	2.88	-29	0.07	0.0	
1019	75	7.03	0.44	6.91	19.6	2.86	-47	0.01	0.0	
1024	80	7.11	0.52	6.92	19.6	2.84	-78	0.00	0.0	
1029	75	7.17	0.58	6.96	19.6	2.82	-97	0.00	0.0	
1034	75	7.22	0.63	6.96	19.6	2.77	-110	0.00	0.0	
1039	75	7.29	0.70	6.96	19.6	2.75	-123	0.00	0.0	
1044	75	7.35	0.76	6.95	19.6	2.74	-130	0.00	0.0	

Comments: Inst. Control #'s Horiba NF04389, W/L Meter NF04420

Signature: Dave J Tyler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DdT, SG
Date: 6-16-08

Time Start Purge: 1158
Time end Purge: 1238
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 1A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.07

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBs 2x1L HEM
Sample ID: WG-12635-061608-002
Sample Time 1240
Sample Date: 6-16-08

COC #: 6159
Lab: Test America NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1208		6.00	0.93	6.72	17.1	1.11	161	3.24	1.1	
1213		6.20	1.13	6.82	17.2	1.08	~~114~~	0.55	0.0	
1218	55	6.37	1.30	6.83	17.2	1.06	97	0.37	0.0	
1223	60	6.68	1.61	6.85	17.4	1.07	71	0.11	0.0	
1228		6.95	1.88	6.87	17.2	1.10	56	0.07	0.0	
1233	60	7.22	2.15	6.87	17.2	1.10	50	0.00	0.0	
1238	55	7.49	2.42	6.87	17.3	1.10	48	0.00	0.0	

Comments: Inst. Control #'s Horiba Rental, W/L M&E NF03172

Signature: Dave J Tigran

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-A000A1
Personnel: DJT, SG
Date: 6-16-08

Time Start Purge: 1217
Time end Purge: 1306
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 1B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 13.38

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: *
Sample ID: WG-12635-061608-003
Sample Time 1330
Sample Date: 6-16-08

COC #: 06159, 6161
Lab: Test America NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1221	210	13.38	0.00	5.77	15.0	1.98	-88	5.04	34.0	
1226		13.38	0.00	6.46	14.5	2.00	-206	3.21	26.3	
1231	210	13.38	0.00	7.38	14.4	2.14	-328	2.56	24.7	
1236	200	13.38	0.00	7.75	14.5	2.28	-349	2.27	21.1	
1241	200	13.38	0.00	8.10	14.7	2.51	-381	1.98	27.6	
1246	200	13.38	0.00	7.24	14.9	2.77	-243	1.86	27.8	
1251	200	13.38	0.00	6.94	14.9	2.81	-226	1.84	23.6	
1256	200	13.38	0.00	6.80	15.0	2.92	-217	1.84	17.3	
1301	200	13.38	0.00	6.77	15.0	2.98	-214	1.79	9.9	
1306	200	13.38	0.00	6.77	15.1	3.00	-215	1.70	8.1	

Comments: * 3x40ml TCL VOC 2x1L TCL SVOC 1x1L TCL Metals
2x1L TCL PCBs 2x1L HEM Inst. Control #'s Horiba NE04389, W/L Meter NF4420

Signature: Dave J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03
Personnel: DJT, SG
Date: 6-16-08

Time Start Purge: 1400
Time end Purge: 1438
Purge Method: PERISTALTIC
Weather Conditions: Overcast

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: CP-25B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.73

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 6x1L PCBs 6x1LHEM
Sample ID: WG-12635-061608-004
Sample Time 1500
Sample Date: 6-16-08

COC #: 6159
Lab: Test America NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1413	300	14.79	0.06	6.89	18.7	2.03	-250	2.60	17.5	
1418	320	14.80	0.07	6.89	18.6	2.02	-260	2.00	12.7	
1423	320	14.81	0.08	6.90	18.6	2.04	-279	1.70	12.1	
1428	320	14.81	0.08	6.90	18.5	2.07	-294	1.55	10.3	
1433	340	14.81	0.08	6.90	18.6	2.11	-304	1.46	8.0	
1438	360	14.81	0.08	6.90	18.6	2.13	-314	1.41	8.7	

Comments: ~~MS/MSD~~ Inst. Control #'s w/L Meter NF03172, Horiba - Rental

Signature: David J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:
Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-17-08

Time Start Purge: 0736
Time end Purge: 0813
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:
Well ID: CP-24B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.58

Sample Record:
Sampling Method: PERISTALTIC
Sample Volume: 2x 1L PCBs 2x 1L HEM
Sample ID: WG-12635-061708-005
Sample Time 0845
Sample Date: 6-17-08

COC #: 6162
Lab: TEST AMERICA N.C

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0744	540	14.64	0.06	7.10	19.5	1.92	-101	0.48	33.5	
0749	440	14.65	0.07	7.25	19.6	1.94	-242	0.00	59.7	
0754	440	14.65	0.07	7.25	19.7	1.98	-281	0.00	59.8	
0759	440	14.65	0.07	7.25	19.7	1.99	-293	0.00	47.6	
0804		14.65	0.07	7.26	19.7	2.00	-311	0.00	45.3	
0809		14.65	0.07	7.28	19.7	2.01	-320	0.00	44.6	

Comments: BLIND DUPLICATE WG-12635-061708-006 0900 2x 1L PCBS 2x 1L HEM
Inst. Control #'s Horiba NF04389, W/L Meter NF04420

Signature: David J Tyler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: SG, DJT
Date: 6-17-08

Time Start Purge: 0824
Time end Purge: 0859
Purge Method: Peristaltic
Weather Conditions: Cloudy 55°F

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: CP-26B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.52

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 2x1L PCBs 2x1L HEM
Sample ID: GW-12635-061708-008
Sample Time 0930
Sample Date: 6-17-08

COC #: 6162
Lab: Test America NC

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0834	70	14.78	0.26	7.48	18.7	1.07	-57	1.66	25.4	
0839		14.83	0.31	7.53	18.8	1.06	-96	0.02	24.4	
0844	72	14.87	0.35	7.53	18.8	1.06	-119	0.00	23.2	
0849		14.88	0.36	7.51	18.8	1.07	-134	0.00	22.5	
0854	70	14.89	0.37	7.50	18.8	1.06	-141	0.00	22.7	
0859				7.48	18.8	1.07	-146	0.00	20.9	

Comments: Inst. Control #'s w/L Meter NF03172, Horiba - Rental

Signature: David J Tyce

1.33

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004A1
Personnel: DJT, SG
Date: 6-17-08

Time Start Purge: 1036
Time end Purge: 1110
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: T-1B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.54

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBs 2x1L HEM
Sample ID: WG-12635-061708-010
Sample Time 1111
Sample Date: 6-17-08

COC #: 6162
Lab: TEST AMERICA NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1043	220	5.55	0.01	6.86	20.2	2.95	22	4.22	15.8	
1048	230	5.55	0.01	6.88	20.2	2.97	19	2.16	14.2	
1053	240	5.55	0.01	6.89	20.1	2.97	19	1.74	13.9	
1058	230	5.55	0.01	6.90	20.2	2.97	18	1.59	15.0	
1103	240	5.56	0.02	6.91	20.1	2.98	19	1.50	14.8	
1107	240	5.57	0.03	6.91	20.0	2.99	20	1.47	15.2	

Comments: Inst. Control #'s Horiba NF04389, w/L Meter NF04420

Signature: Dave J Tynan

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: SG, DJT
Date: 6.17.08

Time Start Purge: 1017
Time end Purge: 1056
Purge Method: Peristaltic
Weather Conditions: Sunny 60°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: M-2
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 8.09

Sample Record:

Sampling Method: Peristaltic
Sample Volume:
Sample ID: WG-12635-061708-011
Sample Time 1100
Sample Date: 6.17.08

COC #: 6167 (Shipped 1x1L PCBs only)
Lab: Test America NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1031				6.92	23.3	2.34	-29	0.49	5.3	
1036	48	8.49	0.40	6.92	23.4	2.34	-52	0.36	4.1	
1041		8.58	0.49	6.92	23.6	2.35	-65	0.32	5.3	
1046		8.65	0.56	6.92	23.7	2.37	-82	0.20	5.2	
1051		8.76	0.67	6.90	23.8	2.37	-86	0.27	4.5	
1056		8.78	0.69	6.89	23.8	2.37	-79	0.26	6.7	
				1x1L PCBs only no other Samples taken						
					well Dry					

Comments: Inst. Control #5 Horiba Rental, W/L Meter NF03172
6.17.08 1x1L PCBs, 6-18-08 0800 Dry 1400 Dry 6.19.08 0830 Dry

Signature: Dan J Tyra

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-17-08

Time Start Purge: 1144
Time end Purge: 1218
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-300A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 10.27

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: *
Sample ID: WG-12635-061708-012
Sample Time 1220
Sample Date: 6-17-08

COC #: 6162, 6163
Lab: TEST AMERICA N C

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1153	55	10.98	0.71	6.69	21.1	2.36	73	1.72	2.1	
1158		11.16	0.89	6.69	20.9	2.38	58	0.91	2.5	
1203	55	11.28	1.01	6.69	20.9	2.37	48	0.72	2.6	
1208		11.48	1.21	6.69	21.0	2.37	35	0.34	3.3	
1213				6.69	21.0	2.36	31	0.30	2.8	
1218		11.77	1.50	6.68	21.0	2.34	26	0.29	2.9	

Comments: Inst Control #'s W/L Meter NF03172 Horiba Rental
* 3x40ml TCL VOCs, 1x1L TCL Metals 2x1L TCL SVOCs 2x1L TCL PCBs 2x1L HEM

Signature: Dave J Tyran

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-17-08

Time Start Purge: 1334
Time end Purge: 1409
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY, RAIN

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: CP-22B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.95

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBS 2x1L HEM
Sample ID: WG-12635-061708-013
Sample Time 1410
Sample Date: 6-17-08

COC #: 6162
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1352	60	12.27	0.32	6.92	20.1	3.03	-115	3.95	21.7	
1357	60	12.32	0.37	6.93	20.4	3.01	-118	2.32	21.5	
1402	55	12.38	0.43	6.94	20.6	3.01	-120	2.10	22.1	
1407	50	12.41	0.46	6.95	20.8	3.00	-121	1.93	23.7	

Comments: INST. CONTROLS - W/L METER NF 04420 HORIBA NF04389

Signature: Dave J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-A00041
Personnel: DJT, SG
Date: 6-18-08

Time Start Purge: 0749
Time end Purge: 0819
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY, RAIN

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: CP-23
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 4.76

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBS 1x1L HEM
Sample ID: WG-12635-061808-015
Sample Time 0820
Sample Date: 6-18-08

COC #: 331
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0801	50	5.02	0.26	6.23	19.3	1.40	-120	3.25	3.8	
0806	40	5.09	0.33	6.25	19.3	1.39	-118	2.42	3.9	
0811	40	5.16	0.40	6.26	19.4	1.39	-119	2.35	3.6	
0816	40			6.27	19.5	1.38	-119	2.26	3.7	

Comments: INST. CONTROLS W/L METER NF04420 HORIBA NF04389
6-18-08 ½ 1L HEM 6-19-08 ½ HEM 2xL PCB

Signature: Dave J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-17-08

Time Start Purge: 1149
Time end Purge: 1212
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY

Presence of Immiscible Layers: Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-300
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.20

Sample Record:

Sampling Method: Peristaltic
Sample Volume:
Sample ID: SG-12635-061808-016
Sample Time 0920
Sample Date: 6-18-08

COC #:
Lab:

Well Yield: High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1200	60	5.67	0.47	6.40	20.9	2.97	-102	3.43	31.9	
1205	55			6.38	20.8	2.95	-103	2.46	27.1	
1210	40			6.38	20.8	2.90	-102	2.00	23.5	
		WELL DRY								
				Dry well no sample Taken						

Comments: INST. CONTROLS - W/L METER NF 04420 HORIBA NF 04389
6.18.08 1/2 PCB checked @ 1430 Dry 6-19-08 0745 Dry 1500 Dry

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-18-08

Time Start Purge: 0917
Time end Purge: 0945
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY, RAIN

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: CP-12A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.34

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBs 2x1L HEM
Sample ID: WG-12635-061808-017
Sample Time 0946
Sample Date: 6-18-08

COC #:
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0932	70	12.70	0.36	6.46	20.3	1.84	-100	2.52	0.0	
0937	50	12.75	0.41	6.45	20.4	1.85	-99	2.32	0.0	
0942	40	12.81	0.47	6.47	20.4	1.85	-98	2.20	0.0	
~~0947~~ (56)										

Comments: INST. CONTROLS W/L METER NF04420 HORIBA NF0A389

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-A00041
Personnel: DJT, SG
Date: 6-18-08

Time Start Purge: 1117
Time end Purge: 1152
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY, RAIN

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-102
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.90

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBS 2x1L HEM
Sample ID: WG-12635-061808-018
Sample Time 1153
Sample Date: 6-18-08

COC #: 6156
Lab: TEST AMERICA NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1125	~~165~~ 160	~~7.40~~ 6.05	0.15	6.81	17.1	3.36	-149	4.20	0.0	
1130	160	~~6.00~~ 6.11	0.21	6.82	16.9	3.29	-156	2.04	0.0	
1135	160	6.14	0.24	6.82	16.9	3.26	-158	1.81	0.0	
1140	160	6.17	0.27	6.83	16.8	3.24	-159	1.64	0.0	
1145	165	6.20	0.30	6.84	16.8	3.22	-161	1.58	0.0	
1150	165	6.22	0.32	6.84	16.8	3.21	-164	1.53	0.0	

Comments: INST. CONTROLS W/L METER NF04A20 HORIBA NF04389
BLIND DUPLICATE WG-12635-061808-020 1213 2x1L PCBS 2x1L HEM

Signature: _____

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040
Personnel: DJT, SG
Date: 6-18-08

Time Start Purge: 0957
Time end Purge: 1032
Purge Method: Peristaltic
Weather Conditions: Cloudy 53°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW204
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.76

Sample Record:

Sampling Method: Peristaltic
Sample Volume: *
Sample ID: GKG-12635-061808-019
Sample Time 1100
Sample Date: 6-18-08

COC #: 6156, 6157
Lab: Test America NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1012	70	4.07	0.31	6.66	16.8	5.53	114	0.29	3.8	
1017		4.14	0.38	6.74	16.9	5.44	81	0.00	3.4	
1022		4.22	0.46	6.78	17.1	5.30	63	0.00	3.8	
1027	75	4.27	0.51	6.78	17.2	5.22	59	0.00	3.1	
1032				6.77	17.1	5.18	57	0.00	3.6	

Comments: Inst. Control #'s Horiba - Rental, w/L Meter, NF03172
* 3x40ml TCL VOC 2x1L TCL SVOC 2x1L TCL PCBs 1x1L TCL Metals 2x1L HEM

Signature: David J Tyran

MS/MSD

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040
Personnel: DJT, SG
Date: 6-18-08

Time Start Purge: 1233
Time end Purge: 1326
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 58°F

Presence of Immiscible Layers:
Yes (No)
Detection method: InterFace Probe
Collection Method:

Monitoring Well Data:

Well ID: MW409B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.19

Sample Record:

Sampling Method: Peristaltic
Sample Volume: *
Sample ID: 4XG-12635-061808-021
Sample Time 1345
Sample Date: 6-18-08

COC #: 6156, 6157
Lab: Test America NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1236	250	11.28	0.09	7.08	15.7	2.03	-33	2.21	26.1	
1241	280	11.29	0.10	7.12	15.1	1.97	-107	0.13	33.5	
1246	300	11.31	0.12	7.06	15.1	1.96	-136	0.00	64.1	
1251	380	11.33	0.14	7.05	15.0	1.95	-161	0.00	50.0	
1256		11.36	0.17	7.04	15.0	1.95	-182	0.00	110.0	
1306		11.36	0.17	7.02	14.9	1.94	-215	0.00	8.9	
1311		11.37	0.18	7.03	14.9	1.93	-228	0.00	10.0	
1316		11.37	0.18	7.05	15.0	1.91	-245	0.00	9.3	
1321				7.06	15.0	1.92	-253	0.00	11.3	
1326				7.03	15.0	1.92	-260	0.00	11.9	

Comments: Inst. Control #'S Horiba - Rental w/ Meter NF03172
* 9x40ml TCL VOC, 6x1L TCL SVOC 6x1L TCL PCBs 3x1L TCL Metals 6x1L HEM

Signature: Dave J Tyran

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 202040 12635-03-~~4CC04~~ (EE)
Personnel: DJT, SG
Date: 6-19-08

Time Start Purge: 0807
Time end Purge: 0856
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-408
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.600

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: *
Sample ID: WG-12635-061908-022
Sample Time 0857
Sample Date: 6-19-08

COC #: 6167, 6168
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0822	50	6.11	0.51	7.19	14.9	4.59	-175	4.21	34.3	
0827	60	6.28	0.68	7.24	14.8	4.46	-172	2.56	32.1	
0832	60	6.38	0.78	7.18	14.8	4.28	-169	2.15	20.3	
0837	60	6.51	0.91	7.18	14.9	4.22	-171	1.93	18.4	
0842	60	6.61	1.01	7.19	14.9	4.20	-170	1.83	17.3	
0847	60	6.72	1.12	7.19	15.0	4.20	-171	1.70	16.9	
0852	60	6.86	1.26	7.20	15.0	4.20	-172	1.66	15.9	

Comments: * 2x1L PCB, 2x1L SVOC 2x1L HEM 1x1L METALS 3x 40z VOC
INST. CONTROLS W/L METER NF 04420 HORIBA NF 04389

Signature: David J Tyree

DUP

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040
Personnel: DJT/SG
Date: 6-19-08

Time Start Purge: 0921
Time end Purge: 0959
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 58°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW-5B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.51

Sample Record:

Sampling Method: Peristaltic
Sample Volume: *
Sample ID: WG-12635-061908-023
Sample Time 1030
Sample Date: 6-19-08

COC #: 6167, 6168
Lab: Test America NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0924	220	6.57	0.06	7.30	14.7	1.38	177	1.06	18.2	
0929	390	6.58	0.07	8.46	14.2	1.42	159	0.00	17.9	
0934		6.61	0.10	7.69	13.8	1.56	118	0.00	21.9	
0939	450	6.62	0.11	7.26	13.7	1.67	72	0.00	16.5	
0944		6.63	0.12	7.21	13.6	1.69	28	0.00	20.2	
0949	430	6.64	0.13	7.16	13.6	1.71	7	0.00	16.6	
0954		6.64	0.13	7.13	13.6	1.71	-10	0.00	10.6	
0959		6.64	0.13	7.11	13.5	1.72	-19	0.00	5.9	

Comments: Blind Dup. WG-12635-061908-024 (1200)
* 6x40ml TCL VOC, 4x1L TCL SVOC, 4x1L TCL PCBS, 2x1L TCL Metals, 4x1L HEM

Signature: David J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040
Personnel: SG, DJT
Date: 6-19-08

Time Start Purge: 1105
Time end Purge: 1151
Purge Method: Peristaltic
Weather Conditions: Partly Sunny 64°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 409
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 0.07

Sample Record:

Sampling Method: Peristaltic
Sample Volume: *
Sample ID: 2G-12635-061908-025
Sample Time 1215
Sample Date: 6-19-08

COC #: 6167, 6168
Lab: Test America NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1111	200	0.25	0.18	7.54	18.0	8.95	61	0.47	89.6	
1116	230	0.30	0.23	7.70	18.2	8.37	-63	0.00	63.2	
1121	240	0.32	0.25	7.71	18.1	8.20	-121	0.00	32.6	
1126		0.38	0.31	7.72	18.2	7.13	-154	0.00	35.8	
1131	260	0.29	0.22	7.73	18.1	6.56	-172	0.00	23.3	
1136		0.29	0.22	7.75	18.0	5.61	-184	0.00	23.8	
1141		0.29	0.22	7.77	17.9	4.79	-190	0.00	25.0	
1146		0.29	0.22	7.85	17.9	4.75	-195	0.00	26.4	
1151				7.94	17.8	4.68	-201	0.00	25.4	

Comments: * 3x40ml TCL VOC 2x1L TCL SVOC 2x1L TCL PCBs 1x1L TCL Metals 2x1L HEM
Inst. Controls #'s w/L meters NF03172, Horiba ~ Rental

Signature: Dana J Tyson

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03 ~~400041~~ 202040 (SG)
Personnel: DJT, SG
Date: 6-19-08

Time Start Purge: 1232
Time end Purge: 1327
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-4A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 13.85

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: *
Sample ID: MG-12635-061908.026
Sample Time (SG) ~~1320~~ 1328
Sample Date: 6-19-08

COC #:
Lab: TEST AMERICA NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1241	140	13.98	0.13	6.74	16.4	12.49	209	7.69	9.4	
1246	140	13.99	0.14	6.70	16.6	12.45	224	4.75	9.0	
1251	140	14.00	0.15	6.71	16.7	12.26	230	4.01	5.0	
1256	140	14.00	0.15	6.70	17.0	11.31	231	3.39	3.4	
1301	140	14.00	0.15	6.70	17.2	10.28	230	2.95	2.4	
1306	140	14.00	0.15	6.69	17.1	9.62	230	2.68	1.9	
1311	140	14.00	0.15	6.68	17.1	7.34	228	2.16	0.9	
1316	140	14.00	0.15	6.65	16.9	6.89	226	1.86	0.6	
1321	140	14.00	0.15	6.65	16.9	6.69	228	1.79	0.3	

Comments: INST. CONTROL # W/L METER NF 04420 HORIBA NF 04389
* 2x 1L TCL PCB 2x 1L TCL SVOC 2x 1L HEM 1x 1L TCL METALS 3x^A02 TCL VOC

Signature: _____

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: SG, DJT
Date: 6-19-08

Time Start Purge: 1325
Time end Purge: 1429
Purge Method: Peristaltic
Weather Conditions: Cloudy 60°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW-3A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.03

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 2x1L HEM 2x1L ABs
Sample ID: GG-12635-061908-027
Sample Time 1440
Sample Date: 6-19-08

COC #: 6167
Lab: Test America NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1334	95	7.46	0.43	5.83	16.5	1.63	91	2.26	74.8	
1339		7.46	0.43	6.38	17.2	1.69	94	0.25	79.3	
1344	60	7.47	0.44	6.49	17.8	1.75	71	1.27	80	
1349		7.57	0.54	6.39	16.2	1.85	80	0.00	60	
1354	90	7.63	0.60	6.32	15.7	1.90	75	0.00	49.1	
1359		7.59	0.56	6.01	15.8	2.01	63	0.00	47.7	
1404		7.52	0.49	4.68	15.8	2.04	29	0.00	31.9	
1409	95	7.62	0.59	4.95	15.4	2.22	-2	0.00	28.9	
1414				5.27	15.2	2.28	-10	0.00	27.6	
1419		7.59	0.56	5.53	15.2	2.33	-16	0.00	24.9	
1424		7.59	0.56	5.66	15.1	2.40	-21	0.00	21.0	
1429				5.72	15.0	2.44	-22	0.00	18.5	

Comments: Inst. Control #'s w/L Meter NF03172, Horiba - Rental

Signature: Dave Tyler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040
Personnel: DJT, SG
Date: 6-20-08

Time Start Purge: 0755
Time end Purge: 0851
Purge Method: PERISTALTIC
Weather Conditions: CLOUDY, RAIN

Presence of Immiscible Layers: Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 2.70

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: *
Sample ID: WG-12635-062008-028
Sample Time 0852
Sample Date: 6-20-08

COC #: 331, 330
Lab: TEST AMERICA N C

Well Yield: High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0815	60	3.64	0.94	8.82	17.5	4.88	-120	4.67	252.0	
0820	40	3.80	1.10	8.75	17.5	4.67	-118	3.07	217.0	
0825	40	3.93	1.23	8.77	17.5	4.45	-109	2.55	170.0	
0830	50	4.02	1.32	8.78	17.5	4.39	-101	2.29	151.0	
0835	40	4.10	1.40	8.78	17.6	4.33	-95	2.18	138.0	
0840	40	4.17	1.47	8.78	17.8	4.26	-88	2.08	125.0	
0845	50	4.26	1.56	8.78	17.8	4.25	-87	2.06	123.0	

Comments: * 2x1L TCL PCB 2x1L TCL SVOC 2x1L HEM 1x1L TCL METALS 3x4oz. TCL VOC
INST. CONTROL # W/L METER NF04420 HORIBA NF04389

Signature: Dave J Tyra

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DST/SG
Date: 6-20-08

Time Start Purge: 0756
Time end Purge: 0822
Purge Method: Peristaltic
Weather Conditions: Overcast 56°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW 801 A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.17

Sample Record:

Sampling Method: Peristaltic
Sample Volume: 2x1L HEM 2x1L PCBs
Sample ID: 426-12635-062008-029
Sample Time 0830
Sample Date: 6-20-08

COC #: 331
Lab: Test America NJC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0802	100	8.24	1.07	6.60	15.4	4.62	169	1.26	23.2	
0807				6.69	15.4	4.54	150	0.00	48.4	
0812		9.07	1.90	6.72	15.4	4.54	135	0.00	48.7	
0817	50	9.41	2.24	6.73	15.4	4.50	126	0.00	54.3	
0822				6.74	15.5	4.53	122	0.00	51.3	

Comments: Inst.-Control #'s w/L Meter NF03172, Horiba - Rental

Signature: Dave J Tyner

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:
Number: 12635-03-400041
Personnel: SG, DJT
Date: 6-20-08

Time Start Purge: 0930
Time end Purge: 1005
Purge Method: Peristaltic
Weather Conditions: Overcast 60°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:
Well ID: MW-804A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 13.10

Sample Record:
Sampling Method: Peristaltic
Sample Volume: 1x1L HEM, 2x1L PCBs
Sample ID: GW-12635-062008-030
Sample Time 1005
Sample Date: 6-20-08

COC #: 331
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0945	50	14.00	0.90	6.61	15.2	3.66	216	3.94	41.8	
0950		14.30	1.20	6.67	15.2	3.64	199	3.39	32.8	
0955	50	14.68	1.58	6.57	15.0	3.65	188	3.15	27.0	
1000				6.57	14.9	3.65	178	2.87	25.3	
1005		14.97	1.87	6.52	14.9	3.65	177	2.79	26.2	

Comments: Inst: Control #'s W/L Meter NF03172, Horiba - Rental
* only 1L taken for HEM well went Dry

Signature: David J Tynan

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT SG
Date: 6-20-08

Time Start Purge: 1245
Time end Purge: 1331
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-2A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 8.98

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBS 2x1L HEM
Sample ID: WG-12635-062008-031
Sample Time 1332
Sample Date: 6-20-08

COC #: 331
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1255	100	9.42	0.44	6.59	17.3	24.4	-12	0.29	25.1	
1300	100	9.58	0.60	6.68	17.2	19.1	-56	0.00	25.5	
1305	100	9.71	0.73	6.66	17.2	16.3	-68	0.00	33.8	
1310	100	9.90	0.92	6.61	17.5	14.0	-74	3.79	23.1	
1315	100	10.02	1.04	6.59	16.7	14.2	-78	3.43	23.3	
1320	100	10.15	1.17	6.58	16.7	14.3	-80	0.31	23.2	
1325	100	10.30	1.32	6.56	16.5	14.3	-84	0.33	23.0	
1330	100	10.42	1.44	6.56	16.6	14.5	-85	0.00	22.9	

Comments: INST CONTROL # W/L METER NF 03172 HORIBA RENTAL

Signature: David J Tyra

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004
Personnel: DJT, SG
Date: 6-23-08

Time Start Purge: 1157
Time end Purge: 1250
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-6A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.77

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBS 2x1L HEM
Sample ID: WG-12635-062308-032
Sample Time 1251
Sample Date: 6-23-08

COC #: 332
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1213	50	7.15	0.38	6.57	17.1	1.36	189	0.72	179	
1218	50	7.22	0.45	6.61	17.2	1.35	165	0.33	105	
1223	50	7.30	0.53	6.62	17.3	1.34	145	0.11	50.6	
1228	50	7.36	0.59	6.63	17.4	1.33	132	0.00	34.8	
1233	50	7.42	0.65	6.70	17.5	1.32	99	0.00	24.7	
1238	50	7.47	0.70	6.65	17.6	1.32	80	0.00	20.4	
1243	50	7.52	0.75	6.65	17.7	1.32	85	0.00	22.6	
~~1248~~	50	7.55	0.78	6.10		1.32	24 (SG)			

Comments: INST CONTROL # W/L METER NF 04420 HORIBA - RENTAL

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: DJT, SG
Date: 6-23-08

Time Start Purge: 1200
Time end Purge: 1247
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-6B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.89

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBs 2x1L HEM
Sample ID: WG-12635-062308-033
Sample Time 1248
Sample Date: 6-23-08

COC #: 332
Lab: TEST AMERICA NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1225	60	8.15	0.26	6.32	21.2	2.19	-82	5.97	252	
1230	60	8.20	0.31	6.34	19.8	2.16	-83	3.55	205	
1235	60	8.25	0.36	6.34	19.9	2.12	-84	2.76	185	
1240	60	8.30	0.41	6.34	20.1	2.11	-85	2.51	168	
1245	60	8.30	0.41	6.34	20.2	2.11	-87	2.47	166	

Comments: INST. - CONTROL # W/L METER NF 03172 HORIBA NF 04389

Signature: _____

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40001
Personnel: DJT, SG
Date: 6-24-08

Time Start Purge: 0755
Time end Purge: 0853
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes (No)
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW-106
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.25

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBS 2x1L HEM
Sample ID: WG-12635-062408-34
Sample Time 0854
Sample Date: 6-24-08

COC #: 333
Lab: TEST AMERICA NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0814	110	6.42	0.17	6.45	15.1	2.74	-43	7.40	6.8	
0819	110	6.47	0.22	6.50	14.9	2.82	-69	3.53	6.3	
0824	110	6.48	0.23	6.54	14.9	3.04	-83	3.12	6.2	
0829	110	6.50	0.25	6.58	14.9	3.35	-95	2.73	6.2	
0834	110	6.51	0.26	6.60	14.9	3.41	-100	2.62	6.2	
0839	110	6.52	0.27	6.70	15.0	4.44	-125	2.19	6.5	
0844	110	6.53	0.28	6.72	15.0	4.86	-126	2.16	6.4	
0849	110	6.54	0.29	6.73	15.1	4.95	-129	2.11	6.3	

Comments: INST. CONTROL # W/L METER NF03172 HORIBA NF04389

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635.03-400041
Personnel: DJT, SG
Date: 6-24-08

Time Start Purge: 0834
Time end Purge: 0938
Purge Method: PERISTALTIC
Weather Conditions: SUNNY

Presence of Immiscible Layers:
Yes No
Detection method: INTERFACE PROBE
Collection Method:

Monitoring Well Data:

Well ID: MW405
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 2.99

Sample Record:

Sampling Method: PERISTALTIC
Sample Volume: 2x1L PCBs 2x1L HEM
Sample ID: GWG-12635-062408-035
Sample Time 0945
Sample Date: 6.24.08

COC #: 333
Lab: TEST AMERICA N C

Well Yield:
High (Low)

1927

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0853	65	3.48	0.49	6.69	21.3	17.93	-5.3	11.72	4.5	
0858		3.56	0.57	6.69	21.5	18.10	-1.6	13.24	4.4	
0903	65	3.63	0.64	6.68	21.5	18.88	7.3	15.29	3.9	
0908		3.73	0.74	6.69	20.8	21.86	-57.9	16.49	4.2	
0913	6.5	3.77	0.78	6.70	20.9	20.76	-57.7	17.49	2.9	
0918		3.85	0.86	6.71	20.8	20.39	-60.1	18.82	2.1	
0923		3.97	0.98	6.72	20.6	19.28	-58.1	20.07	2.5	
0928				6.73	20.8	18.16	-52.6	21.03	2.5	
0933	70	4.18	1.19	6.74	21.0	17.56	-55.5	22.13	2.1	
0938		4.27	1.28	6.76	21.1	17.02	-56.4	23.00	1.6	

Comments: INST. CONTROL # W/L METER NF04420 (YSI) ~~TOPIBA~~ NF04441

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Fowles, K. Nyborg
Date: 11/17/08

Time Start Purge: 12:00
Time end Purge: 1513
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: CP-25B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 25.3
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.36

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-111708-KN-001
Sample Time 1340
Sample Date: 11/17/08

COC #: 203576
Lab: Test America - Pitts

Well Yield:
(High)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
12:57	30	14.45	0.09	6.92	14.7	1.44	-157	1.10	19.1	
13:02		14.50	0.14	6.85	14.1	1.35	~~-160~~ -163	0.28	25.7	
13:07		14.53	0.17	6.87	13.7	1.30	-166		26.9	
13:17		14.56	0.20	6.86	13.3	1.31	-167		36.0	
13:22		14.58	0.22	6.98	13.7	1.35	-166		32.5	
13:27		14.60	0.24	~~7.08~~	~~13.4~~	~~1.24~~	~~-160~~	~~0.71~~	~~42.0~~	
13:33		14.61	0.25	6.97	14.5	1.36	-150	0.99	25.3	
13:40		14.61	0.25	7.18	~~16.16~~	~~1.38~~	-176	0.97	8.6	
13:43		14.62	0.26	7.24	17.0	1.35	-182	0.98	5.9	
13:48	↓	14.62	0.26	7.28	17.2	1.39	-185	0.96	4.8	

Comments:

Signature:

Sample ID: GW:12635:111708:KN:001 @ 13:48

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyberg
Date: 11/18/08

Time Start Purge: 11:45
Time end Purge:
Purge Method: Ultra Low Flow
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW4D
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 17.35
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.2

Sample Record:

Sampling Method: ultra low flow
Sample Volume: 4lt
Sample ID: GW:12635:111808:KN:002
Sample Time 1400
Sample Date: NOV 181108

COC #: 3576
Lab: Test America - PHS
Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1341	30	14.71	0.51	7.08	13.3	8.35	239	0.67	4.8	
1346	↓	14.90	0.70	7.08	13.0	8.36	241	0.68	3.9	
1351	↓	15.01	0.81	7.06	13.0	8.30	242	0.66	4.1	

Comments:

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4041
Personnel: S. Pooles, K. Nyberg
Date: 11/19/08

Time Start Purge: 09:42
Time end Purge: 1130
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW 801A
t point:
Constructed Well Depth (ft):
Sounded Well Depth (ft): 18.3
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.31

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-111908-KN-003
Sample Time: 0945
Sample Date: 11/19/08

COC #: 003575
Lab: Test America - [illegible] NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
09:15	30	10.11	2.80	6.74	10.7	4.09	-83	1.13	4.29	
0920	↓	10.63	3.32	6.88	11.1	4.12	-96	0.91	3.20	
0925		10.85	3.54	6.91	11.1	4.13	-101	0.96	2.32	
0930		10.97	3.66	6.92	11.0	4.09	-102	0.69	2.11	
0935		11.20	3.89	6.94	10.5	4.15	-103	0.60	2.95	
0940		11.35	4.04	6.95	10.3	4.11	-103	0.59	2.39	

Comments:

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Myberg
Date: 11/19/08

Time Start Purge: 1040
Time end Purge: 1450
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes ⊘
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-2A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 12.65
Depth of Sediment(ft):
Initial Depth of Water (ft): 9.27

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: 1310
Sample Time ~~1310~~ GW-12635-111908-KM-004
Sample Date: 11/19/08

COC #: 003575
Lab: Test America - Kappa NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1100	30	9.52	0.35	7.25	8.3	19.3	-70	1.30	10.16	
1140	↓	9.88	0.71	6.96	6.8	18.0	-75	1.12	9.77	
1240		10.20	1.03	7.27	6.4	17.9	-78	0.92	5.61	
1255		10.35	1.18	7.02	6.6	18.0	-80	0.88	3.96	
1300		10.40	1.23	7.01	6.6	18.6	-80	0.86	3.07	
1305		10.46	1.29	7.01	6.7	18.5	-80	0.83	2.83	

Comments:

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40841
Personnel: S. Pooles, K. Nyberg
Date: 11/14/08

Time Start Purge: 11:40
Time end Purge: 1450
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW 4
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.80
Depth of Sediment(ft):
Initial Depth of Water (ft): 2.50

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-111908-KN-005
Sample Time 1330
Sample Date: 11/19/08

COC #: 003575
Lab: Test America - Buffalo NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
12:39	30	3.21	0.71	8.85	16.7	3.74	-153	1.72	123.0	
12:44	↓			8.86	10.2	3.89	-159	1.02	129	
12:49				8.90	10.2	3.94	-169	0.60	194	
12:54	↓			8.93	10.4	4.00	-173	0.50	151	
	* stopped purging @ 15:30 - tube still around								50 NTU - will begin	
	again tomorrow. Readings begin new 11/19/08									
1255	30	3.50	1.00	9.65	7.6	5.23	-203	0.60	7.26	
1300	↓	3.52	1.02	9.66	7.2	5.23	-201	0.63	6.40	
1310		3.54	1.04	9.67	7.0	5.23	-202	0.58	5.70	
1315		3.55	1.05	9.65	7.5	5.13	-207	0.61	5.87	
1320		3.56	1.06	9.65	7.9	5.15	-200	0.61	5.17	
1325	↓	3.57	1.07	9.66	8.1	5.15	-203	0.60	4.46	

Comments: * Sheen in purge water *

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyborg
Date: 11/19/08

Time Start Purge: 1130
Time end Purge: 1500
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-3A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 20.40
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.40

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-111908-KN-0006
Sample Time 1355
Sample Date: 11/19/08

COC #: 003575
Lab: Test America - Knoxville NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1325	30	7.45	0.05	7.11	10.9	2.17	-76	0.82	8.08	
1335	30	7.51	0.11	7.10	11.3	2.20	-74	0.80	9/12 3.6	
1340	↓	7.51	0.11	7.11	11.3	2.17	-73	0.77	4.34	
1345		7.51	0.11	7.11	11.3	2.17	-71	0.76	4.79	
1350	↓	7.51	0.11	7.11	11.3	2.17	-69	0.75	3.88	

Comments:

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyborg
Date: 11/20/08

Time Start Purge: 0838
Time end Purge: 1215
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers: Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW1B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 22.60
Depth of Sediment(ft):
Initial Depth of Water (ft): 13.8

Sample Record:

Sampling Method: ultra low flow
Sample Volume: 4lt
Sample ID: GW-12635-112008-KN-007
Sample Time 10:33
Sample Date: NOV 20 08

COC #: 4945
Lab: Test America - NC

Well Yield: (High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0919	30	13.83	0.03						7.19	
0923	↓	13.85	0.05	9.60	6.3	0.884	-149	1.47	6.18	
0928		13.86	0.06	9.56	6.1	0.891	-155	1.57	6.22	
0933		13.87	0.07	9.32	6.0	0.898	-155	1.46	6.41	
0943		13.87	0.07	9.67	5.9	0.919	-165	0.91	6.12	
1015		13.90	0.10	10.09	5.2	1.10	-184	0.92	5.31	
1023		13.90	0.10	10.02	5.4	1.12	-182	0.84	4.47	
1028		13.90	0.10	10.00	5.5	1.11	-182	0.78	4.84	
1033		13.90	0.10	9.98	5.7	1.12	-183	0.97	4.79	

Comments: GOOD WELL

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4041
Personnel: S. Peeples, K. Nyberg
Date: 11/20/08

Time Start Purge: 0841
Time end Purge: 1315
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW 1A
t point TOR.
Constructed Well Depth (ft):
Sounded Well Depth (ft): 15.25
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.22

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112008-KN-COC
Sample Time 1105
Sample Date: 11/20/08

COC #: 4945
Lab: Test America - NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0917	30	7.05		5.39	6.1	0.223		8.39	10.3	
0921		7.05	1.83	5.39	6.1	0.223	177	8.39	11.1	
0926		7.09	1.87	5.15	5.2	0.218	172	8.12	10.82	
0931		7.12	1.90	4.82	4.7	0.196	170	8.08	10.67	
0941		7.39	2.17	4.83	3.9	0.190	163	7.67	11.89	
0951										
1050		7.40	2.18	3.71	3.4	0.207	138	6.43	4.61	
1055		7.43	2.21	3.73	3.8	0.200	136	6.17	4.80	
1100	↓	7.47	2.25	3.64	4.0	0.209	135	6.09	4.93	

Comments: * PH in purge records wrong - trouble w Horiba + Everything else fine!

Signature: Kristin Nyberg

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyborg
Date: 11/20/08

Time Start Purge: 1235
Time end Purge: 1530
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-405
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft): 6.85'
Initial Depth of Water (ft): 2.95'

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112008-KN-009
Sample Time 1480
Sample Date: 11/20/08

COC #: 4945
Lab: Test America - NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1345	30	3.62	0.67	8.36	9.9°	9.42	-53	0.36	3.09	
1350	↓	3.70	0.75	8.34	9.9	9.29	-55	0.31	3.66	
1355		3.72	0.77	8.34	9.8	9.27	-56	0.25	1.62	
1400		3.75	0.80	8.34	9.6	9.28	-57	0.23	1.33	
1405	↓	3.77	0.82	8.35	9.6	9.28	-58	0.20	1.22	

Comments: ★ GOOD WELL ★

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4041
Personnel: S. Pooles, K. Nyborg
Date: 11/21/08

Time Start Purge: 0830
Time end Purge:
Purge Method: Peristaltic (Dup)
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes No
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: CP-26B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 26.3
Depth of Sediment(ft):
Initial Depth of Water (ft): 13.97

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112108-KN-010 (+) GW-12635-112108-KN-011 (DUP)
Sample Time 1005
Sample Date: 11/21/08

COC #: 4945
Lab: Test America - NC
Well Yield: (High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0910	30	14.40	0.43	6.90	13.2	1.29	-175	1.91	10.1	
0920	30	14.40	0.43	7.05	13.3	1.30	-206	1.17	6.31	
0930	30	14.40	0.43	7.11	13.4	1.30	-204	0.87	6.39	
0940	30	14.40	0.43	7.12	13.2	1.30	-214	0.67	5.47	
0950	30	14.40	0.43	7.14	13.6	1.30	-226	0.64	5.53	
1000	30	14.40	0.43	7.14	13.4	1.30	-235	0.57	4.41	

Comments: Good Well

Signature: S. Pooles

Good 1 11

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041

Personnel: S. Pooles, K. Nyborg

Date: 11/24/08

Time Start Purge: 1135

Time end Purge: 1945

Purge Method: Peristaltic

Weather Conditions: Indoor

Presence of Immiscible Layers:

Yes (No)

Detection method:

Collection Method:

Monitoring Well Data:

Well ID: CR12A

t point TOC

Constructed Well Depth (ft):

Sounded Well Depth (ft): 15.73

Depth of Sediment(ft):

Initial Depth of Water (ft): 13.32

Sample Record:

Sampling Method: ultra low flow

Sample Volume:

Sample ID: 1305

Sample Time

Sample Date: 11/24/08

GW-1263-112408-KN-012

COC #: 353

Lab: Test America - NC

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1245	30	13.81	0.49	6.47	11.9	1.51	-83	2.00	2.88	
1250	↓	13.82	0.50	6.42	11.5	1.49	-84	1.32	2.45	
1255		13.83	0.51	6.38	11.3	1.50	-83	0.93	2.43	
1300		13.84	0.52	6.36	11.2	1.47	-83	0.95	2.10	

Comments:

Signature: S Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4041
Personnel: S. Poeles, K. Nyborg
Date: 11/24/08

Time Start Purge: ~~0750~~ 0920
Time end Purge: 0945
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Used interface probe and bailer - did not see/detect any NAPL.

Monitoring Well Data:
Well ID: CP-20B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 24.4
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.5

Sample Record:
Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW:12635:112508:KN:013
Sample Time 0800
Sample Date: 11/25/08

COC #: 353
Lab: Test America - NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0738	30	14.56	0.06	7.06	13.9	1.99	-286	0.66	2.54	
0745	30	14.56	↓	7.09	17.1	2.03	-301	0.66	2.51	
0750	30	14.56	↓	7.09	11.6	2.01	-302	0.62	2.19	
0755	30	14.56	↓	7.09	11.4	2.01	-306	0.59	2.41	

Comments: Purged the full day of Nov 24/08 and overnight - twice good this morning.

Signature: Kristin Nyborg

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyborg
Date: 11/24/08

Monitoring Well Data:

Well ID: CP-22B
t point:
Constructed Well Depth (ft):
Sounded Well Depth (ft): 29.0'
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.45'

Time Start Purge: 1050
Time end Purge: 11/25/08
Purge Method: Peristaltic
Weather Conditions: Indoor

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: [illegible] see next Pg
Sample Time
Sample Date: 11/25/08

Presence of Immiscible Layers:

Yes (No)
Detection method:
Collection Method:

COC #:
Lab: Test America - NC

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1450	30	13.62	1.17	7.02	14.7	2.03	-146	0.79	13.8	
1510	↓	13.65	1.20	7.01	15.0	2.03	-144	0.80	12.0	
START 0845 Nov 21/08 1530	↓	13.66	1.21	7.01	15.0	2.04	-142	0.78	9.8	
1245	30	13.70	1.25	8.63	14.7	2.12	-99	1.71	6.78	END of DAY, MUST STOP
1255	↓	13.71	1.26	8.57	14.5	2.11	-100	0.82	6.81	*Next Day! Nov 21/08.
1305		13.72	1.27	8.57	13.4	2.15	-97	0.57	6.08	
1315		13.72	1.27	8.56	13.9	2.08	-98	0.55	6.17	
1330	↓	13.72	1.27	8.57	14.7	2.06	-98	0.61	6.25	

Comments: * Nov 21, 2008 - Began purging again @ 09:00 - Black in purge H2O when first started to purge well.

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Poeles, K. Nyborg
Date: 11/25/08

Time Start Purge: 0730
Time end Purge: 0945
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers: Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: CP 22B
t point TOB
Constructed Well Depth (ft):
Sounded Well Depth (ft): 29.0'
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.45'

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112508-KN-014
Sample Time 0805
Sample Date: Nov 25/08

COC #: 353
Lab: Test America - NC

Well Yield: (High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0740	30	13.41	0.96	5.86	11.5	2.40	-36	2.17	4.22	
0747	↓	13.41	0.96	6.10	12.4	2.40	-62	1.41	4.30	
0752		13.41	0.96	6.19	12.6	2.39	-73	1.28	4.37	
0757	↓	13.41	0.96	6.20	12.6	2.37	-71	1.19	3.97	

Comments: * Purged overnight ~~for~~ from 1600 - 0730 - turbo good this morning.

Signature: Nicole Nyborg

GOOD WELL

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:
Number: 12635-03-4041
Personnel: S. Pooles, K. Nyborg
Date: 11/25/08

Monitoring Well Data:
Well ID: MW-102
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 13.15
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.00

Time Start Purge: 1055
Time end Purge:
Purge Method: Peristaltic
Weather Conditions: Indoor

Sample Record:
Sampling Method: ultra low flow
Sample Volume:
Sample ID: 1235
Sample Time
Sample Date: GW-12635-112508-KN-DUP 11/25/08

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

COC #: 353
Lab: Test America - NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1215	30	6.08	0.08	7.09	13.5	3.41	-176	0.69	3.69	
1220	↓	6.09	0.09	7.09	13.6	3.40	-178	0.66	3.97	
1225		6.09	0.09	7.09	13.6	3.42	-178	0.61	4.82	
1230		6.09	0.09	7.11	13.8	3.42	-179	0.63	3.56	

Comments: ★ GOOD WELL ★

Signature: S. Pooles

★ GOOD a 1L

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4041
Personnel: S.Fowler, K.Nyborg
Date: 11/25/08

Time Start Purge: 1105
Time end Purge: 1500
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-106
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.25
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.28

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-121625-112508-KN-016
Sample Time 1248
Sample Date: 11/25/08

COC #: 353
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
12:27	30	6.49	0.11	6.24	8.6	3.23	-17	1.88	1.43	
12:32	30	6.56	0.12	6.25	8.3	3.24	-16	1.80	1.99	
12:37	30	6.56	0.18	6.25	8.9	3.24	-18	1.47	1.55	
12:42	30	6.56	0.18	6.26	8.1	3.23	-16	1.64	2.09	

Comments: ★ GOOD WELL ★

Signature: S. Fowler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Fooks, K. Myberg
Date: 11/26/08

Time Start Purge: 07:45
Time end Purge: 1240
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-409B
t point TOR.
Constructed Well Depth (ft):
Sounded Well Depth (ft): 24.04
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.1

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112608-KM-017 + 019 "DUP"
Sample Time 0923
Sample Date: 11/26/08

COC #: 353
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0907	30	11.64	0.54	6.78	8.8	1.96	302	0.67	5.17	Hc odour
0912	↓	11.68	0.58	6.81	8.9	1.15	-306	0.61	4.61	
0917		11.70	0.60	6.83	8.8	1.96	309	0.59	4.11	
0922	↓	11.71	0.61	6.86	8.10	1.96	-310	0.57	3.94	

Comments: Good Well

Signature: S. Fooks

Good ELL

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4041
Personnel: S. Pooles, K. Nyborg
Date: 11/26/08

Monitoring Well Data:

Well ID: CP-18B
t point:
Constructed Well Depth (ft):
Sounded Well Depth (ft): 26.5
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.29

Time Start Purge: 1000
Time end Purge: 1215
Purge Method: Peristaltic
Weather Conditions: Indoor

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112608-KN-018
Sample Time & 1040
Sample Date: 11/26/08

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface Probe
Collection Method:
No NAPL detected with probe or bailer.

COC #: 353
Lab: Test America - NC

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1020	30	14.41		6.63	15.4	2.38	-136	1.35	1.81	
1025	↓	14.41		6.73	14.9	2.41	-150	1.23	1.64	
1030		14.41		6.78	17.1	2.40	-156	1.18	1.39	
1035		14.41		6.82	15.3	2.39	-158	1.16	1.17	

Comments: Good Well

Signature: S. Pooles

★ GO > WELL

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyborg
Date: 11/26/08

Time Start Purge: 1130
Time end Purge: 1345
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-300A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 16.80
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.10

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112608-KN-020
Sample Time 1210
Sample Date: 11/26/08

COC #: 353
Lab: Test America - NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1145	30	11.91	0.81	6.53	14.6	2.48	-85	1.48	1.67	
1150	↓	12.60	1.50	6.53	14.9	2.52	-88	1.20	1.07	
1155		12.70	1.60	6.53	14.0	2.55	-90	1.42	1.24	
1200		12.70	1.60	6.53	12.2	2.57	-88	1.60	1.01	
1205	↓	12.70	1.60	6.54	12.1	2.55	-87	1.66	0.94	

Comments: ★ Excellent well ★

Signature: S. Pooles

☆ Excellent well ☆

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Poeles, K. Nyborg
Date: 11/26/08

Time Start Purge: 1220
Time end Purge: 1500
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: T-1B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 38.95
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.38

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-112608-KN-021
Sample Time 1315
Sample Date: 11/26/08

COC #: 353
Lab: Test America - NC

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1240	30	6.40	0.02	7.40	12.2	1.80	-139	2.61	7.60	
1245 1300	30	6.43	0.05	7.26	11.7	1.81	-119	1.16	4.94	
1250 1305	30	6.44	0.06	7.26	11.7	1.80	-116	1.19	4.24	
1255 1310	30	6.44	0.06	7.25	11.7	1.79	-112	1.20	4.53	

Comments: ☆ Excellent well ☆

Signature: S. Poeles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Nyborg
Date: 12/01/08

Time Start Purge: 0840
Time end Purge: 1230
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers: Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-204
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.6
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.37

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-120108-SP-022
Sample Time 1045
Sample Date: 12/01/08

COC #: 354
Lab: Test America - NC

Well Yield: High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1000	30	4.20	0.83	7.10	9.8	6.70	15	2.07	5.07	Turb 10.2 START
1015		4.21	0.84	7.03	9.2	6.86	13	0.89	5.70	
1020		4.21	0.84	7.02	9.8	6.76	7	1.49	4.26	
1025		4.21	0.84	7.04	9.5	6.80	3	0.50	4.43	
1030		4.21	0.84	7.05	9.8	6.79	-4	0.44	4.42	
1035		4.21	0.84	7.05	9.7	6.82	-8	0.41	3.88	
1040		4.21	0.84	7.05	9.8	6.77	-13	0.37	3.79	

Comments: Good Well

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4~~00~~1

Personnel: S. Poole, K. Nyborg

Date: 11/26/08 to 12/02/08

Monitoring Well Data:

Well ID: MW408

t point TOR.

Constructed Well Depth (ft):

Sounded Well Depth (ft): 12.19

Depth of Sediment(ft):

Initial Depth of Water (ft): 5.68

Time Start Purge: 07:45.

Time end Purge:

Purge Method: Peristaltic

Weather Conditions: Indoor

Sample Record:

Sampling Method: ultra low flow

Sample Volume:

Sample ID: GW-12635-120208-SP-023

Sample Time 1235

Sample Date: 12/02/08

Presence of Immiscible Layers:

Yes (No)

Detection method:

Collection Method:

COC #: 354

Lab: Test America - NC

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1000	30	10.90	4.82	–	–	–	–	–	71.0	
1040	"	12.10	6.42	–	–	–	–	–	–	ORV, well pump Next week
1300	30			–	–	–	–	–	48.0	12/01/08 START
1400				–	–	–	–	–	37.1	
1425				–	–	–	–	–	20.7	
1450				–	–	–	–	–	5.89	
1515				–	–	–	–	–	2.60	
1545										
1015	30	8.05	2.37	6.72	7.8	4.03	-91	.79	6.26	12/02/08
1220		8.35	2.67	6.79	10.8	3.66	-96	0.81	3.65	0845 = 14.
1225		8.39	2.71	6.74	10.1	3.75	-98	0.88	3.92	0930 = 8.8
1230		8.41	2.73	6.73	9.8	3.74	-99	0.72	3.40	

Comments: * Takes long time

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4~~0841~~

Personnel: S. Fowles, K. Nyborg

Date: 12/01/08 to 12/02/08

Monitoring Well Data:

Well ID: MW-5B

t point

Constructed Well Depth (ft):

Sounded Well Depth (ft): 20.5

Depth of Sediment(ft):

Initial Depth of Water (ft): 7.81

Time Start Purge: 0850

Time end Purge: 1255

Purge Method: Peristaltic

Weather Conditions: Indoor

Sample Record:

Sampling Method: ultra low flow

Sample Volume:

Sample ID: GW-12635-120208 SP#024

Sample Time 1255

Sample Date: 12/02/08

Presence of Immiscible Layers:

Yes (No)

Detection method:

Collection Method:

COC #: 354

Lab: Test America

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1110	30	7.92	0.11	7.11	7.4	1.21	-49	0.81	5.37	
1210	↓	7.95	0.14	7.08	7.4	1.35	-99	0.82	5.36	
1220		7.96	0.15	7.11	7.5	1.43	-62	0.68	4.93	
1245		7.96	0.15	7.11	7.3	1.43	-65	0.53	4.08	
1250	↓	7.97	0.16	7.12	7.3	1.44	-66	0.51	4.14	
1255										
1350										

1230 = 12.6
1330 = 7.9
1410 = 7.0
1440 = 5.6
1530 = 5.0

12/02/08
0900 = 31.4
1030 = 9.5
1055 = 5.4

Comments: ☆ Takes long time

Signature: S. Fowles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40841
Personnel: S. Pooles, K. Nyborg
Date: 12/03/08

Time Start Purge: 0830
Time end Purge: 1120
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW-6A
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 8.50
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.21

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-120308-SP-025
Sample Time 0935
Sample Date: 12/03/08

COC #: 355
Lab: Test America - NC

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0905	30	5.79	0.58	6.36	9.7	1.18	144	3.12	4.16	
0910		5.80	0.59	6.25	8.1	1.22	133	2.65	2.98	
0915		5.81	0.60	6.24	7.8	1.21	131	2.36	2.34	
0920		5.88	0.67	6.25	7.8	1.17	117	2.05	1.54	
0925		5.90	0.69	6.26	7.8	1.16	114	1.94	1.30	
0930	↓	5.91	0.70	6.26	7.9	1.16	110	1.86	1.24	

Comments: ☆ Good Well

Signature: S. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4008.1
Personnel: S. Poeles, K. Nyborg
Date: 12/03/08 to 12/04/08

Time Start Purge: 0845
Time end Purge: 1330
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: MW 6B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 20.2
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.38

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-12.4.08-SL026 (MS/MSD)
Sample Time 0820
Sample Date: 12/04/08

COC #: 355
Lab: Test America - NC
Well Yield:
High Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
12/04/08										
0715	30	7.21	0.03	–	–	–	–	–	2.60	
0755		7.22	0.04	6.30	8.3	1.95	-49	4.a	3.11	
0800		7.23	0.05	6.33	8.3	1.95	-74	1.96	2.64	
0805		7.24	0.09	6.42	7.9	1.97	-86	1.30	2.81	
0810		7.29	0.11	6.46	7.6	1.98	-90	1.18	2.60	
0815		7.30	0.12	6.49	7.3	1.98	-95	1.10	2.63	Sampling started

0945 = 51.2
1030 = 40.6
1630 = 21.6
1100 = 12.6
1150 = 9.1
1250 = 6.87
1330 = 6.42
1400 - left s

Comments: ★ MS/MSD VOLUME collected ★

Signature: S. Poeles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40041
Personnel: S. Pooles, K. Myberg
Date: 12/01/08 (4 DAYS) to 12/04/08

Monitoring Well Data:

Well ID: MW-205
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 11.2
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.90

Time Start Purge: 0945
Time end Purge: 1330
Purge Method: Peristaltic
Weather Conditions: Indoor

Sample Record:

Sampling Method: ultra low flow
Sample Volume:
Sample ID: GW-12635-MW08-SP-029
Sample Time 1125
Sample Date: 12/04/08

Presence of Immiscible Layers:

Yes (No)
Detection method:
Collection Method:

COC #: 355
Lab: Test America - NC

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
12/04/08 1100	30	9.72	2.82	-	-	-	-	-	5.03	Connect Harbor
1105	↓	9.79	2.89	6.61	13.0	2.99	-157	1.80	4.53	
1110		9.80	2.90	6.64	12.6	2.96	-161	1.63	4.39	
1115		9.81	2.91	6.65	12.7	3.00	-167	1.62	4.12	
1120	↓	9.82	2.92	6.65	12.7	3.00	-168	1.60	4.02	

1340 = 7.27
1415 = 6.46
1445 = 6.29
1540 = 6.73

START 12/2/08
0815 = 14.8
0930 = 9.4
1010 = 8.0
1050 = 7.4
1125 = 6.49
1140 = 7.1
1430 = 6.5
12/03/08
1100 = 10.4
1300 = 10.4
12/04/08
0930 = 6.74

Comments: ★ POOR WELL ★

Signature: D. Pooles

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

"001"

Project Data:
Number: 12635-03-202040
Personnel: [redacted] KN + SP
Date: March 24 09

Monitoring Well Data:
Well ID: MW 812 PT
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 18.4
Depth of Sediment(ft):
Initial Depth of Water (ft): 10.45
Start time: 0830

Time Start Purge: 0830
Time end Purge: 1200
Purge Method: ~~peristaltic~~ bwflow
Weather Conditions: cold/sunny

Sample Record: (LUFL)
Sampling Method: bwflow
Sample Volume: 4 lt
Sample ID: [redacted] WG-082408-MW001
Sample Time 10:35
Sample Date: Mar 24 09

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface.

COC #: 00358
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1020 0856	100	11.01	0.56	8.78	2.62	2.66	-9	20.53	2.61	
1025	"	"	↓	8.65	3.14	2.68	-7	20.74	2.48	
1030	"	"		8.56	3.70	2.72	-3	20.59	1.87	
1035	"	"		8.53	3.75	2.73	-2	19.31	1.69	
	SAMPLED AT 1035 # 001									

Comments:

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

"002"

Project Data:

Number: 12635-03-202040
Personnel: KN+SP
Date: Mar 24/09

Monitoring Well Data:

Well ID: MW8098
t point:
Constructed Well Depth (ft):
Sounded Well Depth (ft): 15.81
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.30

Time Start Purge: 0845
Time end Purge: ~~1045~~ 1215
Purge Method: low flow
Weather Conditions: cold/snow ~5°C

Sample Record:

Sampling Method: (UFL) low flow
Sample Volume: 4L
Sample ID: WG-12635-032409-002
Sample Time: 1100
Sample Date: 03/24/09

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface
Collection Method:

COC #: 00358
Lab: Test America

Well Yield:

(High) Low

Start time: 0845

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1045	100	5.53	0.23	6.69	7.7	6.34	-77	6.46	2.0	
1050	↓	↓	↓	6.53	8.1	6.48	-80	6.60	2.0	
1055	↓	↓	↓	6.58	8.1	6.50	-82	6.67	2.0	
	SAMPLED AT 1100 # 002/1									

Comments:

Signature: S. Pooler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

11 003 4

Project Data:

Number: 12635-03-20040
Personnel: K. Nyboer - S. Poulos
Date: Mar 24/09

Time Start Purge: 0845
Time end Purge: ~~1330~~ 1300
Purge Method: low flow
Weather Conditions: Sunny/windy ~4°C

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW810A
t point:
Constructed Well Depth (ft):
Sounded Well Depth (ft): 16.03
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.27
MW

Sample Record:

Sampling Method: (LFL) low flow
Sample Volume: 4lt
Sample ID: ~~MW~~ WG-12635-032409-003
Sample Time: 1130
Sample Date: Mar 24/09
Start time: 0845.

COC #: 00358
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1110	90	5.35	0.08	8.90	7.12	5.17	42	17.31	1.28	
1120	90	"	↓	8.74	8.33	5.23	45	16.28	1.42	
1125	90	"		8.78	8.73	5.32	45	15.89	1.26	
1130	90	"	↓	8.74	9.06	5.35	46	15.39	1.35	
	SAMPLED AT 1130 # 003									

Comments:

Signature: S. Poulos

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

"004"

Project Data:

Number: 12635.03 - 4xxx41
Personnel: S. Foster / K. Nyborg
Date: 03/24/09

Time Start Purge: 1100
Time end Purge: 1510
Purge Method: Peristaltic
Weather Conditions: Sunny

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW2B
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): ~~34~~ 34.60
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.16

Sample Record:

Sampling Method: ULF
Sample Volume: 4 L
Sample ID: WG-12635-032409-004
Sample Time 1350
Sample Date: 03/24/09

COC #: 00359
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1330	~~50~~	7.60	0.44	7.78	11.52	1.20	-59	14.20	5.5	
1335	↓	7.60	0.44	7.71	11.63	1.25	-54	13.13	4.4	
1340		7.60	0.44	7.76	11.72	1.26	-52	12.47	4.3	
1345	↓	7.60	0.44	7.74	11.82	1.26	-49	12.09	4.1	
	SAMPLED AT	1350		# 004						

Comments:

Signature: S. Foster

"005"

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040

Personnel: K.Nyboer + S.Pooler

Date: March 24 '09

Monitoring Well Data:

Well ID: MW58IIA

t point TOR.

Constructed Well Depth (ft):

Sounded Well Depth (ft): 15.5

Depth of Sediment(ft):

Initial Depth of Water (ft): 14.8

Time Start Purge: 12:30

Time end Purge: ~~1445~~ 1500

Purge Method: low flow

Weather Conditions: sunny ~ 8°c windy

Sample Record:

Sampling Method: (LFL) low flow

Sample Volume: 4lt

Sample ID: "005"

Sample Time 13:45

Sample Date: ~~Mar 24/09~~

Presence of Immiscible Layers:

Yes (No)

Detection method: Interface probe

Collection Method:

COC #: 00358

Lab: Test America

Well Yield:

~~High~~ Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1:35	100	14.8	0.0	6.61	9.5	11.8	—	8.47	0.77	
1:40	↓	↓	↓	6.60	9.5	11.0	—	7.61	0.71	
1:45	↓	↓	↓	6.60	9.6	10.8	—	7.24	0.60	
	SAMPLED AT 1345 # 005									

Comments:

Signature: S. Pooler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

"006"

Project Data:

Number: 12635.03-400041
Personnel: K. Nyborg ; S. Poder
Date: 03/25/09

Time Start Purge: 0900
Time end Purge: ~~0945~~ 1030
Purge Method: ~~Bailer~~ UFL
Weather Conditions: Sunny ~3°C

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW3
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 12.85
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.49

Sample Record:

Sampling Method: Ultra low flow
Sample Volume: 4L
Sample ID: AG:12635.032609:006
Sample Time: 0940
Sample Date: 03/26/2009

COC #: # 00359
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0925	30ml/min	12.50	0.01	8.02	3.49	0.271	183	16.91	1.45	
0930	↓	12.50	0.01	8.26	3.87	0.262	171	17.31	1.43	
0935	↓	12.51	0.02	8.37	4.24	0.260	165	17.26	0.84	
	Well went dry during sampling - will let recharge & sample again @ ~noon (1200).									
	SAMPLED AT 0940 # 006									

Comments:

Signature:

"007"

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03.20240

Personnel: S Fouts / K Nyhan

Date: 03/25/09

Time Start Purge: 0815

Time end Purge: 1120

Purge Method: Fes.st./ hc

Weather Conditions: Partly Sunny

Presence of Immiscible Layers:

Yes (No)

Detection method: Interface

Collection Method:

Monitoring Well Data:

Well ID: MW-813 A

t point

Constructed Well Depth (ft):

Sounded Well Depth (ft): 12.52

Depth of Sediment(ft):

Initial Depth of Water (ft): 8.01

Sample Record:

Sampling Method: ULF

Sample Volume: 4L

Sample ID: WG-12635-032509-007

Sample Time 1005

Sample Date: 03/25/09

COC #: # 00359

Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0945	90	8.07	0.06	7.68	10.1	18.80	-108	1.54	3.3	
0950	↓	8.07	0.06	7.68	10.1	19.20	-117	1.11	2.1	
0955		8.08	0.06	7.67	10.2	19.50	-121	0.96	2.0	
1000	↓	8.08	0.06	7.69	10.4	19.70	-122	0.94	1.5	
	SAMPLED AT	1005		# 007						

Comments:

Signature: S. Fouts

11008 cc

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-202040

Personnel: K.Wong · S.Poole

Date: March 25/09

Monitoring Well Data:

Well ID: MW808B

t point TOR

Constructed Well Depth (ft):

Sounded Well Depth (ft): 20.77

Depth of Sediment(ft):

Initial Depth of Water (ft): 17.05

Time Start Purge: 0830

Time end Purge: ~~1350~~ 1900

Purge Method: ULF

Weather Conditions: Sunny ~5°c

Sample Record:

Sampling Method: ULF

Sample Volume: 4H

Sample ID: MW-12635-032509-008

Sample Time 1405

Sample Date: 03/25/2009.

Presence of Immiscible Layers:

Yes (No)

Detection method: Interface

Collection Method:

COC #: # 00359

Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
~~1320~~ 1330	50	17.11	0.06	~~6.81~~ 6.81	14.0	~~1.31~~ 1.31	-66	~~1.39~~ 1.35	5.62	
1345	↓	17.11	↓	6.81	14.0	1.32	-66	1.52	5.02	
1350		17.11		6.81	13.9	1.31	-66	1.48	4.97	
~~1335~~ 1355		17.11		6.81	13.9	1.31	-66	1.46	4.98	
~~1340~~ 1400	↓	17.11	↓	6.81	13.8	1.30	-66	1.40	4.90	
	SAMPLED AT 1405 # 008									

Comments:

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

11 009 cc

Project Data:

Number: 12635-08-202040
Personnel: S. Poder / K. Nyborg
Date: 03/26/09

Time Start Purge: 0845
Time end Purge:
Purge Method: Peristaltic
Weather Conditions: Mostly Cloudy

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: CP-31
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 9.11
Depth of Sediment(ft):
Initial Depth of Water (ft): 8.31

Sample Record:

Sampling Method: ULF
Sample Volume: 2 L
Sample ID: WG-12635-032609-009
Sample Time 0950
Sample Date: 03/26/09

371
COC #: # 00[illegible]
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0935	50	8.71	0.40	6.63	8.2	1.87	-63	1.47	3.37	
0940	↓	8.99	0.68	6.63	8.2	1.87	-66	1.50	1.76	
0945	↓	9.05	0.74	6.66	8.1	1.86	-65	1.54	1.53	
	SAMPLED AT	0950		# 009						

Comments: * Went dry while sampling → fill bottles between 2 Days. Only 2 bottles filled PCB/Lab

Signature: S. Poder

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

"010" + "011" (DUP)

Project Data:

Number: 12635-03-202040
Personnel: SP/KN
Date: 03/26/09

Time Start Purge: 10:40
Time end Purge: 14:00
Purge Method: Peristaltic
Weather Conditions: Overcast

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-801A
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 17.9
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.02

Sample Record:

Sampling Method: ULF
Sample Volume: 4L + 4L
Sample ID: WS-12635-032609-010
Sample Time 1300/1410 -011 (DUP)
Sample Date: 03/26/09

COC #: #00359
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1045	80	11.23	0.21	7.16	12.42	2.59	29	3.70	3.20	
1250	↓	11.24	0.22	7.18	12.51	2.69	25	3.67	2.39	
1255		11.24	0.22	7.20	12.65	2.83	23	3.63	4.73	
1300		11.25	0.23	7.21	12.75	2.94	20	3.59	3.66	
	SAMPLED AT 1300				#010 + #011 (DUP)					

Comments:

Signature: S. Pooler

"012"

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004
Personnel: S. Pooler
Date: 03/27/09

Time Start Purge: 0900
Time end Purge: 1330
Purge Method: Peristaltic
Weather Conditions: Sunny

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-405
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.20
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.11

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: WG-12635-032709-012
Sample Time 1125
Sample Date: 03/27/09

COC #: #00371
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0950	75	3.89	0.78	→	–	–	–	–	11.0	
1050	↓	4.05	0.94	6.70	11.3	7.71	-73	1.30	5.44	
1100		4.15	1.04	6.71	12.0	7.01	-68	1.27	5.62	
1110		4.20	1.09	6.74	12.6	7.05	-65	1.20	4.36	
1115		4.28	1.17	6.74	13.2	7.09	-64	1.24	1.43	
1120	↓	4.33	1.24	6.73	13.4	7.10	-65	1.25	1.01	
	SAMPLED AT	1125		# 012						

Comments:

Signature: S. Pooler

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

"013"

Project Data:

Number: 12635-03-40041
Personnel: S.Poole
Date: 03/27/09

Time Start Purge: 1050
Time end Purge: 1415
Purge Method: Peristaltic
Weather Conditions: Sunny

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-3A
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 19.90
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.17

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: WS-12635-032909-013
Sample Time 1255
Sample Date: 03/27/09

COC #: #00371
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1130	50	~	–	–	–	~	~	–	18.3	
1155	↓	7.35	0.18	6.80	12.9°	1.93	-3	2.97	6.39	
1240		7.40	0.23	6.78	13.0	2.05	2	2.92	4.52	
1245		7.42	0.25	6.78	12.7	2.05	1	2.61	4.77	
1250	↓	7.44	0.27	6.77	12.9	2.04	1	2.57	4.72	
	SAMPLED AT 1255 # 013									

Comments:

Signature: S. Poole

014

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40801
Personnel: K. Mayberry · S. Rader
Date: 30-March-2009

Time Start Purge: 0900
Time end Purge: ~~0935~~ 1045
Purge Method: DLF
Weather Conditions: ~5°C/Brezi/wind

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW4A
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 16.80
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.46

Sample Record:

Sampling Method: DLF
Sample Volume: 4lt
Sample ID: MW 12635 033009 014
Sample Time: 0935
Sample Date: 03/30/2009

COC #: # 00372
Lab: Test Americs

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0920	70	14.46	0.00	6.88	8.00	6.40	255	3.27	1.93	
0925	70	↓	↓	6.79	8.05	5.98	257	2.86	1.40	
0930	70			6.74	8.20	5.79	258	2.48	1.37	
0935	70	↓	↓	6.79	8.08	5.72	257	2.33	1.39	
		SAMPLED AT 0935 #014								

Comments: * Good Well

Signature: S. Rader

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

015

Project Data:

Number: 12635-03-20260
Personnel: SP/KN
Date: 03/30/09

Time Start Purge: 1030
Time end Purge: 1425
Purge Method: Peristaltic
Weather Conditions: Cloudy, light snow

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-2A
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 12.05
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.7

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: WG-12635-03009-015
Sample Time 1310
Sample Date: 03/30/09

COC #: # 00372
Lab: Test America

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
12:50	80	7.91	0.21	6.99	7.0	5.40	-91	2.03	5.6	
12:55	80	8.02	0.30	6.99	7.1	5.34	-90	1.86	4.0	
13:00	80	8.07	0.35	6.99	7.2	5.13	-90	1.94	4.8	
13:05	80	8.10	0.38	7.00	7.3	4.79	-89	1.95	4.3	
13:10										
13:15	SAMPLED AT 1310 # 015									

Comments:

Signature: S. Peters

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

016

Project Data:

Number: 12635-03-40001

Personnel: SP / KN

Date: 03/30/09

Monitoring Well Data:

Well ID: MW-1B

t point: TOR

Constructed Well Depth (ft):

Sounded Well Depth (ft): 22.17

Depth of Sediment(ft):

Initial Depth of Water (ft): 14.20

Time Start Purge: 1045

Time end Purge: 1445

Purge Method: Peristaltic

Weather Conditions: Cloudy, light snow

Sample Record:

Sampling Method: ULF

Sample Volume: 4L

Sample ID: WG-12635-033009-016

Sample Time: 1325

Sample Date: 03/30/09

Presence of Immiscible Layers:

Yes (No)

Detection method:

Collection Method: Interface

COC #: # 00372

Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1305	50	14.1	0.1	6.98	7.06	1.81	-164	0.64	3.1	
1310	50	14.1	0.1	6.95	7.04	1.79	-169	0.08	2.8	
1315	50	14.1	0.1	6.97	7.02	1.79	-171	0.10	3.0	
1320	50	14.1	0.1	6.98	7.02	1.79	-173	0.08	3.3	
	SAMPLED AT 1325 # 016									

Comments:

Signature: D. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

017

Project Data:

Number: 12635-03-202040
Personnel: Kinyoon, S. Rader
Date: 30-March-2009

Time Start Purge: 0900
Time end Purge: 1545
Purge Method: ULF
Weather Conditions: 5°C/Snow/windy

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface Probe

Monitoring Well Data:

Well ID: MW4
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.2
Depth of Sediment(ft):
Initial Depth of Water (ft): 1.85

Sample Record:

Sampling Method: ULF
Sample Volume: 4lt
Sample ID: WG126350330309
Sample Time 1440
Sample Date: 03/30/09

COC #: #00372
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
~~1355~~	—	—	—	—	—	—	—	—		
1425	100	1.98	0.13	9.86	5.65	2.92	-244	2.06	12.3	
1430	100	1.98	0.13	9.88	5.64	2.93	-243	2.90	4.23	
1435	100	1.98	0.13	9.89	5.64	2.93	-241	2.88	4.01	
									4.20	
	SAMPLED AT		1440	#017						

Comments:

Signature: S. Rader

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#018 MS/MSD

Project Data:

Number: 12635-03-202040
Personnel: SP/KN
Date: 03/26/09, 03/27/09, 03/30/09

Monitoring Well Data:

Well ID: MW-806B
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 27.20
Depth of Sediment(ft):
Initial Depth of Water (ft): 10.05

Time Start Purge: 1000
Time end Purge: 3 DAYS + Overnight
Purge Method: Resistaltic
Weather Conditions: Mostly Cloudy

Sample Record:

Sampling Method: ULF
Sample Volume: 1 L
Sample ID: WG-12635-033109-018
Sample Time: 0855 *MS/MSD
Sample Date: 03/31/09 VOLUME*

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface
Collection Method:

COC #: # 00372
Lab: Test America

Well Yield: (High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1530	50	-	-	-	-	-	-	-	9.90	End of Day
1030	50	-	-	-	-	-	-	-	13.40	03/27/09 - START 0820
1145	50	-	-	-	-	-	-	-	14.20	
1400	50	-	-	-	-	-	-	-	14.00	Discontinue Pump
0930	50	-	-	-	-	-	-	-	10.00	03/30/09 - START 0840
0835	50	11.80	1.75	7.16	10.14	1.16	-142	1.43	2.49	03/31/09 - Begin readings
0840	↓	↓	1.75	7.06	10.35	1.17	-136	1.21	2.47	
0845			1.75	6.97	10.73	1.18	-157	1.01	2.40	
0850	↓	↓	1.75	6.90	10.99	1.19	-165	0.92	2.61	
	SAMPLED AT 0855				#018 MS/MSD VOLUME					

Comments: * Note: 03/30/09 - Leave pump running for 24-HR. 03/31/09 - Morning initial turbidity = 2.49 Hook horiba and begin readings, but trace black sediment in water

Signature: S. Rader

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#019
#021 Dup

Project Data:

Number: 12635-03-202040
Personnel: SP/KN
Date: 03/31/09

Time Start Purge: 0920
Time end Purge: 1205
Purge Method: Peristaltic
Weather Conditions: Sunny, ↑ 51°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-409R
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.21
Depth of Sediment(ft):
Initial Depth of Water (ft): 0.85

Sample Record:

Sampling Method: ULF
Sample Volume: 4L + 4L
Sample ID: WG-12635-033109-019
Sample Time 1015/1120 -021 (Dup)
Sample Date: 03/31/09

COC #: # 00372
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0935	50	-	-	-	-	-	-	-	7.83	
0945	50	-	-	-	-	-	-	-	4.92	Connect Horiba
0950	↓	2.71	1.86	7.57	7.0	2.60	27	3.13	3.25	
0955		2.80	1.95	8.69	7.0	2.64	-43	1.25	3.64	
1000		2.86	2.01	8.90	6.9	2.65	-65	0.94	3.85	
1005		2.88	2.03	8.92	6.8	2.66	-71	0.88	3.70	
1010	↓	2.90	2.05	8.92	6.9	2.66	-77	0.84	3.68	
	SAMPLED AT 1015 #019 + #021 (DUP)									

Comments:

Signature: S. Pooley

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#020

Project Data:

Number: 12635-03-202040

Personnel: SP / KN

Date: 03/31/09

Time Start Purge: 0915

Time end Purge: 1145

Purge Method: Peristaltic

Weather Conditions: Sunny, 51°F

Presence of Immiscible Layers:

Yes (No)

Detection method: Interface

Collection Method:

Monitoring Well Data:

Well ID: MW-409B

t point TOR

Constructed Well Depth (ft):

Sounded Well Depth (ft): 24.05

Depth of Sediment(ft):

Initial Depth of Water (ft): 11.30

Sample Record:

Sampling Method: ULF

Sample Volume: 4L

Sample ID: WG-12635-033109-020

Sample Time 1035

Sample Date: 03/31/09

COC #: #00372

Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0935	75	-	-	-	-	-	-	-	34.3	
0950	75	-	-	-	-	-	-	-	3.93	
1015	↓	11.40	0.10	6.80	12.9	1.54	-174	1.05	2.09	
1020	↓	11.40	↓	6.77	12.9	1.53	-155	0.53	1.51	
1025	↓	11.40	↓	6.80	13.1	1.53	-167	0.37	2.40	
1030	↓	11.40	↓	6.79	13.3	1.52	-172	0.36	1.17	
	SAMPLED	AT	1035	#020						

Comments:

Signature: S. Pooler

#022

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004
Personnel: SB / KN
Date: 03/31/09

Time Start Purge: 0900
Time end Purge: 1200
Purge Method: Peristaltic
Weather Conditions: Sunny ↑ 51°F

Presence of Immiscible Layers:
Yes ~~No~~
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-1A
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 14.80
Depth of Sediment(ft):
Initial Depth of Water (ft): 4.86

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: WG-12635-033109-022
Sample Time 1040
Sample Date: 03/31/09

COC #: #00372
Lab: Test America

Well Yield:
~~High~~ Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0930	50	7.57	2.71	6.68	6.84	0.501	-46	2.19	8.90	
1025	50	7.65	2.79	6.80	6.78	0.511	-75	0.58	4.8	
1025	50	7.68	2.82	6.81	6.80	0.515	-77	0.29	4.1	
1030	↓	7.70	2.84	6.90	6.99	0.517	-78	0.0	4.6	
1035	↓	7.72	2.86	6.94	7.28	0.522	-79	0.0	5.7	
	SAMPLED AT 1040 #022									

Comments: Good Well

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

023

Project Data:

Number: 12685-03-task 1
Personnel: SP/KN
Date: 03/31/09

Monitoring Well Data:

Well ID: MW-107R
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 11.84
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.60

Time Start Purge: 1200
Time end Purge: 1430
Purge Method: Peristaltic
Weather Conditions: Sunny ↑51°F

Sample Record:

Sampling Method: ULF
Sample Volume: 4 L'
Sample ID: MW-12685-033109-023
Sample Time: 1320
Sample Date: 03/31/09

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface
Collection Method:

COC #: # 00372
Lab: Test America

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1300	50	4.45	0.85	6.97	8.50	2.82	-5	7.44	2.50	
1305	↓	4.48	0.88	6.99	9.00	2.83	-6	7.20	4.20	
1310		4.48	0.88	7.02	9.68	2.80	-4	6.82	2.20	
1315	↓	4.48	0.88	7.06	10.71	2.80	-1	6.79	2.20	
	SAMPLED AT 1320 # 023									

Comments:

Signature: S. Parker

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#024

Project Data:

Number: 12635-03-40041
Personnel: SP/KN
Date: 04/01/09

Time Start Purge: 0830
Time end Purge: 1045
Purge Method: Peristaltic
Weather Conditions: Rainy, 53°F

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface

Monitoring Well Data:

Well ID: MW-106
t point: TOC
Constructed Well Depth (ft):
Sounded Well Depth (ft): 9.83
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.41

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: WG-12635-040109-024
Sample Time 0935
Sample Date: 04/01/09

COC #: #00373
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0915	50	6.80	0.39	6.75	9.4	3.99	96	1.14	0.57	
0920	↓	6.80	0.39	6.77	9.3	4.10	70	1.08	0.46	
0925		6.80	0.39	6.77	9.3	4.17	46	0.95	1.60	
0930	↓	6.80	0.39	6.78	9.3	4.19	38	0.87	0.47	
	SAMPLED AT 0935 # 024									

Comments:

Signature: S. Cooke

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#025

Project Data:

Number: 12635-03-208uto
Personnel: SP/KP
Date: 03/31/09
04/01/09

Time Start Purge: 1135
Time end Purge: 2 Days
Purge Method: Bailer Inc
Weather Conditions: Sunny T 51°F

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface

Monitoring Well Data:

Well ID: MW-408R
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 11.43
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.10

Sample Record:

Sampling Method: ULF
Sample Volume: 4 L
Sample ID: WG-12635-040109-025
Sample Time 1020
Sample Date: 04/01/09

COC #: # 00373
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1140	75	-	-	-	-	-	-	-	8.42	
1200	75	-	-	-	-	-	-	-	7.52	
1300	75	-	-	-	-	-	-	-	7.30	
1430	75	-	-	-	-	-	-	-	7.20	
1000	75	3.24	0.14	8.06	9.4	3.83	-176	1.68	4.1	- Discontinue Pump for day
1005	75	3.24	0.14	8.06	9.4	3.95	-178	1.70	4.0	04/01/09 - START 0820
1010	75	3.25	0.15	8.04	9.4	3.99	-189	1.62	3.7	
1015	75	3.25	0.15	8.05	9.4	4.00	-188	1.45	3.6	
1020	75	3.27	0.17	8.04	9.5	4.00	>193	1.18	3.0	
	SAMPLED AT 1020 #025									

Comments: NOTE: Turbidity won't go down on 03/31/08, pump all day. Continue well in morning 04/01/09

Signature: S. Parker

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#026

Project Data:

Number: 12635-03-40004(
Personnel: SP/KN
Date: 04/01/09

Time Start Purge: 0850
Time end Purge: 1430
Purge Method: Peristaltic
Weather Conditions: Rain, ↑ 53°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-102
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 12.55
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.14

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: WG-12635-040109-026
Sample Time 1320
Sample Date: 04/01/09

COC #: #00373
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0945	50	–	–	–	–	–	–	–	141	
1300	50	–	–	–	–	–	–	–	1.51	Connect Horiba
1305	50	6.34	0.20	6.07	6.01	2.01	-118	0.86	1.28	
1310	50	6.34	0.20	6.04	6.01	1.99	-123	0.37	1.20	
1315	50	6.34	0.20	6.02	6.01	1.99	-120	0.36	1.17	
	SAMPLED AT 1320 #026									

Comments:

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#027

Project Data:

Number: 12635
Personnel: K. Aylsworth, K. Rector
Date: 1-April-09
2- " -09

Time Start Purge: 1600 1-Apr 1-09
Time end Purge: 0900
Purge Method: DLF
Weather Conditions: Sunny ~5°C

Presence of Immiscible Layers: (Yes) No
Detection method:
Collection Method: Interface probe

Monitoring Well Data:

Well ID: CP20B
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 24.25
Depth of Sediment(ft):
Initial Depth of Water (ft): 15.25

Sample Record:

Sampling Method: DLF
Sample Volume: 4lt
Sample ID: W612653 040209 027
Sample Time 0900
Sample Date: 2-April-09

COC #: #00374
Lab: Test America

Well Yield: (High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
~~0550~~	200	15.28	0.03	6.74	16.0	1.95	-226	0.91	1.38	
~~0855~~	200	15.28	0.03	6.78	15.7	1.98	-235	0.82	1.69	
0900	200	15.28	0.03	6.79	15.7	1.98	-238	0.74	1.45	
~~0900~~	SAMPLED AT		0900	#027						

Comments: Started purging MW@ 1600 1-April-09 overnight to sample next day - Turb. good morning, 2-April-09

Signature: Kristie Aylsworth

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#028

Project Data:

Number: 12635-03-4aaa4
Personnel: SP/KN
Date: 04/01/09 04/02/09

Time Start Purge: 1030
Time end Purge: 2 Days
Purge Method: Peristaltic
Weather Conditions: Sunny

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface

Monitoring Well Data:

Well ID: CP-26B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 25.9
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.71

Sample Record:

Sampling Method: ULF
Sample Volume: 4lt
Sample ID: AG 12635 040209 028
Sample Time 1330
Sample Date: 02-April-09

COC #: #00374
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1130	50	–	–	–	–	–	–	–	41.9	
1245	90	–	–	–	–	–	–	–	24.0	
1530	50	–	–	–	–	–	–	–	12.9	End of Day - Continue tomorrow
0930	50	–	–	–	–	–	–	–	11.4	04/02/09 - START 0845
1000	50	–	–	–	–	–	–	–	8.91	
1256	30	14.76	0.05	7.25	14.7	0.939	-155	1.20	5.19	
~~1320~~ 1320	↓	14.76	↓	7.23	10.9	1.13	-152	1.46	4.91	
~~1325~~ 1325		14.76		7.23	10.9	1.13	-152	1.32	4.76	
1330	↓	14.76	↓	7.23	10.8	1.12	-150	1.31	4.70	
	SAMPLED AT 1335 # 029									

Comments: NOTE: Required 2 Days to sample

Signature: S. Parker

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#029

Project Data:

Number: 12635
Personnel: K.Nyborg · S. Rader
Date: 1-April-09
2-April-09
3-April-09

Monitoring Well Data:

Well ID: CP22B
t point TOR.
Constructed Well Depth (ft):
Sounded Well Depth (ft): 28.8
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.5.

Time Start Purge: 1600
Time end Purge: 3 Days
Purge Method: WLF
Weather Conditions: Sunny ~5°C

Sample Record:

Sampling Method: WLF
Sample Volume: 4 L.
Sample ID: WG-12635-040309-029
Sample Time 0805
Sample Date: 04/03/09

Presence of Immiscible Layers:

Yes (No)
Detection method:
Collection Method: Interface Probe.

COC #: # 00374
Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1530	50	–	–	–	–	–	–	–	44.9	04/02/09 - Turbidity around 40 all
										CONTINUOUS PUMPING OVER DAY
0745	50	14.5	2.0	6.89	13.3	2.29	-116	1.46	4.39	NIGHT.
0750	50	14.5	2.0	6.91	13.6	2.29	-126	1.20	4.37	04/03/09
0755	50	14.5	2.0	6.98	13.9	2.28	-133	1.07	4.68	
0800	50	14.5	2.0	7.00	14.1	2.27	-134	0.99	4.14	
	SAMPLED AT	0805		# 029						

Comments: Began purging MW 1600 1-April-09 overnight. Turb. still very high morning 2-April-09 - will keep pumping. Pumped all day / all night 04/02/09. 04/03/09 - Well finally below 5 NTU @ 4.39

Signature:

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

030

Project Data:

Number: 12635
Personnel: K. Nyborg, S. Poole
Date: 3-April-09

Time Start Purge: 3-April-09 0800
Time end Purge: 1030
Purge Method: ULF
Weather Conditions: Raining ~3°C

Presence of Immiscible ~~Layers~~:
Yes (No)
Detection method:
Collection Method: Interface Probe

Monitoring Well Data:

Well ID: TAB
t point TOR
Constructed Well Depth (ft): --
Sounded Well Depth (ft): 38.9
Depth of Sediment(ft): --
Initial Depth of Water (ft): 7.3

Sample Record:

Sampling Method: ULF
Sample Volume: 4L
Sample ID: W6-12635-040309-030
Sample Time 0920
Sample Date: 04/03/09

COC #: #00374
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0855	100	6.8	0.5	—	—	—	—	—	4.20	
0900	"	"	"	—	—	—	—	—	4.48	
0905	"	"	"	7.06	11.7	3.66	-9	2.35	4.46	
0910	"	"	"	7.06	11.7	3.68	-12	2.33	3.98	
0915	"	"	"	7.05	11.7	3.69	-12	2.16	3.96	
	SAMPLED AT 0920 #030									

Comments:

Signature: S. Poole

#031

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635
Personnel: KN / SP
Date: 3-April-2009

Time Start Purge: 0840
Time end Purge: 1045
Purge Method: WLF
Weather Conditions: Rainy 3°C.

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface Probe
Collection Method:

Monitoring Well Data:

Well ID: MW3009
t point TOR
Constructed Well Depth (ft): 18.7
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 10.77

Sample Record:

Sampling Method: WLF
Sample Volume: 4L
Sample ID: WG-12635-040309-031
Sample Time 0930
Sample Date: 04/03/09

COC #: # 08374
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0910	50	12.7	1.93	6.84	12.13	1.75	64	4.30	1.62	
0915	↓	12.79	2.02	6.83	12.46	1.76	63	3.76	1.06	
0920	↓	13.10	2.33	6.81	12.53	1.76	60	3.17	0.64	
0925	↓	13.15	2.38	6.81	12.60	1.76	58	3.00	0.55	
	SAMPLED AT 0930 # 031									

Comments: A Excellent well

Signature: S. Foley

#032

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4ow41
Personnel: Kaybog, S. Boyer
Date: 3-April-2009

Time Start Purge: 3-April-09 0800
Time end Purge: ~~0945~~ 1160
Purge Method: GLF
Weather Conditions: Raining ~3°C

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface Probe

Monitoring Well Data:

Well ID: GR 24B
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 22.33
Depth of Sediment(ft):
Initial Depth of Water (ft): 15.01

Sample Record:

Sampling Method: GLF
Sample Volume: 4lt
Sample ID: W041263504030903 2
Sample Time 0945
Sample Date: 3-April-09

COC #: # 00374
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
0925	200	14.72	0.29	—	—	—	—	—	4.47	
0930	" "	" "	" "	6.86	16.1	2.04	-262	0.81	4.25	
0935	" "	" "	" "	6.85	16.3	2.04	-269	0.65	4.23	
0940	" "	" "	" "	6.85	16.5	2.04	-279	0.51	4.91	
0945	" "	" "	" "	6.84	16.5	2.04	-281	0.52	4.43	
	SAMPLED AT	0945	# 032							

Comments:

Signature:

#035
#033 (DUP)

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-4 Task 1
Personnel: SP/KN
Date: 04/03/09

Time Start Purge: 1130
Time end Purge: 1430
Purge Method: Peristaltic
Weather Conditions: Rain, ↑ 48°F

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface

Monitoring Well Data:

Well ID: EP-18B
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 26.18
Depth of Sediment(ft):
Initial Depth of Water (ft): 14.62

Sample Record:

Sampling Method: ULF
Sample Volume: 4L + 4L
Sample ID: WG-12635-040309-035 -033 (DUP)
Sample Time 1200/1310
Sample Date: 04/03/09

COC #: #00374
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1140	60	14.67	0.05	7.18	11.87	1.75	-158	1.90	1.99	
1145	↓	↓	↓	7.11	12.67	1.76	-171	1.10	2.19	
1150				7.10	13.05	1.77	-174	0.70	1.37	
1155	↓	↓	↓	7.08	13.25	1.78	-180	0.60	2.42	
	SAMPLED AT 1200 # 035									
				1310 # 033 (DUP)						

Comments:

Signature: S. Powers

#034

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-Task 1
Personnel: KN / SP
Date: 3-April-2009

Monitoring Well Data:

Well ID: OP23B
t point TOP
Constructed Well Depth (ft):
Sounded Well Depth (ft): 23.25
Depth of Sediment(ft):
Initial Depth of Water (ft): ~~14.70~~ 14.70

Time Start Purge: 3-April-09 1005
Time end Purge: 1400
Purge Method: WLP
Weather Conditions: Raining ~5°C

Sample Record:

Sampling Method: WLP
Sample Volume: 4L
Sample ID: WG-12635-040309-034
Sample Time 1250
Sample Date: 04/03/09

Presence of Immiscible Layers:

Yes (No)
Detection method:
Collection Method: Interface Probe

COC #: # 00374
Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1230	75	14.75	0.05	6.77	15.3	2.08	-289	0.67	4.48	
1235	↓	14.75	0.05	6.78	15.2	2.09	-290	0.65	3.94	
1240		14.75	0.05	6.79	15.2	2.09	-293	0.59	2.54	
1245		14.95	0.05	6.79	15.2	2.09	-293	0.60		
	SAMPLED AT	1250		#034						

Comments:

Signature: S. Pooley

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#036

Project Data:

Number: 12635-03-460041
Personnel: SD/KN
Date: 04/03/09 - 04/06/09

Time Start Purge: 3-April-09 11:50
Time end Purge: 6-April-09
Purge Method: Peristaltic
Weather Conditions: Rain 45°F

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: CP12A
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 15.5
Depth of Sediment(ft):
Initial Depth of Water (ft): 12.34

Sample Record:

Sampling Method: GF
Sample Volume: 3L
Sample ID: 460412635040609-036
Sample Time 0915
Sample Date: 6-April-2009

COC #: #00376
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1350	50	—	—	—	—	—	—	—	10.38	Stopped 1600 April 3, 2009
0835	75	14.52	2.18	6.91	10.57	1.05	-137	0.62	3.91	Started @ 7:30
0840	50	14.57	2.23	6.93	10.65	1.05	-143	0.50	2.91	April 6, 2009
0845	50	14.60	2.26	6.75	10.27	1.041	-135	0.47	3.78	
0850	50	14.61	2.27	6.80	10.24	1.04	-135	0.62	2.07	
0910	50	14.63	2.29	6.80	10.17	1.04	-133	0.38	2.31	
	SAMPLED AT	0915	#036							

Comments: NOTE: Well kept going dry while sampling, continue to fill bottles until 04/09/09
Only able to fill 3 bottles

Signature: S Haden

#037

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: SP/KN
Date: 04/06/09

Time Start Purge: 0940
Time end Purge: Dry while Sampling
Purge Method: Peristaltic
Weather Conditions: Indoor

Presence of Immiscible Layers:
Yes (No)
Detection method:
Collection Method: Interface

Monitoring Well Data:

Well ID: CP-25
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 6.40
Depth of Sediment(ft):
Initial Depth of Water (ft): 5.56

Sample Record:

Sampling Method: ULF
Sample Volume: 2L
Sample ID: WG-12635-040609-037
Sample Time 1030
Sample Date: 04/06/09

COC #: # 00376
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1010	50	5.98	0.42	6.62	8.6	2.92	-49	5.00	1.17	
1015	↓	6.00	0.44	6.65	8.6	2.92	-49	2.70	1.06	
1020		6.05	0.49	6.65	8.7	2.92	-45	2.30	1.46	
1025	↓	6.10	0.54	6.66	8.7	2.92	-45	2.22	1.30	
	SAMPLED AT 1030			# 037						

Comments: NOTE: Well goes dry while sampling, continue to fill bottles until 04/09/09. (Terrible well) Only got 2 bottles filled.

Signature: J. Pooler

#038

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-40004.1
Personnel: SP/KN
Date: 04/08/09
04/07/09

Monitoring Well Data:

Well ID: cl-21B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft): 25.75
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.10

Time Start Purge: 1030
Time end Purge: 04/07/09 (Continuous pumping)
Purge Method: Peristaltic
Weather Conditions: Snowy ↑ 1°C

Sample Record:

Sampling Method: ULF
Sample Volume: 4 L
Sample ID: WG-12635-040709-038
Sample Time 0855
Sample Date: 04/07/09

Presence of Immiscible Layers:

Yes (No)
Detection method:
Collection Method: Interface

COC #: #00375
Lab: Test America

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1245	75	-	-	-	-	-	-	-	48.1	
1320	↓	-	-	-	-	-	-	-	42.8	
1430	↓	-	-	-	-	-	-	-	30.2	
1510	↓	-	-	-	-	-	-	-	24.9	End of Day - Leave Pump Running
0830	↓	11.13	0.03	6.92	5.22	1.87	-157	1.80	2.40	
0840	↓	↓	↓	6.93	5.85	1.88	-160	1.25	4.90	
0845	↓	↓	↓	6.92	6.25	1.90	-160	1.10	4.61	
0850	↓	↓	↓	6.95	6.55	1.90	-163	0.89	4.32	
		SAMPLED AT 0855 #038								

Comments: Note: Turbidity still high on 04/06/09, continue pumping overnight. 04/07/09 - initial turbidity 2.40, connect Horiba.

Signature: S. Rooker

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#039
MS/MSD

Project Data:

Number: 12635.03.202.40
Personnel: SB · KD
Date: 04/01/2009
04/02/2009
04/03/09 CP 04/06/09 - 04/07/09

Monitoring Well Data:

Well ID: ~~MW~~-27B
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 22.15
Depth of Sediment(ft):
Initial Depth of Water (ft): 15.1

Time Start Purge: 1015
Time end Purge: 5 ~~3~~ DAYS
Purge Method: Peristaltic
Weather Conditions: Sunny

Sample Record:

Sampling Method: ULF
Sample Volume: ~~1~~ 12 L
Sample ID: WG-12635-040709-039 (MS/MSD) volume
Sample Time 0910
Sample Date: 7-April-09

Presence of Immiscible Layers:

Yes (No)
Detection method: Interface
Collection Method:

COC #: #00375
Lab: Test America

Well Yield:

(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1120	40	–	–	–	–	–	–	–	13.10	
1230	40	–	–	–	–	–	–	–	6.91	
1330	40	–	–	–	–	–	–	–	12.8	
0930	50	–	–	–	–	–	–	–	18.0	End of Day - Continue to readings 04/02/09 - START @ 0940
1030	50	–	–	–	–	–	–	–	17.6	
1530	50	–	–	–	–	–	–	–	11.4	End of Day - Continue tom. 04/03/09 - START @ 0750
0855	50	15.20	0.10	6.85	13.2	1.35	-262	1.03	1.76	04/06/09 - Pumped all day through night.
0900	↓	↓	↓	6.87	13.7	1.38	-264	0.94	1.69	
0905				6.88	13.4	1.42	-269	0.87	1.67	
0910				6.88	13.5	1.42	-269	0.85	1.59	

7-April-09

SAMPLED AT 0910 # 039

Comments: Note: Ran pump for 3 days during day, turn off at night.
MS/MSD volume collected.

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

[redacted] 040 + 041 DUP

Project Data:

Number: 12635-03-40041
Personnel: SP / KN
Date: 04/09/09

Time Start Purge: 1010
Time end Purge: 1415
Purge Method: Peristaltic
Weather Conditions: Snowy, ↑ 1°C

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-204
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 10.30
Depth of Sediment(ft):
Initial Depth of Water (ft): 3.11

Sample Record:

Sampling Method: ULF
Sample Volume: 4L + 4L
Sample ID: WG-12635-040709-[redacted]
Sample Time: 1150/1300 040
Sample Date: 04/7/09 - 041 (DUP)

COC #: # 00375
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1120	70	-	-	-	-	-	-	-	1.95	Onset Hum. bag
1130	↓	4.45	1.34	7.21	8.1	4.63	-30	2.96	2.56	
1135		4.52	1.41	7.20	8.0	4.67	-29	2.75	1.08	
1140		4.60	1.49	7.18	8.1	4.73	-27	2.11	0.62	
1145	↓	4.64	1.53	7.16	8.1	4.75	-23	1.75	0.63	
	SAMPLED AT 1150 1300				# [redacted] 040					
					+ 041 (DUP)					

Comments: Initial turbidity 24.0 NTU.

Signature: S. Parker

+ Good well! ☺

#042

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041

Personnel: K.Nyborg, S.Rocker

Date: 3-April-09

Time Start Purge: 0830

Time end Purge: 1130

Purge Method: LF

Weather Conditions: Cold -5°C Snow

Presence of Immiscible Layers: Yes (No)

Detection method: Interface

Collection Method:

Monitoring Well Data:

Well ID: CP14B

t point TOR

Constructed Well Depth (ft):

Sounded Well Depth (ft): 23.25

Depth of Sediment(ft):

Initial Depth of Water (ft): 15.1

Sample Record:

Sampling Method: LF

Sample Volume: 4L

Sample ID: LCG12635040809042

Sample Time 1015

Sample Date: 3-April-09

COC #: 376 [redacted]

Lab: Test America

Well Yield: (High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1000	50	15.17	0.07	6.88	10.3	1.44	-183	3.55	1.92	
1005	50	15.20	0.10	6.89	10.8	1.43	-187	3.92	1.78	
1010	50	15.21	0.11	6.91	10.8	1.43	-202	3.50	1.69	
1015	50	15.21	0.11	6.92	10.8	1.43	-207	3.43	2.21	
	SAMPLED AT	1015		# 042						

Comments:

Signature:

#043

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-3-40046
Personnel: SB/KN
Date: 04/07/09 04/08/09

Time Start Purge: 1215
Time end Purge: 1430 on 04/08/09
Purge Method: Peristaltic
Weather Conditions: Snowy ↑ 1°C

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:

Well ID: MW-5B
t point TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 20.37
Depth of Sediment(ft):
Initial Depth of Water (ft): 7.51

Sample Record:

Sampling Method: ULF
Sample Volume: 4lt
Sample ID: WG12635040809043
Sample Time 1320
Sample Date: 8-April-09

COC #: 376 #00[illegible]
Lab: Test America

Well Yield:
(High) Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1520	50	-	-	-	-	-	-	-	14.2	End of Day, Continue tomorrow
1305	50	6.98	0.41	7.26	10.7	1.92	-64	1.07	4.62	8-April-09 - START 0800
1310	50	6.98	0.41	7.25	10.9	1.93	-67	0.97	4.61	
1315	50	6.98	0.41	7.25	10.8	1.94	-69	0.93	4.43	
1320	50	6.98	0.41	7.25	10.8	1.94	-69	0.91	4.38	
	SAMPLED AT 1320 #043									

Comments: NOTE: Well required 2 Days of pumping to go below 5.0 NTU - 04/07/09 & 04/08/09.

Signature: S. Poole

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

#044

Project Data:

Number: 12635-03-400041
Personnel: SP/KN
Date: 04/08/09

Time Start Purge: 1145
Time end Purge: 1445
Purge Method: Peristaltic
Weather Conditions: Partly Cloudy

Presence of Immiscible Layers:
Yes (No)
Detection method: Interface
Collection Method:

Monitoring Well Data:
Well ID: MW-6A
t point: TOR
Constructed Well Depth (ft):
Sounded Well Depth (ft): 8.18
Depth of Sediment(ft):
Initial Depth of Water (ft): 6.55

Sample Record:
Sampling Method: ULF
Sample Volume: 4 L
Sample ID: WG-12635-040809-044
Sample Time 1335
Sample Date: 04/08/09

COC #: #60375
Lab: Test America

Well Yield:
High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1315	50	6.95	0.40	6.96	4.39	0.635	116	8.01	4.14	
1320	↓	7.10	0.55	6.98	4.93	0.637	112	3.80	0.87	
1325		7.12	0.57	6.95	5.16	0.643	111	3.61	0.61	
1330		7.18	0.63	6.96	5.26	0.648	109	3.40	0.79	
	SAMPLED AT	1335		#044						

Comments:

Signature: S. Pooler

#045

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12685-03-[illegible]41

Personnel: SP/KN

Date: 04/08/09

Time Start Purge: 1150

Time end Purge: 1530

Purge Method: Peristaltic

Weather Conditions: Partly Cloudy

Presence of Immiscible Layers:

Yes (No)

Detection method: Interface

Collection Method:

Monitoring Well Data:

Well ID: MW-6B

t point TOR

Constructed Well Depth (ft):

Sounded Well Depth (ft): 19.58

Depth of Sediment(ft):

Initial Depth of Water (ft): 7.31

Sample Record:

Sampling Method: ULF

Sample Volume: 4L

Sample ID: WG-12685-040809-045

Sample Time 1420

Sample Date: 04/08/09

COC #: #00376

Lab: Test America

Well Yield:

High (Low)

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1400	50	7.70	0.39	6.75	5.65	1.12	-112	2.31	2.83	
1405	↓	↓	↓	6.84	6.37	1.12	-129	0.52	1.99	
1410				6.86	6.99	1.13	-132	0.64	1.57	
1415	↓	↓	↓	6.89	7.44	1.15	-132	0.38	1.44	
	SAMPLED AT	1420		# 045						

Comments:

Signature: [signature]

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-A00041

Personnel: SG

Date: 6/3/09

Monitoring Well Data:

Well ID: 102

t point

Constructed Well Depth (ft):

Sounded Well Depth (ft):

Depth of Sediment(ft):

Initial Depth of Water (ft): 6.18

Time Start Purge: 1150

Time end Purge:

Purge Method: PERISTALTIC PUMP

Weather Conditions: SUNNY 65°

Sample Record:

Sampling Method: PERISTALTIC PUMP

Sample Volume:

Sample ID: WG-12635-060409-001

Sample Time 0910

Sample Date: 6/4/09

Presence of Immiscible Layers:

Yes No

Detection method:

Collection Method:

COC #: 4513

Lab: TEST AMERICA N CANTON

Well Yield:

High Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1214	50	6.29	0.11						146	
1307		6.32	0.14						34	
1411		6.36	0.18						22	
6/4/09 0852	40	6.45	0.27	7.58	13.15	2.96	-150	3.36	1	
0857	40	6.47	0.29	7.57	13.05	2.97	-151	3.38	1	
0902	40	6.49	0.31	7.56	13.01	2.97	-152	3.42	1	

Comments: INITIAL PURGE RATE IS APPROX 50 ML/MIN

Signature: Shaun Gannon

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-ACXXA1
Personnel: SG
Date: 6/4/09

Time Start Purge: 1010
Time end Purge:
Purge Method: PERISTALTIC PUMP
Weather Conditions: SUNNY 65°

Presence of Immiscible Layers:
Yes No
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: 409B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 11.39

Sample Record:

Sampling Method: PERISTALTIC PUMP
Sample Volume:
Sample ID: WG-12635-060ACA-002
Sample Time 1215
Sample Date: 6/4/09

COC #: 4513
Lab: TEST AMERICA N. CANTON

Well Yield:
High Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1048	80	11.41	0.02	7.57	14.81	1.481	-272	6.27	4	
1053	80	11.41	0.02	7.52	14.71	1.479	-273	5.97	4	
1058	80	11.41	0.02	7.51	14.61	1.480	-275	5.82	4	

Comments:

Signature: Sean Marder

American Axle Delevan Ave
Monitoring Well Record for Low-Flow Purging

Project Data:

Number: 12635-03-400041
Personnel: SG
Date: 6/3/09

Time Start Purge: 0853
Time end Purge:
Purge Method: P. Pump
Weather Conditions: Sunny 65°

Presence of Immiscible Layers:
Yes No
Detection method:
Collection Method:

Monitoring Well Data:

Well ID: 806B
t point
Constructed Well Depth (ft):
Sounded Well Depth (ft):
Depth of Sediment(ft):
Initial Depth of Water (ft): 9.79'

Sample Record:

Sampling Method: PERISTALTIC PUMP
Sample Volume:
Sample ID: WG-12635-061109-003
Sample Time
Sample Date:

COC #: 4513
Lab: TEST AMERICA N CANTON

Well Yield:
High Low

Time	Pumping Rate (ml/min)	Water Level (ft)	Draw Down (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Observations
1012	40	10.25	0.46	7.81	15.65	1.58	-223	3.31	11	
1042		10.21	0.42	7.77	15.26	1.57	-215	1.30	12	
1200		10.27	0.48	7.76	15.82	1.58	-218	1.57	9	
1254		10.34	0.55	7.75	15.93	1.59	-214	1.63	6	
1342		10.29								
6/4/09 0830	50	10.05	0.26	7.49	15.64	1.58	-186	3.19	11	
6/5/09 0805	~~45~~	10.25	0.46	7.52	15.79	1.59	-179	2.96	7	

Comments: INITIAL PURGE RATE IS APPROX 40ml/min

Signature: Shawn Vandivier

APPENDIX E

DATA VALIDATION REPORTS

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 12650-035004

FROM: Susan Scrocchi/jbh/3-NF

DATE: December 27, 2006

Via E-Mail and U.S. Mail

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
BSA Sewer Investigation
November 2006

INTRODUCTION

Twenty-two (22) groundwater samples, 35 oil samples, and six field duplicate samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during November 2006. The samples were submitted to Severn Trent Laboratories (STL) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
PCBs	SW-846 8082[2]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times with the exception of one groundwater sample. Sample GW-12635-112106-SM-060 required a PCB re-extraction due to poor

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA)-600/4-79-220, March 1983 (with all subsequent revisions).

2 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

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surrogate recovery. The re-extraction was performed outside of the required holding time and all results were qualified as estimated (see Table 2).

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy with the following exceptions:

i) a high surrogate recovery was observed. All associated non-detect results would not have been impacted by the implied high bias and all positive sample results were qualified as estimated;

ii) a low surrogate recovery was observed. All associated sample results were qualified as estimated; and

iii) an extremely low (<10%) surrogate recovery was observed. All associated positive sample results were qualified as estimated and all non-detect results were rejected due to the poor recovery.

A summary of qualifications is presented in Table 3.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy.

Matrix spike/matrix spike duplicate (MS/MSD) samples were prepared and at the proper frequency. All recoveries showed acceptable analytical accuracy and precision with the exception of a few high recoveries. The high recoveries were possibly due to high concentrations in the original samples. No qualification of the data were performed.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable with the qualifications and exceptions noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
AMERICAN AXLE MANUFACTURING SITE
BUFFALO, NEW YORK
NOVEMBER 2006

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Matrix*	*PCBs*	*Oil & Grease*	*Comments*
GW-12635-111306-SM-001	CP-24B	11/13/06	11:05	Groundwater	X	X	
GW-12635-111306-SM-002	CP-25B	11/13/06	13:15	Groundwater	X	X	
GW-12635-111306-SM-003	CP-25B	11/13/06	13:30	Groundwater	X	X	Field duplicate of GW-12635-111306-SM-002
GW-12635-111406-SM-007	CP-12A	11/14/06	10:40	Groundwater	X	X	
GW-12635-111406-SM-011	MW-106	11/14/06	12:05	Groundwater	X	X	
GW-12635-111406-SM-016	MW-107	11/14/06	14:35	Groundwater	X	X	
O-12635-111406-SM-004	MW-309	11/14/06	10:20	Oil	X		
O-12635-111406-SM-005	CP-14	11/14/06	10:30	Oil	X		
O-12635-111406-SM-006	CP-14	11/14/06	10:35	Oil	X		Field duplicate of O-12635-111406-SM-005
O-12635-111406-SM-008	M-3	11/14/06	11:39	Oil	X		
O-12635-111406-SM-009	M-1	11/14/06	11:50	Oil	X		
O-12635-111406-SM-010	CP-13	11/14/06	12:04	Oil	X		
O-12635-111406-SM-012	CP-28	11/14/06	13:40	Oil	X		
O-12635-111406-SM-013	B-1	11/14/06	13:50	Oil	X		
O-12635-111406-SM-014	MW-401	11/14/06	14:00	Oil	X		
O-12635-111406-SM-015	MW-306	11/14/06	14:16	Oil	X		
GW-12635-111506-SM-017	MW-408	11/15/06	10:40	Groundwater	X	X	
GW-12635-111506-SM-022	MW-409	11/15/06	12:40	Groundwater	X	X	
GW-12635-111506-SM-023	MW-4A	11/15/06	15:15	Groundwater	X	X	
O-12635-111506-SM-018	CP-11B	11/15/06	12:02	Oil	X		
O-12635-111506-SM-019	CP-11B	11/15/06	12:07	Oil	X		Field duplicate of O-12635-111506-SM-018
O-12635-111506-SM-020	CP-14A	11/15/06	12:20	Oil	X		
O-12635-111506-SM-021	CP-14AR	11/15/06	12:35	Oil	X		
GW-12635-111606-SM-024	CP-26B	11/16/06	10:15	Groundwater	X	X	
GW-12635-111606-SM-025	CP-27B	11/16/06	11:55	Groundwater	X	X	
GW-12635-111606-SM-026	MW-300A	11/16/06	13:40	Groundwater	X	X	
GW-12635-111606-SM-027	T-1B	11/16/06	14:55	Groundwater	X	X	
GW-12635-111606-SM-028	T-1B	11/16/06	15:00	Groundwater	X	X	Field duplicate of GW-12635-111606-SM-027
GW-12635-111706-SM-032	MW-204	11/17/06	10:45	Groundwater	X	X	
GW-12635-111706-SM-036	CP-21B	11/17/06	12:20	Groundwater	X	X	
GW-12635-111706-SM-040	CP-22B	11/17/06	14:00	Groundwater	X	X	
O-12635-111706-SM-029	CP-13A	11/17/06	10:00	Oil	X		
O-12635-111706-SM-030	CP-9	11/17/06	10:13	Oil	X		
O-12635-111706-SM-031	CP-19A	11/17/06	10:35	Oil	X		
O-12635-111706-SM-033	B-2	11/17/06	11:13	Oil	X		
O-12635-111706-SM-034	MW-307	11/17/06	11:38	Oil	X		
O-12635-111706-SM-035	CP-8	11/17/06	12:05	Oil	X		
O-12635-111706-SM-037	CP-8A	11/17/06	12:45	Oil	X		
O-12635-111706-SM-038	CP-26	11/17/06	13:35	Oil	X		
O-12635-111706-SM-039	CP-26A	11/17/06	13:45	Oil	X		
O-12635-111706-SM-041	CP-27A	11/17/06	14:10	Oil	X		
O-12635-111706-SM-042	MW-406	11/17/06	15:00	Oil	X		
GW-12635-112006-SM-047	MW-405	11/20/06	10:50	Groundwater	X	X	
GW-12635-112006-SM-052	MW-2A	11/20/06	12:50	Groundwater	X	X	
GW-12635-112006-SM-056	MW-1A	11/20/06	14:00	Groundwater	X	X	
GW-12635-112006-SM-058	MW-3A	11/20/06	15:35	Groundwater	X	X	
GW-12635-112006-SM-059	MW-3A	11/20/06	15:55	Groundwater	X	X	Field duplicate of GW-12635-112006-SM-058
O-12635-112006-SM-043	CP-3B	11/20/06	10:00	Oil	X		
O-12635-112006-SM-044	CP-3B	11/20/06	10:05	Oil	X		Field duplicate of O-12635-112006-SM-043
O-12635-112006-SM-045	MW-305R	11/20/06	10:25	Oil	X		
O-12635-112006-SM-046	MW-308	11/20/06	10:45	Oil	X		
O-12635-112006-SM-048	MW-309A	11/20/06	11:00	Oil	X		
O-12635-112006-SM-049	T-1	11/20/06	11:24	Oil	X		
O-12635-112006-SM-050	MW-103	11/20/06	11:38	Oil	X		
O-12635-112006-SM-051	GP-12	11/20/06	12:45	Oil	X		

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
AMERICAN AXLE MANUFACTURING SITE
BUFFALO, NEW YORK
NOVEMBER 2006

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Matrix*	*PCBs*	*Oil & Grease*	*Comments*
O-12635-112006-SM-053	M-2A	11/20/06	13:00	Oil	X		
O-12635-112006-SM-054	MW-400	11/20/06	13:20	Oil	X		
O-12635-112006-SM-055	CP-4A	11/20/06	13:48	Oil	X		
O-12635-112006-SM-057	MW-404	11/20/06	14:36	Oil	X		
GW-12635-112106-SM-060	MW-205	11/21/06	10:20	Groundwater	X	X	
GW-12635-112106-SM-061	MW-102	11/21/06	11:57	Groundwater	X	X	
GW-12635-112106-SM-062	MW-4	11/21/06	13:30	Groundwater	X	X	
O-12635-112106-SM-063	B-26 Sump	11/21/06	14:20	Oil	X		

Note:
PCBs Polychlorinated Biphenyls.

TABLE 2

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
SEMI-ANNUAL MONITORING EVENT
AMERICAN AXLE MANUFACTURING SITE
BUFFALO, NEW YORK
NOVEMBER 2006

Parameter	*Sample ID*	*Compound*	*Holding Time (days)*	*Holding Time Criteria (days)*	*Sample Results*	*Units*	*Qualifier*
PCBs	GW-12635-112106-SM-060	Aroclor-1260 (PCB-1260)	11	7	0.065 U	µg/L	UJ
		Aroclor-1254 (PCB-1254)			0.065 U	µg/L	UJ
		Aroclor-1221 (PCB-1221)			0.065 U	µg/L	UJ
		Aroclor-1232 (PCB-1232)			0.065 U	µg/L	UJ
		Aroclor-1248 (PCB-1248)			0.065 U	µg/L	UJ
		Aroclor-1016 (PCB-1016)			0.065 U	µg/L	UJ
		Aroclor-1242 (PCB-1242)			0.065 U	µg/L	UJ

Notes:
PCBs Polychlorinated Biphenyls.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 3

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SEMI-ANNUAL MONITORING EVENT
AMERICAN AXLE MANUFACTURING SITE
BUFFALO, NEW YORK
NOVEMBER 2006

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
PCBs	Decachlorobiphenyl	32	40-145	O-12635-111706-SM-034	Aroclor-1260 (PCB-1260)	1000 U	µg/kg	UJ
					Aroclor-1254 (PCB-1254)	1000 U	µg/kg	UJ
					Aroclor-1221 (PCB-1221)	1000 U	µg/kg	UJ
					Aroclor-1232 (PCB-1232)	1000 U	µg/kg	UJ
					Aroclor-1248 (PCB-1248)	4800	µg/kg	J
					Aroclor-1016 (PCB-1016)	1000 U	µg/kg	UJ
					Aroclor-1242 (PCB-1242)	1000 U	µg/kg	UJ
PCBs	Decachlorobiphenyl	170	40-145	O-12635-111706-SM-037	Aroclor-1248 (PCB-1248)	10000	µg/kg	J
PCBs	Decachlorobiphenyl	2	40-145	O-12635-112006-SM-045	Aroclor-1260 (PCB-1260)	1000 U	µg/kg	R
					Aroclor-1254 (PCB-1254)	1000 U	µg/kg	R
					Aroclor-1221 (PCB-1221)	1000 U	µg/kg	R
					Aroclor-1232 (PCB-1232)	1000 U	µg/kg	R
					Aroclor-1248 (PCB-1248)	13000	µg/kg	J
					Aroclor-1016 (PCB-1016)	1000 U	µg/kg	R
					Aroclor-1242 (PCB-1242)	1000 U	µg/kg	R

Notes:
J Estimated.
PCBs Polychlorinated Biphenyls.
R Rejected.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035009

FROM: Susan Scrocchi/jbh/9

DATE: June 29, 2007

Via E-Mail and U.S. Mail

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
BSA Sewer Investigation
May – June 2007

INTRODUCTION

Twenty-three (23) groundwater samples, 43 oil samples, and six field duplicate samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during May and June 2007. The samples were submitted to Severn Trent Laboratories (STL) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
PCBs	SW-846 8082[2]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

2 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

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QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times with the exception of the groundwater samples collecting on May 14, 2007. All three samples were extracted on the eighth day after collection and were qualified as estimated (see Table 2).

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy with the exception of two low surrogate recoveries. All associated sample results were qualified as estimated to reflect the implied low bias (see Table 3).

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy.

Matrix spike/matrix spike duplicate (MS/MSD) samples were prepared and at the proper frequency. All recoveries showed acceptable analytical accuracy and precision with the exception of a few high recoveries. The high recoveries were possibly due to high concentrations in the original samples. No qualification of the data were performed.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable with the qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
MAY-JUNE 2007

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
GW-12635-050707-SM-001	CP-24B	Groundwater	05/07/07	11:50	X	X	
GW-12635-050707-SM-002	CP-24B	Groundwater	05/07/07	12:05	X	X	Field duplicate of GW-12635-050707-SM-001
GW-12635-050707-SM-003	CP-25B	Groundwater	05/07/07	14:50	X	X	
O-12635-050807-SM-004	M-3	Oil	05/08/07	9:00	X		
O-12635-050807-SM-005	M-1	Oil	05/08/07	9:33	X		
O-12635-050807-SM-006	MW-401	Oil	05/08/07	9:39	X		
O-12635-050807-SM-007	MW-400	Oil	05/08/07	9:43	X		
O-12635-050807-SM-008	CP-14	Oil	05/08/07	9:55	X		
O-12635-050807-SM-009	CP-14	Oil	05/08/07	9:57	X		Field duplicate of O-12635-050807-SM-008
O-12635-050807-SM-010	MW-309	Oil	05/08/07	10:05	X		
O-12635-050807-SM-011	MW-306	Oil	05/08/07	10:10	X		
GW-12635-050807-SM-013	CP-26B	Groundwater	05/08/07	10:13	X	X	
O-12635-050807-SM-014	CP-13	Oil	05/08/07	10:15	X		
O-12635-050807-SM-015	CP-19A	Oil	05/08/07	10:23	X		
O-12635-050807-SM-016	B-1	Oil	05/08/07	10:30	X		
O-12635-050807-SM-017	MW-103	Oil	05/08/07	10:56	X		
GW-12635-050807-SM-018	CP-27B	Groundwater	05/08/07	11:00	X	X	
GW-12635-050807-SM-019	CP-27B	Groundwater	05/08/07	11:15	X	X	Field duplicate of GW-12635-050807-SM-018
O-12635-050807-SM-012	MW-306	Oil	05/08/07	12:12	X		Field duplicate of O-12635-050807-SM-011
GW-12635-050807-SM-020	MW-300A	Groundwater	05/08/07	14:25	X	X	
O-12635-050907-SM-021	CP-11B	Oil	05/09/07	9:47	X		
O-12635-050907-SM-022	CP-11A	Oil	05/09/07	10:10	X		
O-12635-050907-SM-023	B-2	Oil	05/09/07	10:18	X		
GW-12635-050907-SM-024	MW-106	Groundwater	05/09/07	11:15	X	X	
O-12635-050907-SM-025	CP-13A	Oil	05/09/07	11:30	X		
O-12635-050907-SM-026	MW-406	Oil	05/09/07	11:48	X		
O-12635-050907-SM-027	CP-15A	Oil	05/09/07	12:22	X		
O-12635-050907-SM-028	CP-26	Oil	05/09/07	12:52	X		
O-12635-050907-SM-029	CP-26A	Oil	05/09/07	12:59	X		
O-12635-050907-SM-030	CP-27A	Oil	05/09/07	13:09	X		
O-12635-050907-SM-031	CP-28	Oil	05/09/07	13:14	X		
O-12635-050907-SM-032	CP-28	Oil	05/09/07	13:19	X		Field duplicate of O-12635-050907-SM-031
GW-12635-050907-SM-033	MW-107	Groundwater	05/09/07	13:20	X	X	
GW-12635-0501007-SM-034	CP-12A	Groundwater	05/10/07	10:00	X	X	
O-12635-051007-SM-035	M-2A	Oil	05/10/07	11:24	X		
O-12635-051007-SM-036	CP-28B	Oil	05/10/07	11:33	X		
O-12635-051007-SM-037	M-1A	Oil	05/10/07	11:46	X		
O-12635-051007-SM-038	CP-14A	Oil	05/10/07	11:58	X		
O-12635-051007-SM-039	CP-14AR	Oil	05/10/07	12:07	X		
O-12635-051007-SM-040	CP-20B	Oil	05/10/07	12:18	X		
O-12635-051007-SM-041	MW-307	Oil	05/10/07	12:34	X		
O-12635-051007-SM-042	MW-308	Oil	05/10/07	12:41	X		
O-12635-051007-SM-043	MW-305R	Oil	05/10/07	12:52	X		
O-12635-051007-SM-044	T-1	Oil	05/10/07	13:07	X		
GW-12635-051007-SM-045	MW-408	Groundwater	05/10/07	13:10	X	X	
O-12635-051007-SM-046	MW-309A	Oil	05/10/07	13:45	X		
GW-12635-051007-SM-047	MW-409	Groundwater	05/10/07	14:30	X	X	
O-12635-051107-SM-048	MW-404	Oil	05/11/07	10:22	X		
O-12635-051107-SM-049	GP-12	Oil	05/11/07	10:50	X		
O-12635-051107-SM-050	CP-16B	Oil	05/11/07	11:13	X		
GW-12635-051107-SM-051	MW-4A	Groundwater	05/11/07	11:17	X	X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
MAY-JUNE 2007

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
O-12635-051107-SM-052	CP-9B	Oil	05/11/07	11:29	X		
O-12635-051107-SM-053	CP-17A	Oil	05/11/07	12:02	X		
O-12635-051107-SM-054	CP-2A	Oil	05/11/07	12:32	X		
O-12635-051107-SM-055	CP-3B	Oil	05/11/07	12:42	X		
O-12635-051107-SM-056	CP-3B	Oil	05/11/07	12:47	X		Field duplicate of O-12635-051107-SM-055
O-12635-051107-SM-057	CP-4A	Oil	05/11/07	12:58	X		
O-12635-051107-SM-058	CP-8	Oil	05/11/07	13:09	X		
GW-12635-051107-SM-059	MW-4	Groundwater	05/11/07	13:40	X	X	
O-12635-051107-SM-060	B-26 Sump	Oil	05/11/07	13:50	X		
GW-12635-051107-SM-061	MW-405	Groundwater	05/11/07	15:00	X	X	
GW-12635-0501407-SM-062	MW-1A	Groundwater	05/14/07	11:00	X	X	
GW-12635-0501407-SM-063	MW-2A	Groundwater	05/14/07	12:15	X	X	
GW-12635-0501407-SM-064	MW-3A	Groundwater	05/14/07	13:30	X	X	
GW-12635-0501507-SM-065	CP-21B	Groundwater	05/15/07	11:30	X	X	
GW-12635-0501507-SM-066	CP-22B	Groundwater	05/15/07	13:20	X	X	
GW-12635-051607-SM-067	T-1B	Groundwater	05/16/07	10:25	X	X	
GW-12635-051607-SM-068	MW-102	Groundwater	05/16/07	12:20	X	X	
GW-12635-051707-SM-069	MW-204	Groundwater	05/17/07	10:40	X	X	
GW-12635-051707-SM-070	MW-205	Groundwater	05/17/07	12:50	X	X	
GW-12635-050707-SM-071	CP-25A	Groundwater	05/07/07	13:10	X		
O-12635-060407-SM-001	CP-20B	Oil	06/04/07	15:00	X		

Note:
PCBs Polychlorinated Biphenyls.

TABLE 2

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
MAY-JUNE 2007

Parameter	*Sample ID*	*Holding Time (days)*	*Holding Time Criteria (days)*	*Analyte*	*Sample Results*	*Units*	*Qualifier*
PCBs	GW-12635-051407-SM-062	8	7	Aroclor-1260 (PCB-1260)	0.065 U	µg/L	UJ
				Aroclor-1254 (PCB-1254)	0.065 U	µg/L	UJ
				Aroclor-1221 (PCB-1221)	0.065 U	µg/L	UJ
				Aroclor-1232 (PCB-1232)	0.065 U	µg/L	UJ
				Aroclor-1248 (PCB-1248)	0.065 U	µg/L	UJ
				Aroclor-1016 (PCB-1016)	0.065 U	µg/L	UJ
				Aroclor-1242 (PCB-1242)	0.065 U	µg/L	UJ
PCBs	GW-12635-051407-SM-063	8	7	Aroclor-1260 (PCB-1260)	0.065 U	µg/L	UJ
				Aroclor-1254 (PCB-1254)	0.065 U	µg/L	UJ
				Aroclor-1221 (PCB-1221)	0.065 U	µg/L	UJ
				Aroclor-1232 (PCB-1232)	0.065 U	µg/L	UJ
				Aroclor-1248 (PCB-1248)	0.065 U	µg/L	UJ
				Aroclor-1016 (PCB-1016)	0.065 U	µg/L	UJ
				Aroclor-1242 (PCB-1242)	0.065 U	µg/L	UJ
PCBs	GW-12635-051407-SM-064	8	7	Aroclor-1260 (PCB-1260)	0.065 U	µg/L	UJ
				Aroclor-1254 (PCB-1254)	0.065 U	µg/L	UJ
				Aroclor-1221 (PCB-1221)	0.065 U	µg/L	UJ
				Aroclor-1232 (PCB-1232)	0.065 U	µg/L	UJ
				Aroclor-1248 (PCB-1248)	0.065 U	µg/L	UJ
				Aroclor-1016 (PCB-1016)	0.065 U	µg/L	UJ
				Aroclor-1242 (PCB-1242)	0.065 U	µg/L	UJ

Notes:
PCBs Polychlorinated Biphenyls.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 3

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
MAY-JUNE 2007

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
PCBs	Tetrachloro-m-xylene	38	48-125	GW-12635-051107-SM-051	Aroclor-1260 (PCB-1260)	0.065 U	µg/L	UJ
					Aroclor-1254 (PCB-1254)	0.065 U	µg/L	UJ
					Aroclor-1221 (PCB-1221)	0.065 U	µg/L	UJ
					Aroclor-1232 (PCB-1232)	0.065 U	µg/L	UJ
					Aroclor-1248 (PCB-1248)	0.065 U	µg/L	UJ
					Aroclor-1016 (PCB-1016)	0.065 U	µg/L	UJ
					Aroclor-1242 (PCB-1242)	0.065 U	µg/L	UJ
PCBs	Tetrachloro-m-xylene	46	48-125	GW-12635-051107-SM-059	Aroclor-1260 (PCB-1260)	0.065 U	µg/L	UJ
					Aroclor-1254 (PCB-1254)	0.065 U	µg/L	UJ
					Aroclor-1221 (PCB-1221)	0.065 U	µg/L	UJ
					Aroclor-1232 (PCB-1232)	0.065 U	µg/L	UJ
					Aroclor-1248 (PCB-1248)	0.065 U	µg/L	UJ
					Aroclor-1016 (PCB-1016)	0.065 U	µg/L	UJ
					Aroclor-1242 (PCB-1242)	0.065 U	µg/L	UJ

Notes:
PCBs Polychlorinated Biphenyls.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035010

FROM: Susan Scrocchi/bjw/11

DATE: June 15, 2009

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event-Lateral Wells
BSA Sewer Investigation
September 2007

INTRODUCTION

Three (3) water samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during September 2007. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. Analytical results summary is presented in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

A blank spike (BS) was prepared and analyzed for PCBs. The recovery showed acceptable analytical accuracy. The BS for Oil and Grease was analyzed in duplicate. All results were acceptable indicating good analytical accuracy and precision.

No matrix spike/matrix spike duplicate (MS/MSD) samples were prepared from this set of investigative samples.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT-LATERAL WELLS
BSA SEWER INVESTIGATION
SEPTEMBER 2007

				Analysis/Parameters	
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*
WW-12635-092507-001	Lateral-1	09/25/07	10:45	X	X
WW-12635-092507-002	Lateral-2	09/25/07	11:00	X	X
WW-12635-092507-003	Lateral-3	09/25/07	11:15	X	X

Note:

PCBs - Polychlorinated Biphenyls.

TABLE 2

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT-LATERAL WELLS
BSA SEWER INVESTIGATION
SEPTEMBER 2007

	Sample Location:	*LATERAL-1*	*LATERAL-2*	*LATERAL-3*
	Sample ID:	*WW-12635-092507-001*	*WW-12635-092507-002*	*WW-12635-092507-003*
	Sample Date:	*9/25/2007*	*9/25/2007*	*9/25/2007*
Parameters:	*Units*			
Pesticides				
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	1.5	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U
General Chemistry				
n-Hexane Extractable Material	mg/L	29.8	5.0 U	73.4

Notes:

U - Not detected.

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035009

FROM: Susan Scrocchi/jbh/12

DATE: February 27, 2008

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
BSA Sewer Investigation
November 2007

INTRODUCTION

Twenty-two (22) groundwater samples, 38 oil samples, and five field duplicate samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during November 2007. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
PCBs	SW-846 8082[2]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

2 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy with the exception of one low surrogate recovery. The associated sample results were qualified as estimated to reflect the implied low bias (see Table 2).

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Matrix spike/matrix spike duplicate (MS/MSD) samples were prepared and at the proper frequency. All recoveries showed acceptable analytical accuracy and precision with the exception of low oil and grease recoveries for sample WG-12635-110807-014. All associated sample results were qualified as estimated to reflect the implied low bias (see Table 3).

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable with the qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
NOVEMER 2007

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Oil & Grease*	*PCBs*	*Comments*
WG-12635-110507-001	MW-204	Groundwater	11/05/07	10:15	X	X	
WG-12635-110507-002	MW-106	Groundwater	11/05/07	11:45	X	X	
WG-12635-110507-003	MW-409	Groundwater	11/05/07	15:15	X	X	
O-12635-110507-001	MW-404	Oil	11/05/07	9:30		X	
O-12635-110507-002	CP-2A	Oil	11/05/07	10:06		X	
O-12635-110507-003	CP-3B	Oil	11/05/07	10:13		X	
O-12635-110507-004	MW-308	Oil	11/05/07	*10:21*		X	
O-12635-110507-005	CP-4A	Oil	11/05/07	11:10		X	
O-12635-110507-006	CP-19A	Oil	11/05/07	10:39		X	
O-12635-110507-007	CP-9	Oil	11/05/07	10:40		X	
O-12635-110507-008	MW-307	Oil	11/05/07	10:59		X	
O-12635-110507-009	B-2	Oil	11/05/07	11:08		X	
O-12635-110507-010	B-2	Oil	11/05/07	11:40		X	O-12635-110507-009
O-12635-110507-011	CP-7A	Oil	11/05/07	11:15		X	
O-12635-110507-012	MW-305R	Oil	11/05/07	11:22		X	
O-12635-110507-013	MW-306	Oil	11/05/07	11:29		X	
O-12635-110507-014	CP-8	Oil	11/05/07	13:09		X	
O-12635-110507-015	CP-8A	Oil	11/05/07	13:12		X	
O-12635-110507-016	CP-13	Oil	11/05/07	13:24		X	
O-12635-110507-017	CP-13A	Oil	11/05/07	13:30		X	
O-12635-110507-018	B-26	Oil	11/05/07	14:00		X	
O-12635-110607-019	CP-11B	Oil	11/06/07	9:15		X	
O-12635-110607-020	CP-11B	Oil	11/06/07	10:00		X	O-12635-110607-019
O-12635-110607-021	CP-11A	Oil	11/06/07	9:26		X	
O-12635-110607-022	CP-16B	Oil	11/06/07	9:39		X	
O-12635-110607-023	CP-15A	Oil	11/06/07	9:50		X	
O-12635-110607-024	T-1	Oil	11/06/07	10:13		X	
O-12635-110607-025	CP-26A	Oil	11/06/07	10:25		X	
O-12635-110607-026	CP-27A	Oil	11/06/07	10:41		X	
O-12635-110607-027	CP-12	Oil	11/06/07	10:54		X	
O-12635-110607-028	CP-28	Oil	11/06/07	11:03		X	
O-12635-110607-029	M-1A	Oil	11/06/07	11:16		X	
O-12635-110607-030	M-1	Oil	11/06/07	11:22		X	
WG-12635-110607-004	MW-107	Groundwater	11/06/07	9:20	X	X	
WG-12635-110607-005	MW-408	Groundwater	11/06/07	10:15	X	X	
WG-12635-110607-006	MW-4	Groundwater	11/06/07	11:40	X	X	
WG-12635-110607-007	MW-4A	Groundwater	11/06/07	13:15	X	X	
WG-12635-110607-008	MW-4A	Groundwater	11/06/07	14:45	X	X	
WG-12635-110707-009	MW-405	Groundwater	11/07/07	8:10	X	X	
WG-12635-110707-010	MW-3A	Groundwater	11/07/07	10:00	X	X	
WG-12635-110707-011	MW-1A	Groundwater	11/07/07	13:00	X	X	
WG-12635-110707-012	MW-2A	Groundwater	11/07/07	15:00	X	X	
WG-12635-110807-013	CP-24	Groundwater	11/08/07	11:30		X	
WG-12635-110807-014	T-1B	Groundwater	11/08/07	13:30	X	X	
WG-12635-110807-015	CP-24B	Groundwater	11/08/07	15:00	X	X	
O-12635-110807-032	M-2A	Oil	11/08/07	11:58		X	
O-12635-110807-033	M-2A	Oil	11/08/07	12:30		X	O-12635-110807-032
O-12635-110807-034	MW-400	Oil	11/08/07	12:06		X	
O-12635-110807-035	M-3	Oil	11/08/07	12:15		X	
O-12635-110807-036	CP-14	Oil	11/08/07	12:21		X	
O-12635-110807-037	CP-14AR	Oil	11/08/07	12:25		X	
O-12635-110807-038	CP-14	Oil	11/08/07	12:36		X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
NOVEMER 2007

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Oil & Grease*	*PCBs*	*Comments*
O-12635-110807-039	MW-309A	Oil	11/08/07	12:45		X	
O-12635-110807-040	MW-309	Oil	11/08/07	12:49		X	
O-12635-110807-041	MW-309	Oil	11/08/07	13:00		X	O-12635-110807-040
O-12635-110807-042	MW-103	Oil	11/08/07	13:22		X	
O-12635-110807-043	MW-401	Oil	11/08/07	13:32		X	
WG-12635-110907-016	CP-25B	Groundwater	11/09/07	10:15	X	X	
WG-12635-110907-017	CP26B	Groundwater	11/09/07	11:20	X	X	
WG-12635-110907-018	CP-26B	Groundwater	11/09/07	13:30	X	X	WG-12635-110907-017
WG-12635-111307-019	CP-22B	Groundwater	11/13/07	10:40	X	X	
WG-12635-111307-020	MW-205	Groundwater	11/13/07	12:45	X	X	
WG-12635-111307-021	MW-102	Groundwater	11/13/07	14:00	X	X	
WG-12635-111307-022	CP-12A	Groundwater	11/13/07	14:00	X	X	
WG-12635-111307-023	CP-23	Groundwater	11/13/07	14:10	X	X	

Note:
PCBs Polychlorinated Biphenyls.

TABLE 2

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
NOVEMER 2007

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
PCBs	Tetrachloro-m-xylene	26	48-125	WG-12635-111307-022	Aroclor-1260 (PCB-1260)	0.065 U	ug/L	UJ
					Aroclor-1254 (PCB-1254)	0.065 U	ug/L	UJ
					Aroclor-1221 (PCB-1221)	0.065 U	ug/L	UJ
					Aroclor-1232 (PCB-1232)	0.065 U	ug/L	UJ
					Aroclor-1016 (PCB-1016)	0.065 U	ug/L	UJ
					Aroclor-1242 (PCB-1242)	0.065 U	ug/L	UJ

Notes:
PCBs Polychlorinated Biphenyls.
U Not detected.
UJ Not detected, estimated reporting limit.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
NOVEMER 2007

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Sample Result*	*Units*	*Qualifier*
						Recovery (percent)	*RPD (percent)*			
General Chemistry	WG-12635-110607-004	n-Hexane Extractable Material	72	76	5	79-114	20	5.0 U	mg/L	UJ
	WG-12635-110607-005							5.0 U	mg/L	UJ
	WG-12635-110607-006							5.0 U	mg/L	UJ
	WG-12635-110607-007							5.0 U	mg/L	UJ
	WG-12635-110607-008							5.0 U	mg/L	UJ
	WG-12635-110707-009							5.0 U	mg/L	UJ
	WG-12635-110707-010							5.0 U	mg/L	UJ
	WG-12635-110707-011							5.0 U	mg/L	UJ
	WG-12635-110707-012							5.0 U	mg/L	UJ
	WG-12635-110807-014							5.0 U	mg/L	UJ
	WG-12635-110807-015							7.4	mg/L	J
	WG-12635-110907-016							5.8	mg/L	J
	WG-12635-110907-017							5.0 U	mg/L	UJ
	WG-12635-110907-018							5.0 U	mg/L	UJ

Notes:

J Estimated.
MS Matrix Spike.
MSD Matrix Spike Duplicate.
RPD Relative Percent Difference.
U Not detected.
UJ Not detected, estimated reporting limit.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035010

FROM: Sheri Finn/pga/15

DATE: May 21, 2008

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
BSA Sewer Investigation
April 2008

INTRODUCTION

Seven (7) wastewater samples and one field duplicate sample were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during April 2008. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy with the exception of some that were diluted out due to necessary sample dilutions. No qualification of data was necessary.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
BUFFALO, NEW YORK
APRIL 2008

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Oil & Grease*	*PCBs*	*Comments*
WW-12635-042408-001	Mon. Sta. 004	Wastewater	04/24/08	*11:50*	X	X	
WW-12625-042408-006	267' N of MH E37, west wall	Wastewater	04/24/08	*1:30*	X	X	
WW-12625-042408-007	247' N of MH E37, east wall	Wastewater	04/24/08	1:40	X	X	
WW-12625-042408-008	54' N of MH E37, west wall	Wastewater	04/24/08	1:50	X	X	
WW-12625-042408-009	Mon. Sta. 002	Wastewater	04/24/08	15:15	X	X	
WW-12625-042408-010	Mon. Sta. 002	Wastewater	04/24/08	15:30	X	X	Field Duplicate of WW-12625-042408-009
WW-12625-042408-011	Mon. Sta. 003	Wastewater	04/24/08	15:45	X	X	

Note:
PCBs Polychlorinated Biphenyls.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

FROM: Susan Scrocchi/pga/13

REF. NO.: 012650-035013

DATE: May 15, 2008

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Scajaquada Creek Drain Sampling
American Axle Plant Site
April 2008

INTRODUCTION

Two surfacewater and two sediment samples were collected in support of the Scajaquada Creek Drain Sampling Event at the American Axle Manufacturing Site (Site) during April 2008. The sample summary detailing sample identification, sample location, quality control (QC) samples, and analytical parameters is presented in Table 1. Sample analysis was completed at TestAmerica Laboratories, Inc. (TA) in North Canton, Ohio, in accordance with the methodologies presented in Table 2.

The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and the document "National Functional Guidelines for Organic Data Review" (October 1999).

These guidelines are collectively referred to as "Guidelines" in this memorandum.

Sample Quantitation

The laboratory reported polychlorinated biphenyls (PCBs) in water to the requested limit of 0.065 ppb. Results less than the requested limits were not reported. Sediment results were reported based on dry weight. The sediment samples yielded percent solids of less than 50 percent which could cause variability in results. All sediment results should be considered estimated.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled to 4°C(±2°C) after collection.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency. All method blank results were non-detect for the compounds of interest.

Surrogate Compounds - Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To assess the long-term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and relative percent differences (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the "Guidelines", which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples.

No MS/MSDs were requested with these samples.

Laboratory Control Sample (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and is analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were all within the laboratory control limits indicating acceptable analytical accuracy.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SCAJAQUADA CREEK DRAIN SAMPLING
AMERICAN AXLE MANUFACTURING
BUFFALO, NEW YORK
APRIL 2008

				Analysis/Parameters	
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCB 8082*	*PCB 608*
WS-12635-042408-002	25' West of overflow	04/24/08	10:30		X
SE-12635-042408-003	25' West of overflow	04/24/08	10:30	X	
WS-12635-042408-004	25' East of overflow	04/24/08	10:40		X
SE-12635-042408-005	25' East of overflow	04/24/08	10:40	X	

Note:
PCB Polychlorinated Biphenyl.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
SCAJAQUADA CREEK DRAIN SAMPLING
AMERICAN AXLE MANUFACTURING
BUFFALO, NEW YORK
APRIL 2008

Parameter	*Method*
PCBs	SW-846 8082[1]
PCBs	USEPA 608[2]

Notes:

1 "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

(2) "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency [USEPA] 600/4-79-220, March 1983 (with all subsequent revisions).

PCBs Polychlorinated Biphenyls.

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035009

FROM: Susan Scrocchi/bjw/12

DATE: June 15, 2009

E-Mail and Hard Copy if Requested

RE: **Analytical Results and QA/QC Review**
Semi-Annual Monitoring Event
BSA Sewer Investigation
June 2008

INTRODUCTION

Thirty-eight groundwater samples, 51 oil samples, and nine field duplicate samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during June 2008. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	SW846 8082[1]
Lead (total and dissolved)	SW-846 6010[1]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[2]

A sampling and analysis summary is presented in Table 1. Analytical results summaries are presented in Tables 2A and 2B. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

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1 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

2 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

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QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Matrix spike/matrix spike duplicate (MS/MSD) samples were prepared and at the proper frequency. All recoveries showed acceptable analytical accuracy and precision.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

					Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Lead (total and dissolved)*	*Oil & Grease*	*Comments*
WG-12635-061608-001	MW-205	Groundwater	06/16/08	11:00	X		X	
WG-12635-061608-002	MW-1A	Groundwater	06/16/08	12:40	X		X	
WG-12635-061608-003	MW-1B	Groundwater	06/16/08	13:30			X	
WG-12635-061608-004	CP-25B	Groundwater	06/16/08	15:00	X		X	
LNAPL-12635-061608-001	MW-309	Oil	06/16/08	13:41	X			
LNAPL-12635-061608-002	MW-309A	Oil	06/16/08	13:47	X			
LNAPL-12635-061608-003	CP-14	Oil	06/16/08	13:53	X			
LNAPL-12635-061608-004	CP-14AR	Oil	06/16/08	13:59	X			
LNAPL-12635-061608-005	CP-14A	Oil	06/16/08	14:05	X			
LNAPL-12635-061608-006	CP-28	Oil	06/16/08	14:15	X			
LNAPL-12635-061608-007	GP-12	Oil	06/16/08	14:33	X			
LNAPL-12635-061608-008	M-3	Oil	06/16/08	14:40	X			
WG-12635-061708-005	CP-24B	Groundwater	06/17/08	8:45	X		X	
WG-12635-061708-006	CP-24B	Groundwater	06/17/08	9:00	X		X	Field duplicate of WG-12635-061708-005
WG-12635-061708-008	CP-26B	Groundwater	06/17/08	9:30	X		X	
WG-12635-061708-009	GP-03	Groundwater	06/17/08	10:05	X		X	
WG-12635-061708-010	T-1B	Groundwater	06/17/08	11:11	X		X	
WG-12635-061708-012	MW-300A	Groundwater	06/17/08	12:20			X	
WG-12635-061708-013	CP-22B	Groundwater	06/17/08	14:10	X		X	
LNAPL-12635-061708-009	M-1	Oil	06/17/08	10:15	X			
LNAPL-12635-061708-010	M-1A	Oil	06/17/08	10:27	X			
LNAPL-12635-061708-011	MW-400	Oil	06/17/08	10:35	X			

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

					Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Lead (total and dissolved)*	*Oil & Grease*	*Comments*
LNAPL-12635-061708-012	MW-401	Oil	06/17/08	10:42	X			
LNAPL-12635-061708-013	M-2A	Oil	06/17/08	10:57	X			
LNAPL-12635-061708-014	GP-8	Oil	06/17/08	11:21	X			
LNAPL-12635-061708-015	GP-9	Oil	06/17/08	11:28	X			
LNAPL-12635-061708-016	CP-27A	Oil	06/17/08	11:51	X			
LNAPL-12635-061708-017	MW-4B	Oil	06/17/08	12:16	X			
LNAPL-12635-061708-018	MW-404	Oil	06/17/08	12:24	X			
LNAPL-12635-061708-019	MW-305R	Oil	06/17/08	12:44	X			
LNAPL-12635-061708-020	MW-306	Oil	06/17/08	12:49	X			
LNAPL-12635-061708-021	MW-307	Oil	06/17/08	12:55	X			
LNAPL-12635-061708-022	MW-308	Oil	06/17/08	13:04	X			
LNAPL-12635-061708-023	MW-103	Oil	06/17/08	13:20	X			
LNAPL-12635-061708-024	T-1	Oil	06/17/08	13:27	X			
LNAPL-12635-061708-025	CP-11B	Oil	06/17/08	14:29	X			
LNAPL-12635-061708-026	CP-11B	Oil	06/17/08	14:33	X			Field duplicate of LNAPL-12635-061708-
LNAPL-12635-061708-027	CP-13	Oil	06/17/08	14:39	X			
LNAPL-12635-061708-028	CP-13	Oil	06/17/08	14:42	X			Field duplicate of LNAPL-12635-061708-
LNAPL-12635-061708-029	CP-15A	Oil	06/17/08	14:46	X			
LNAPL-12635-061708-030	CP-15A	Oil	06/17/08	14:49	X			Field duplicate of LNAPL-12635-061708-
WG-12635-061808-017	CP-12A	Groundwater	06/18/08	9:46	X		X	
WG-12635-061808-018	MW-102	Groundwater	06/18/08	11:53	X		X	
WG-12635-061808-019	MW-204	Groundwater	06/18/08	11:00			X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

					Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Lead (total and dissolved)*	*Oil & Grease*	*Comments*
WG-12635-061808-020	MW-102	Groundwater	06/18/08	12:13	X		X	Field duplicate of WG-12635-061808-018
WG-12635-061808-021	MW-409B	Groundwater	06/18/08	13:45			X	
LNAPL-12635-061808-031	CP-26	Oil	06/18/08	9:19	X			
LNAPL-12635-061808-032	CP-26A	Oil	06/18/08	9:27	X			
LNAPL-12635-061808-033	CP-24A	Oil	06/18/08	9:32	X			
LNAPL-12635-061808-034	CP-19A	Oil	06/18/08	9:44	X			
LNAPL-12635-061808-035	CP-17A	Oil	06/18/08	9:51	X			
LNAPL-12635-061808-036	CP-16B	Oil	06/18/08	10:08	X			
LNAPL-12635-061808-037	CP-9	Oil	06/18/08	10:15	X			
LNAPL-12635-061808-038	CP-9	Oil	06/18/08	10:20	X			Field duplicate of LNAPL-12635-061808-
LNAPL-12635-061808-039	B-2	Oil	06/18/08	10:33	X			
LNAPL-12635-061808-040	CP-7A	Oil	06/18/08	10:50	X			
LNAPL-12635-061808-041	CP-8	Oil	06/18/08	11:12	X			
LNAPL-12635-061808-042	CP-8A	Oil	06/18/08	11:18	X			
LNAPL-12635-061808-043	CP-4A	Oil	06/18/08	11:28	X			
LNAPL-12635-061808-044	CP-3B	Oil	06/18/08	11:38	X			
LNAPL-12635-061808-045	CP-2A	Oil	06/18/08	11:47	X			
LNAPL-12635-061808-046	CP-1B	Oil	06/18/08	11:55	X			
LNAPL-12635-061808-047	CP-1B	Oil	06/18/08	12:06	X			Field duplicate of LNAPL-12635-061808-
LNAPL-12635-061808-048	MW-803A	Oil	06/18/08	13:28	X			
LNAPL-12635-061808-049	MW-802A	Oil	06/18/08	13:40	X			
LNAPL-12635-061808-050	MW-401B	Oil	06/18/08	14:00	X			

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

					Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Lead (total and dissolved)*	*Oil & Grease*	*Comments*
LNAPL-12635-061808-051	B-1	Oil	06/18/08	10:39	X			
WG-12635-061708-011	M-2	Groundwater	06/17/08	11:00	X			
WG-12635-061708-014	GP-06	Groundwater	06/17/08	14:45	X		X	
WG-12635-061908-022	MW-408	Groundwater	06/19/08	8:57			X	
WG-12635-061908-023	MW-5B	Groundwater	06/19/08	10:30			X	
WG-12635-061908-024	MW-5B	Groundwater	06/19/08	12:00			X	Field duplicate of WG-12635-061908-023
WG-12635-061908-025	MW-409	Groundwater	06/19/08	12:15			X	
WG-12635-061908-026	MW-4A	Groundwater	06/19/08	13:28			X	
WG-12635-061908-027	MW-3A	Groundwater	06/19/08	14:40	X		X	
LNAPL-12635-061908-052	B-26	Oil	06/19/08	9:39	X			
LNAPL-12635-061908-053	B-26	Oil	06/19/08	9:50	X			Field duplicate of LNAPL-12635-061908-
LNAPL-12635-061908-054	CP-8B	Oil	06/19/08	10:04	X			
LNAPL-12635-061908-055	CP-9B	Oil	06/19/08	10:23	X			
LNAPL-12635-061908-056	CP-4B	Oil	06/19/08	10:35	X			
LNAPL-12635-061908-057	CP-14B	Groundwater	06/19/08	13:32	X			
LNAPL-12635-061908-058	CP-18B	Groundwater	06/19/08	13:40	X			
LNAPL-12635-061908-059	CP-11A	Groundwater	06/19/08	13:46	X			
LNAPL-12635-061908-060	CP-20B	Groundwater	06/19/08	13:58	X			
LNAPL-12635-061908-061	CP-21	Groundwater	06/19/08	14:06	X			
WG-12635-062008-028	MW-4	Groundwater	06/20/08	8:52	X		X	
WG-12635-062008-029	MW801A	Groundwater	06/20/08	8:30	X		X	
WG-12635-062008-030	MW-804A	Groundwater	06/20/08	10:05	X		X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

					Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Lead (total and dissolved)*	*Oil & Grease*	*Comments*
WG-12635-062008-031	MW-2A	Groundwater	06/20/08	13:32	X		X	
WG-12635-061808-015	CP-23	Groundwater	06/20/08	8:20	X		X	
LNAPL-12635-062008-062	CP-23B	Groundwater	06/20/08	9:00	X			
LNAPL-12635-062008-063	CP-25A	Groundwater	06/20/08	9:35	X			
LNAPL-12635-062008-064	CP-28B	Oil	06/20/08	10:06	X			
WG-12635-062308-032	MW-6A	Groundwater	06/23/08	12:48	X		X	
WG-12635-062308-033	MW-6B	Groundwater	06/23/08	12:51	X		X	
WG-12635-062408-034	MW-106	Groundwater	06/24/08	8:54	X		X	
WG-12635-062408-035	MW-405	Groundwater	06/24/08	9:45	X		X	
WG-12635-062409-001	MW-206	Groundwater	06/24/08	10:49	X	X		

Notes:

PCBs - Polychlorinated Biphenyls.

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	B-1	B-2	B-26	B-26	CP-1B
	Sample ID:	LNAPL-12635-061808-051	LNAPL-12635-061808-039	LNAPL-12635-061908-052	LNAPL-12635-061908-053	LNAPL-12635-061808-046
	Sample Date:	6/18/2008	6/18/2008	6/19/2008	6/19/2008	6/18/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL (Duplicate)	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U
Aroclor-1248 (PCB-1248)	µg/kg	5300	5800	12000	11000	8000
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	CP-1B	CP-2A	CP-3B	CP-4A	CP-4B
	Sample ID:	LNAPL-12635-061808-047	LNAPL-12635-061808-045	LNAPL-12635-061808-044	LNAPL-12635-061808-043	LNAPL-12635-061908-056
	Sample Date:	6/18/2008	6/18/2008	6/18/2008	6/18/2008	6/19/2008
	Matrix Code:	LNAPL (Duplicate)	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	10000 U	5000 U	2000 U	50000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	10000 U	5000 U	2000 U	50000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	10000 U	5000 U	2000 U	50000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	10000 U	5000 U	2000 U	50000 U
Aroclor-1248 (PCB-1248)	µg/kg	8700	54000	29000	20000	420000
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	10000 U	5000 U	2000 U	50000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	10000 U	5000 U	2000 U	50000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	CP-7A	CP-8	CP-8A	CP-8B	CP-9
	Sample ID:	LNAPL-12635-061808-040	LNAPL-12635-061808-041	LNAPL-12635-061808-042	LNAPL-12635-061908-054	LNAPL-12635-061808-037
	Sample Date:	6/18/2008	6/18/2008	6/18/2008	6/19/2008	6/18/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	1000 U	1000 U	10000 U	10000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	1000 U	1000 U	10000 U	10000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	1000 U	1000 U	10000 U	10000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	1000 U	1000 U	10000 U	10000 U
Aroclor-1248 (PCB-1248)	µg/kg	6200	1700	8200	170000	10000 U
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	1000 U	1000 U	10000 U	10000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	1000 U	1000 U	10000 U	10000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	CP-9	CP-9B	CP-11B	CP-11B	CP-13
	Sample ID:	LNAPL-12635-061808-038	LNAPL-12635-061908-055	LNAPL-12635-061708-025	LNAPL-12635-061708-026	LNAPL-12635-061708-027
	Sample Date:	6/18/2008	6/19/2008	6/17/2008	6/17/2008	6/17/2008
	Matrix Code:	LNAPL (Duplicate)	LNAPL	LNAPL	LNAPL (Duplicate)	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	1000 U	500000 U	500000 U	100000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	1000 U	500000 U	500000 U	100000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	1000 U	500000 U	500000 U	100000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	1000 U	7200000	7300000	100000 U
Aroclor-1248 (PCB-1248)	µg/kg	5300	6300	500000 U	500000 U	100000 U
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	1000 U	500000 U	500000 U	100000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	1000 U	500000 U	500000 U	100000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*CP-13*	*CP-14*	*CP-14A*	*CP-14AR*	*CP-15A*
	Sample ID:	*LNAPL-12635-061708-028*	*LNAPL-12635-061608-003*	*LNAPL-12635-061608-005*	*LNAPL-12635-061608-004*	*LNAPL-12635-061708-029*
	Sample Date:	*6/17/2008*	*6/16/2008*	*6/16/2008*	*6/16/2008*	*6/17/2008*
	Matrix Code:	*LNAPL (Duplicate)*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	100000 U	10000 U	1000 U	1000 U	1000000 U
Aroclor-1221 (PCB-1221)	µg/kg	100000 U	10000 U	1000 U	1000 U	1000000 U
Aroclor-1232 (PCB-1232)	µg/kg	100000 U	10000 U	1000 U	1000 U	1000000 U
Aroclor-1242 (PCB-1242)	µg/kg	100000 U	10000 U	1000 U	1000 U	1000000 U
Aroclor-1248 (PCB-1248)	µg/kg	100000 U	10000 U	3100	2600	19000000
Aroclor-1254 (PCB-1254)	µg/kg	100000 U	10000 U	1000 U	1000 U	1000000 U
Aroclor-1260 (PCB-1260)	µg/kg	100000 U	10000 U	1000 U	1000 U	1000000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*CP-15A*	*CP-16B*	*CP-17A*	*CP-19A*	*CP-24A*
	Sample ID:	*LNAPL-12635-061708-030*	*LNAPL-12635-061808-036*	*LNAPL-12635-061808-035*	*LNAPL-12635-061808-034*	*LNAPL-12635-061808-033*
	Sample Date:	*6/17/2008*	*6/18/2008*	*6/18/2008*	*6/18/2008*	*6/18/2008*
	Matrix Code:	*LNAPL (Duplicate)*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	2000000 U	200000 U	1000000 U	20000 U	2000 U
Aroclor-1221 (PCB-1221)	µg/kg	2000000 U	200000 U	1000000 U	20000 U	2000 U
Aroclor-1232 (PCB-1232)	µg/kg	2000000 U	200000 U	1000000 U	20000 U	2000 U
Aroclor-1242 (PCB-1242)	µg/kg	2000000 U	1700000	4600000	20000 U	2000 U
Aroclor-1248 (PCB-1248)	µg/kg	21000000	200000 U	1000000 U	160000	14000
Aroclor-1254 (PCB-1254)	µg/kg	2000000 U	200000 U	1000000 U	20000 U	2000 U
Aroclor-1260 (PCB-1260)	µg/kg	2000000 U	200000 U	1000000 U	20000 U	2000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*CP-26*	*CP-26A*	*CP-27A*	*CP-28*	*CP-28B*
	Sample ID:	*LNAPL-12635-061808-031*	*LNAPL-12635-061808-032*	*LNAPL-12635-061708-016*	*LNAPL-12635-061608-006*	*LNAPL-12635-062008-064*
	Sample Date:	*6/18/2008*	*6/18/2008*	*6/17/2008*	*6/16/2008*	*6/20/2008*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	20000 U	20000 U	10000 U	10000 U	1000 U
Aroclor-1221 (PCB-1221)	µg/kg	20000 U	20000 U	10000 U	10000 U	1000 U
Aroclor-1232 (PCB-1232)	µg/kg	20000 U	20000 U	10000 U	10000 U	1000 U
Aroclor-1242 (PCB-1242)	µg/kg	20000 U	20000 U	10000 U	10000 U	1000 U
Aroclor-1248 (PCB-1248)	µg/kg	240000	260000	11000	67000	1000 U
Aroclor-1254 (PCB-1254)	µg/kg	20000 U	20000 U	10000 U	10000 U	1000 U
Aroclor-1260 (PCB-1260)	µg/kg	20000 U	20000 U	10000 U	10000 U	1000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	GP-8	GP-9	GP-12	M-1	M-1A
	Sample ID:	LNAPL-12635-061708-014	LNAPL-12635-061708-015	LNAPL-12635-061608-007	LNAPL-12635-061708-009	LNAPL-12635-061708-010
	Sample Date:	6/17/2008	6/17/2008	6/16/2008	6/17/2008	6/17/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	1000 U	10000 U	100000 U	100000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	1000 U	10000 U	100000 U	100000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	1000 U	10000 U	100000 U	100000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	1500	10000 U	100000 U	100000 U
Aroclor-1248 (PCB-1248)	µg/kg	1000 U	1000 U	89000	100000 U	100000 U
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	1000 U	10000 U	100000 U	100000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	1000 U	10000 U	100000 U	100000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	M-2A	M-3	MW-4B	MW-103	MW-305R
	Sample ID:	LNAPL-12635-061708-013	LNAPL-12635-061608-008	LNAPL-12635-061708-017	LNAPL-12635-061708-023	LNAPL-12635-061708-019
	Sample Date:	6/17/2008	6/16/2008	6/17/2008	6/17/2008	6/17/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	1000 U	10000 U	1000 U	2000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	1000 U	10000 U	1000 U	2000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	1000 U	10000 U	1000 U	2000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	1000 U	10000 U	1000 U	2000 U
Aroclor-1248 (PCB-1248)	µg/kg	10000 U	8800	10000 U	1000 U	7200
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	1000 U	10000 U	1000 U	2000 U
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	1000 U	10000 U	1000 U	2000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	MW-306	MW-307	MW-308	MW-309	MW-309A
	Sample ID:	LNAPL-12635-061708-020	LNAPL-12635-061708-021	LNAPL-12635-061708-022	LNAPL-12635-061608-001	LNAPL-12635-061608-002
	Sample Date:	6/17/2008	6/17/2008	6/17/2008	6/16/2008	6/16/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	10000 U	2000 U	5000 U	5000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	10000 U	2000 U	5000 U	5000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	10000 U	2000 U	5000 U	5000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	10000 U	10000	5000 U	5000 U
Aroclor-1248 (PCB-1248)	µg/kg	12000	10000 U	2000 U	5000 U	5000 U
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	10000 U	3100	20000	26000
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	10000 U	2000 U	5000 U	5000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	MW-400	MW-401	MW-401B	MW-404	MW-802A
	Sample ID:	LNAPL-12635-061708-011	LNAPL-12635-061708-012	LNAPL-12635-061808-050	LNAPL-12635-061708-018	LNAPL-12635-061808-049
	Sample Date:	6/17/2008	6/17/2008	6/18/2008	6/17/2008	6/18/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	100000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1221 (PCB-1221)	µg/kg	100000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1232 (PCB-1232)	µg/kg	100000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1242 (PCB-1242)	µg/kg	100000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1248 (PCB-1248)	µg/kg	100000 U	100000 U	2100	10000 U	1000 U
Aroclor-1254 (PCB-1254)	µg/kg	100000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1260 (PCB-1260)	µg/kg	100000 U	100000 U	1000 U	10000 U	1000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*MW-803A*	*T-1*
	Sample ID:	*LNAPL-12635-061808-048*	*LNAPL-12635-061708-024*
	Sample Date:	*6/18/2008*	*6/17/2008*
	Matrix Code:	*LNAPL*	*LNAPL*
Parameters	*Units*		
Polychlorinated Biphenyls			
Aroclor-1016 (PCB-1016)	µg/kg	20000 U	2000 U
Aroclor-1221 (PCB-1221)	µg/kg	20000 U	2000 U
Aroclor-1232 (PCB-1232)	µg/kg	20000 U	2000 U
Aroclor-1242 (PCB-1242)	µg/kg	20000 U	2000 U
Aroclor-1248 (PCB-1248)	µg/kg	230000	11000
Aroclor-1254 (PCB-1254)	µg/kg	20000 U	2000 U
Aroclor-1260 (PCB-1260)	µg/kg	20000 U	2000 U

Notes:

U - Not detected.

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

		Sample Location:	*MW-206*	*CP-12A*	*CP-22B*	*CP-23*	*CP-24B*
		Sample ID:	*WG-12635-062408-001*	*WG-12635-061808-017*	*WG-12635-061708-013*	*WG-12635-061808-015*	*WG-12635-061708-005*
		Sample Date:	*6/24/2008*	*6/18/2008*	*6/17/2008*	*6/18/2008*	*6/17/2008*
		Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters	*Units*						
Metals							
Lead	µg/L		11.0	-	-	-	-
Lead (Dissolved)	µg/L		3.0 U	-	-	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/L		0.065 U	0.65 U	0.065 U	0.065 U	6.5 U
Aroclor-1221 (PCB-1221)	µg/L		0.065 U	0.65 U	0.065 U	0.065 U	6.5 U
Aroclor-1232 (PCB-1232)	µg/L		0.065 U	0.65 U	0.065 U	0.065 U	6.5 U
Aroclor-1242 (PCB-1242)	µg/L		0.065 U	0.65 U	0.72	0.62	6.5 U
Aroclor-1248 (PCB-1248)	µg/L		0.065 U	0.65 U	0.065 U	0.065 U	6.5 U
Aroclor-1254 (PCB-1254)	µg/L		0.065 U	0.65 U	0.065 U	0.065 U	6.5 U
Aroclor-1260 (PCB-1260)	µg/L		0.065 U	0.65 U	0.065 U	0.065 U	6.5 U
General Chemistry							
n-Hexane Extractable Material	mg/L		-	9.9	5.0 U	5.0 U	5.9

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*CP-24B*	*CP-25B*	*CP-26B*	*GP-3*	*GP-6*
	Sample ID:	*WG-12635-061708-006*	*WG-12635-061608-004*	*WG-12635-061708-008*	*WG-12635-061708-009*	*WG-12635-061708-014*
	Sample Date:	*6/17/2008*	*6/16/2008*	*6/17/2008*	*6/17/2008*	*6/17/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
		(Duplicate)				
Parameters	*Units*					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	6.5 U	0.065 U	0.65 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	6.5 U	0.065 U	0.65 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	6.5 U	0.065 U	0.65 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	6.5 U	1.5	0.65 U	3.6	3.3
Aroclor-1248 (PCB-1248)	µg/L	6.5 U	0.065 U	0.65 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	6.5 U	0.065 U	0.65 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	6.5 U	0.065 U	0.65 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	6.0	30.7

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	M-2	MW-1A	MW-1B	MW-2A	MW-3A
	Sample ID:	WG-12635-061708-011	WG-12635-061608-002	WG-12635-061608-003	WG-12635-062008-031	WG-12635-061908-027
	Sample Date:	6/17/2008	6/16/2008	6/16/2008	6/20/2008	6/19/2008
	Matrix Code:	WG	WG	WG	WG	WG
Parameters	*Units*					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	-	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	-	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	-	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	-	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	-	3.3	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	-	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	-	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	-	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*MW-4*	*MW-4A*	*MW-5B*	*MW-5B*	*MW-6A*
	Sample ID:	*WG-12635-062008-028*	*WG-12635-061908-026*	*WG-12635-061908-023*	*WG-12635-061908-024*	*WG-12635-062308-032*
	Sample Date:	*6/20/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008*	*6/23/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG (Duplicate)*	*WG*
Parameters	*Units*					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	-	-	-	-	0.32 U
Aroclor-1221 (PCB-1221)	µg/L	-	-	-	-	0.32 U
Aroclor-1232 (PCB-1232)	µg/L	-	-	-	-	0.32 U
Aroclor-1242 (PCB-1242)	µg/L	-	-	-	-	0.32 U
Aroclor-1248 (PCB-1248)	µg/L	-	-	-	-	0.32 U
Aroclor-1254 (PCB-1254)	µg/L	-	-	-	-	0.32 U
Aroclor-1260 (PCB-1260)	µg/L	-	-	-	-	0.32 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*MW-6B*	*MW-102*	*MW-102*	*MW-106*	*MW-204*
	Sample ID:	*WG-12635-062308-033*	*WG-12635-061808-018*	*WG-12635-061808-020*	*WG-12635-062408-034*	*WG-12635-061808-019*
	Sample Date:	*6/23/2008*	*6/18/2008*	*6/18/2008*	*6/24/2008*	*6/18/2008*
	Matrix Code:	*WG*	*WG*	*WG (Duplicate)*	*WG*	*WG*
Parameters	*Units*					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	-
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*MW-205*	*MW-300A*	*MW-405*	*MW-408*	*MW-409*
	Sample ID:	*WG-12635-061608-001*	*WG-12635-061708-012*	*WG-12635-062408-035*	*WG-12635-061908-022*	*WG-12635-061908-025*
	Sample Date:	*6/16/2008*	*6/17/2008*	*6/24/2008*	*6/19/2008*	*6/19/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters	*Units*					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	-	0.065 U	-	-
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	-	0.065 U	-	-
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	-	0.065 U	-	-
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	-	0.065 U	-	-
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	-	0.065 U	-	-
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	-	0.065 U	-	-
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	-	0.065 U	-	-
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	*MW-409B*	*MW-801A*	*MW-804A*	*T-1B*	*CP-11A*
	Sample ID:	*WG-12635-061808-021*	*WG-12635-062008-029*	*WG-12635-062008-030*	*WG-12635-061708-010*	*LNAPL-12635-061908-059*
	Sample Date:	*6/18/2008*	*6/20/2008*	*6/20/2008*	*6/17/2008*	*6/19/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*LNAPL*
Parameters	***Units***					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	-	0.065 U	0.32 U	0.32 U	320 U
Aroclor-1221 (PCB-1221)	µg/L	-	0.065 U	0.32 U	0.32 U	320 U
Aroclor-1232 (PCB-1232)	µg/L	-	0.065 U	0.32 U	0.32 U	320 U
Aroclor-1242 (PCB-1242)	µg/L	-	0.065 U	0.32 U	9.4	11000
Aroclor-1248 (PCB-1248)	µg/L	-	0.065 U	0.32 U	0.32 U	320 U
Aroclor-1254 (PCB-1254)	µg/L	-	0.065 U	0.32 U	0.32 U	2800
Aroclor-1260 (PCB-1260)	µg/L	-	0.065 U	0.32 U	0.32 U	320 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

	Sample Location:	CP-14B	CP-18B	CP-20B	CP-21B	CP-23B
	Sample ID:	LNAPL-12635-061908-057	LNAPL-12635-061908-058	LNAPL-12635-061908-060	LNAPL-12635-061908-061	LNAPL-12635-062008-062
	Sample Date:	6/19/2008	6/19/2008	6/19/2008	6/19/2008	6/20/2008
	Matrix Code:	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
Parameters	*Units*					
Metals						
Lead	µg/L	-	-	-	-	-
Lead (Dissolved)	µg/L	-	-	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.65 U	0.65 U	320 U	77 U	160 U
Aroclor-1221 (PCB-1221)	µg/L	0.65 U	0.65 U	320 U	77 U	160 U
Aroclor-1232 (PCB-1232)	µg/L	0.65 U	0.65 U	320 U	77 U	160 U
Aroclor-1242 (PCB-1242)	µg/L	0.65 U	13	320 U	1400	160 U
Aroclor-1248 (PCB-1248)	µg/L	3.6	0.65 U	6500	77 U	4400
Aroclor-1254 (PCB-1254)	µg/L	0.65 U	0.65 U	320 U	77 U	160 U
Aroclor-1260 (PCB-1260)	µg/L	0.65 U	0.65 U	320 U	77 U	160 U
General Chemistry						
n-Hexane Extractable Material	mg/L	-	-	-	-	-

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
JUNE 2008

Sample Location:	*CP-25A*
Sample ID:	*LNAPL-12635-062008-063*
Sample Date:	*6/20/2008*
Matrix Code:	*LNAPL*

Parameters	*Units*	
Metals		
Lead	µg/L	-
Lead (Dissolved)	µg/L	-
Polychlorinated Biphenyls		
Aroclor-1016 (PCB-1016)	µg/L	58 U
Aroclor-1221 (PCB-1221)	µg/L	58 U
Aroclor-1232 (PCB-1232)	µg/L	58 U
Aroclor-1242 (PCB-1242)	µg/L	58 U
Aroclor-1248 (PCB-1248)	µg/L	1900
Aroclor-1254 (PCB-1254)	µg/L	58 U
Aroclor-1260 (PCB-1260)	µg/L	58 U
General Chemistry		
n-Hexane Extractable Material	mg/L	-

Notes:

U - Not detected.
- Not analyzed.
MW-206 for R035015 data.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 12650-035014

FROM: Susan C. Scrocchi/bjw/13 SCS

DATE: June 15, 2009

E-Mail and Hard Copy if Requested

RE: Data Quality Assessment and Validation
Groundwater Investigation
American Axel Manufacturing
June 2008

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the Groundwater Investigation sampling event during June 2008, at the American Axle Manufacturing Site (Site) in Buffalo, New York. The sample summary detailing sample identification, sample location, quality control (QC) samples, and analytical parameters is presented in Table 1. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio and were analyzed according to the methods summarized in Table 2.

The analytical results are summarized in Table 3. The QC criteria used to assess the data were established by the methods and the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99/008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", United States Environmental Protection Agency (USEPA) 540/R-94/013, February 1994

These guidelines are collectively referred to as "Guidelines" in this memorandum.

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

QA/QC REVIEW

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times. All samples were properly preserved and cooled to 4°C (±2°C) after collection.

Method blanks were analyzed at the recommended frequency and all results were non-detect for the compounds of interest.

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Surrogates were added to all samples, blanks, and QC samples prior to extraction and/or analysis for all organic parameters. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

Blank spikes (BS) were prepared and analyzed for all parameters. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical accuracy and precision with the exception of low SVOC recoveries. The associated sample results were qualified as estimated to reflect the implied low bias (see Table 4).

Matrix spike/matrix spike duplicate (MS/MSD) samples were prepared and at the proper frequency. All recoveries showed acceptable analytical accuracy and precision with the exception of some low VOC recoveries. All associated sample results were qualified as estimated. Extremely low (<10%) SVOC recoveries were observed. The associated sample result was non-detect and rejected due to the poor analytical efficiency. A summary of the qualified results is presented in Table 5.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples. All trip blank results were non-detect for the compounds of interest.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision with the exception of variability between PCB results. The sample and its duplicate were qualified as estimated (see Table 6).

OVERALL ASSESSMENT

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications and exception noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

				Analysis/Parameters				
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*TCL VOCs*	*TCL SVOCs*	*PCBs*	*TAL Metals*	*Comments*
WG-12635-061608-003	MW-1B	06/16/08	13:30	X	X	X	X	
TB-12635-061608	TRIP BLANK	06/16/08	-	X				
WG-12635-061708-012	MW-300A	06/17/08	12:20	X	X	X	X	
TB-12635-061708	TRIP BLANK	06/17/08	-	X				
WG-12635-061808-019	MW-204	06/18/08	*11:00*	X	X	X	X	
WG-12635-061808-021	MW-409B	06/18/08	13:45	X	X	X	X	
TB-12635-061808-	TRIP BLANK	06/18/08	-	X				
WG-12635-061908-022	MW-408	06/19/08	8:57	X	X	X	X	
WG-12635-061908-023	MW-5B	06/19/08	10:30	X	X	X	X	
WG-12635-061908-024	MW-5B	06/19/08	12:00	X	X	X	X	Field duplicate of WG-12635-061908-023
WG-12635-061908-025	MW-409	06/19/08	12:15	X	X	X	X	
WG-12635-061908-026	MW-4A	06/19/08	13:28	X	X	X	X	
TB-12635-061908	TRIP BLANK	06/19/08	-	X				
WG-12635-062008-028	MW-4	06/20/08	8:52	X	X	X	X	
TB-12635-062008	TRIP BLANK	06/20/08	-	X				

Notes:

PCBs - Polychlorinated Biphenyls.
TAL - Target Analyte List.
TCL - Target Compound List.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
GROUNDWATER INVESTIGATION
AMERICAN AXLE MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

Parameter	*Method*
TCL VOCs	SW-846 8260[1]
TCL SVOCs	SW-846 8270[1]
Polychlorinated Biphenyls	SW-846 8082[1]
TAL Metals	SW-846 6010/7470[1]

Notes:

(1) "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).
SVOCs Semi-Volatile Organic Compounds.
TAL Target Analyte List.
TCL Target Compound List.
VOCs Volatile Organic Compounds.

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-1B*	*MW-4*	*MW-4A*	*MW-5B*	*MW-5B*
	Sample ID:	*WG-12635-061608-003*	*WG-12635-062008-028*	*WG-12635-061908-026*	*WG-12635-061908-023*	*WG-12635-061908-024*
	Sample Date:	*6/16/2008*	*6/20/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008 (Duplicate)*
Parameters	*Units*					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	µg/L	10 U	10 U	10 U	10 U	10 U
Bromoform	µg/L	10 U	10 U	10 U	10 U	10 U
Bromomethane (Methyl Bromide)	µg/L	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	µg/L	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Chloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	µg/L	10 U	10 U	10 U	10 U	10 U
Chloromethane (Methyl Chloride)	µg/L	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	µg/L	10 U	10 U	10 U	10 U	10 U
Cyclohexane	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-1B*	*MW-4*	*MW-4A*	*MW-5B*	*MW-5B*
	Sample ID:	*WG-12635-061608-003*	*WG-12635-062008-028*	*WG-12635-061908-026*	*WG-12635-061908-023*	*WG-12635-061908-024*
	Sample Date:	*6/16/2008*	*6/20/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008 (Duplicate)*
Parameters	*Units*					
Volatile Organic Compounds (Cont'd.)						
Dibromochloromethane	µg/L	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane (CFC-12)	µg/L	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Methyl acetate	µg/L	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	µg/L	10 U	10 U	10 U	10 U	10 U
Methyl Tert Butyl Ether	µg/L	10 U	10 U	10 U	10 U	10 U
Methylene chloride	µg/L	10 U	10 U	10 U	10 U	10 U
Styrene	µg/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Toluene	µg/L	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane (CFC-11)	µg/L	10 U	10 U	10 U	10 U	10 U
Trifluorotrichloroethane (Freon 113)	µg/L	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	10 U	10 U	10 U	10 U	10 U
Xylene (total)	µg/L	10 U	10 U	10 U	10 U	10 U
Semi-volatile Organic Compounds						
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	µg/L	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	µg/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	µg/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	MW-1B	MW-4	MW-4A	MW-5B	MW-5B
	Sample ID:	WG-12635-061608-003	WG-12635-062008-028	WG-12635-061908-026	WG-12635-061908-023	WG-12635-061908-024
	Sample Date:	6/16/2008	6/20/2008	6/19/2008	6/19/2008	6/19/2008 (Duplicate)
Parameters	*Units*					
Semi-volatile Organic Compounds (Cont'd.)						
2-Chlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	µg/L	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	µg/L	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	µg/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	µg/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	µg/L	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	µg/L	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	µg/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	µg/L	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	µg/L	25 U	25 U	25 U	25 U	25 U
Acenaphthene	µg/L	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	10 U	10 U	10 U	10 U	10 U
Acetophenone	µg/L	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	10 U	10 U	10 U	10 U	10 U
Atrazine	µg/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	10 U	10 U	10 U	10 U	10 U
Biphenyl	µg/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	µg/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	µg/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-1B*	*MW-4*	*MW-4A*	*MW-5B*	*MW-5B*
	Sample ID:	*WG-12635-061608-003*	*WG-12635-062008-028*	*WG-12635-061908-026*	*WG-12635-061908-023*	*WG-12635-061908-024*
	Sample Date:	*6/16/2008*	*6/20/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008 (Duplicate)*
Parameters	*Units*					
Semi-volatile Organic Compounds (Cont'd.)						
Butyl benzylphthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	µg/L	10 UJ	10 U	10 U	10 U	10 U
Carbazole	µg/L	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	µg/L	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	µg/L	10 U	10 U	10 U	10 U	10 U
Isophorone	µg/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	µg/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	µg/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	µg/L	25 U	25 U	25 U	25 U	25 U
Phenanthrene	µg/L	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	MW-1B	MW-4	MW-4A	MW-5B	MW-5B
	Sample ID:	WG-12635-061608-003	WG-12635-062008-028	WG-12635-061908-026	WG-12635-061908-023	WG-12635-061908-024
	Sample Date:	6/16/2008	6/20/2008	6/19/2008	6/19/2008	6/19/2008 (Duplicate)
Parameters	*Units*					
Metals						
Aluminum	µg/L	200 U	200 U	200 U	200 U	200 U
Antimony	µg/L	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Barium	µg/L	206	3460	200 U	200 U	200 U
Beryllium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L	162000	21400	149000	83800	83200
Chromium Total	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt	µg/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Copper	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Iron	µg/L	1750	3820	158	360	327
Lead	µg/L	5.0 U	5.0	5.0 U	5.0 U	5.0 U
Magnesium	µg/L	120000	5000 U	143000	14400	14300
Manganese	µg/L	216	15.0 U	131	15.0 U	15.0 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U
Potassium	µg/L	8580	22300	5000 U	5000 U	5000 U
Selenium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	µg/L	277000	695000	364000	204000	202000
Thallium	µg/L	21.9	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	µg/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc	µg/L	20.0 U	32.0	73.6	20.0 U	20.0 U
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-1B*	*MW-4*	*MW-4A*	*MW-5B*	*MW-5B*
	Sample ID:	*WG-12635-061608-003*	*WG-12635-062008-028*	*WG-12635-061908-026*	*WG-12635-061908-023*	*WG-12635-061908-024*
	Sample Date:	*6/16/2008*	*6/20/2008*	*6/19/2008*	*6/19/2008*	*6/19/2008 (Duplicate)*
Parameters	*Units*					
Polychlorinated Biphenyls (Cont'd.)						
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 UJ	0.56 J
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-204*	*MW-300A*	*MW-408*	*MW-409*	*MW-409B*
	Sample ID:	*WG-12635-061808-019*	*WG-12635-061708-012*	*WG-12635-061908-022*	*WG-12635-061908-025*	*WG-12635-061808-021*
	Sample Date:	*6/18/2008*	*6/17/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
Parameters	*Units*					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	µg/L	10 U	10 U	10 U	10 U	10 U
Bromoform	µg/L	10 U	10 U	10 U	10 U	10 UJ
Bromomethane (Methyl Bromide)	µg/L	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	µg/L	10 U	10 U	10 U	10 U	10 UJ
Chlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Chloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	µg/L	10 U	10 U	10 U	10 U	10 U
Chloromethane (Methyl Chloride)	µg/L	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	11
cis-1,3-Dichloropropene	µg/L	10 U	10 U	10 U	10 U	10 UJ
Cyclohexane	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-204*	*MW-300A*	*MW-408*	*MW-409*	*MW-409B*
	Sample ID:	*WG-12635-061808-019*	*WG-12635-061708-012*	*WG-12635-061908-022*	*WG-12635-061908-025*	*WG-12635-061808-021*
	Sample Date:	*6/18/2008*	*6/17/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
Parameters	*Units*					
Volatile Organic Compounds (Cont'd.)						
Dibromochloromethane	µg/L	10 U	10 U	10 U	10 U	10 UJ
Dichlorodifluoromethane (CFC-12)	µg/L	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Methyl acetate	µg/L	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	µg/L	10 U	10 U	10 U	10 U	10 U
Methyl Tert Butyl Ether	µg/L	10 U	10 U	10 U	10 U	10 U
Methylene chloride	µg/L	10 U	10 U	10 U	10 U	10 U
Styrene	µg/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Toluene	µg/L	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	µg/L	10 U	10 U	10 U	10 U	10 UJ
Trichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane (CFC-11)	µg/L	10 U	10 U	10 U	10 U	10 U
Trifluorotrichloroethane (Freon 113)	µg/L	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	10 U	10 U	10 U	10 U	31
Xylene (total)	µg/L	10 U	10 U	10 U	10 U	10 U
Semi-volatile Organic Compounds						
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	µg/L	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	µg/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	µg/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	MW-204	MW-300A	MW-408	MW-409	MW-409B
	Sample ID:	WG-12635-061808-019	WG-12635-061708-012	WG-12635-061908-022	WG-12635-061908-025	WG-12635-061808-021
	Sample Date:	6/18/2008	6/17/2008	6/19/2008	6/19/2008	6/18/2008
Parameters	*Units*					
Semi-volatile Organic Compounds (Cont'd.)						
2-Chlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	µg/L	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	µg/L	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	µg/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	µg/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	µg/L	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	µg/L	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	µg/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	µg/L	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	µg/L	25 U	25 U	25 U	25 U	25 U
Acenaphthene	µg/L	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	10 U	10 U	10 U	10 U	10 U
Acetophenone	µg/L	10 U	10 U	10 U	10 U	10 U
Anthracene	µg/L	10 U	10 U	10 U	10 U	10 U
Atrazine	µg/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	µg/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	10 U	10 U	10 U	10 U	10 U
Biphenyl	µg/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	µg/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	µg/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-204*	*MW-300A*	*MW-408*	*MW-409*	*MW-409B*
	Sample ID:	*WG-12635-061808-019*	*WG-12635-061708-012*	*WG-12635-061908-022*	*WG-12635-061908-025*	*WG-12635-061808-021*
	Sample Date:	*6/18/2008*	*6/17/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
Parameters	*Units*					
Semi-volatile Organic Compounds (Cont'd.)						
Butyl benzylphthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	µg/L	10 U	10 UJ	10 U	10 U	10 U
Carbazole	µg/L	10 U	10 U	10 U	10 U	10 U
Chrysene	µg/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	µg/L	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	µg/L	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	µg/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	10 U	10 U	10 U	10 U	10 U
Fluorene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	µg/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	µg/L	10 U	10 U	10 U	10 U	R
Hexachloroethane	µg/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	µg/L	10 U	10 U	10 U	10 U	10 U
Isophorone	µg/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	µg/L	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	µg/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	µg/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	µg/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	µg/L	25 U	25 U	25 U	25 U	25 U
Phenanthrene	µg/L	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	10 U	10 U	10 U	10 U	10 U
Pyrene	µg/L	10 U	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	MW-204	MW-300A	MW-408	MW-409	MW-409B
	Sample ID:	WG-12635-061808-019	WG-12635-061708-012	WG-12635-061908-022	WG-12635-061908-025	WG-12635-061808-021
	Sample Date:	6/18/2008	6/17/2008	6/19/2008	6/19/2008	6/18/2008
Parameters	*Units*					
Metals						
Aluminum	µg/L	200 U	200 U	200 U	369	200 U
Antimony	µg/L	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	18.9	10.0 U
Barium	µg/L	286	200 U	556	200 U	210
Beryllium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	µg/L	5.6	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L	161000	126000	165000	37200	184000
Chromium Total	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt	µg/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Copper	µg/L	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Iron	µg/L	308	366	6290	1700	1720
Lead	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Magnesium	µg/L	26100	145000	83100	9680	67400
Manganese	µg/L	1380	137	432	222	166
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U
Potassium	µg/L	13500	5000 U	5000 U	5000 U	5000 U
Selenium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	µg/L	763000	136000	438000	503000	84400
Thallium	µg/L	10.0 U	18.0	10.0 U	10.0 U	10.0 U
Vanadium	µg/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc	µg/L	43.4	20.0 U	20.0 U	20.0 U	20.0 U
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

	Sample Location:	*MW-204*	*MW-300A*	*MW-408*	*MW-409*	*MW-409B*
	Sample ID:	*WG-12635-061808-019*	*WG-12635-061708-012*	*WG-12635-061908-022*	*WG-12635-061908-025*	*WG-12635-061808-021*
	Sample Date:	*6/18/2008*	*6/17/2008*	*6/19/2008*	*6/19/2008*	*6/18/2008*
Parameters	*Units*					
Polychlorinated Biphenyls (Cont'd.)						
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

Notes:

J - Estimated.
R - Rejected.
U - Not detected.
UJ - Not detected, estimated reporting limit.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

Parameter	*Compound*	*LCS Date*	*Associated Sample ID*	*LCS %Rec*	*LCSD %Rec*	*RPD (percent)*	*Control Limits*		*Qualified Sample Results*	*Units*
							%Rec	*%RPD*		
SVOCs	Caprolactam	06/19/09	WG-12635-061608-003	22	27	20	50-130	30	10 UJ	µg/L
			WG-12635-061708-012						10 UJ	µg/L

Notes:

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate.
RPD - Relative Percent Difference.
UJ - Not detected, estimated reporting limit.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Qualified Sample Result*	*Units*
						Recovery (percent)	*RPD (percent)*		
VOCs	WG-12635-061808-021	cis-1,3-Dichloropropene	79	84	6	86-122	20	10 UJ	µg/L
		trans-1,3-Dichloropropene	77	83	6	85-120	20	10 UJ	µg/L
		Dibromochloromethane	73	77	5	85-124	20	10 UJ	µg/L
		Carbon tetrachloride	68	72	6	80-125	20	10 UJ	µg/L
		Bromoform	64	69	8	79-135	20	10 UJ	µg/L
SVOCs	WG-12635-061808-021	Hexachlorocyclopentadiene	2.2	2.8	24	10-110	20	R	µg/L

Notes:

MS - Matrix Spike.
MSD - Matrix Spike Duplicate.
RPD - Relative Percent Difference.
SVOCs - Semi-Volatile Organic Compounds.
UJ - Not detected, estimated reporting limit.
VOCs - Volatile Organic Compounds.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
GROUNDWATER INVESTIGATION
AMERICAN AXEL MANUFACTURING
BUFFALO, NEW YORK
JUNE 2008

Parameter	*Analyte*	*Original Sample ID*	*Qualified Sample Result*	*Duplicate Sample ID*	*Qualified Sample Result*	*RPD*	*Units*
PCBs	Aroclor-1248 (PCB-1248)	WG-12635-061908-024	0.56 J	WG-12635-061908-023	0.065 UJ	NA	µg/L

Notes:

1 - The qualifier applies to both the original and duplicate results.
J - Estimated.
NA - Not applicable.
PCBs - Polychlorinated Biphenyls.
RPD - Relative Percent Difference.
UJ - Not detected, estimated reporting limit.

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035010

FROM: Kathleen Willy/bjw/14 KW

DATE: June 15, 2009

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
Sewer Lateral Sampling
October 2008

INTRODUCTION

Four water samples and one field duplicate sample were collected in support of the Buffalo Sewer Authority (BSA) Sewer Lateral Sampling Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during October 2008. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. Analytical results summaries are presented in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and blank spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
SEWER LATERAL SAMPLING
OCTOBER 2008

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
WW-12635-100608-001	INLET #3	Water	10/06/08	11:40	X	X	
WW-12635-100608-002	MH @ COLORADO	Water	10/06/08	13:30	X	X	
WW-12635-100608-003	MH @ CORNWALL/NORTHLAND	Water	10/06/08	13:45	X	X	
WW-12635-100608-004	MH @ CORNWALL/NORTHLAND	Water	10/06/08	13:50	X	X	Field duplicate of sample WW-12635-100608-003
WW-12635-100608-005	MH @ DELEVAN	Water	10/06/08	14:00	X	X	

Notes:

PCBs - Polychlorinated Biphenyls.

TABLE 2

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
SEWER LATERAL SAMPLING
OCTOBER 2008

	Sample Location:	*INLET #3*	*MH @ COLORADO*	*MH@CORNWALL/NORLAND*	*MH@CORNWALL/NORLAND*	*MH @ DELEVAN*
	Sample ID:	*WW-012635-100608-001*	*WW-012635-100608-002*	*WW-012635-100608-003*	*WW-012635-100608-004*	*WW-012635-100608-005*
	Sample Date:	*10/6/2008*	*10/6/2008*	*10/6/2008*	*10/6/2008* *(Duplicate)*	*10/6/2008*
Parameters	*Units*					
Pesticides						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.14	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.23	0.28	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	8.0	5.0 U	5.0 U	10.5

Notes:

U - Not detected.

CONESTOGA-ROVERS & ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: (716) 297-6150 Fax: (716) 297-2265
www.CRAworld.com

MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035009

FROM: Susan Scrocchi/bjw/16CS

DATE: March 13, 2009

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
BSA Sewer Investigation
November and December 2008

INTRODUCTION

Twenty-five (25) groundwater samples, 37 oil samples, and six (6) field duplicate samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Investigation Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during November and December 2008. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
PCBs	SW-846 8082[2]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. Analytical results summaries are presented in Tables 2A and 2B. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and spike recoveries.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

2 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Matrix spike/matrix spike duplicate (MS/MSD) samples were prepared and at the proper frequency. All recoveries showed acceptable analytical accuracy and precision.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
O-012635-111408-001	T-1	Oil	11/14/08	7:00	X		
O-012635-111408-002	MW-305R	Oil	11/14/08	7:10	X		
O-012635-111408-003	MW-306	Oil	11/14/08	7:20	X		
O-012635-111408-004	MW-307	Oil	11/14/08	7:30	X		
O-012635-111408-005	MW-308	Oil	11/14/08	7:40	X		
O-012635-111408-006	MW-309	Oil	11/14/08	7:50	X		
O-012635-111408-007	MW-309	Oil	11/14/08	8:00	X		Field duplicate of O-012635-111408-006
O-012635-111408-008	MW-309A	Oil	11/14/08	8:10	X		
O-012635-111408-009	CP-14	Oil	11/14/08	8:20	X		
O-012635-111408-010	CP-14A	Oil	11/14/08	8:30	X		
O-012635-111408-011	CP-15A	Oil	11/14/08	8:40	X		
O-012635-111408-012	CP-16B	Oil	11/14/08	8:50	X		
O-012635-111408-013	CP-19A	Oil	11/14/08	9:00	X		
O-012635-111408-014	CP-26A	Oil	11/14/08	9:10	X		
O-012635-111408-015	CP-27A	Oil	11/14/08	9:20	X		
O-012635-111408-016	CP-28	Oil	11/14/08	9:30	X		
O-012635-111408-017	GP-12	Oil	11/14/08	9:40	X		
O-012635-111408-018	MW-400	Oil	11/14/08	9:50	X		
O-012635-111408-019	MW-400	Oil	11/14/08	10:00	X		Field duplicate of O-012635-111408-018
O-012635-111408-020	M-1	Oil	11/14/08	10:10	X		
O-012635-111408-021	M-2A	Oil	11/14/08	10:20	X		
O-012635-111408-022	M-3	Oil	11/14/08	10:30	X		
O-012635-111408-023	MW-4B	Oil	11/14/08	10:40	X		
O-012635-111408-024	MW-404	Oil	11/14/08	10:50	X		
O-012635-111408-025	MW-802A	Oil	11/14/08	11:00	X		
O-012635-111408-026	MW-803A	Oil	11/14/08	11:10	X		
O-012635-111408-027	B-1	Oil	11/14/08	11:20	X		
O-012635-111408-028	B-2	Oil	11/14/08	11:30	X		
O-012635-111408-029	CP-1B	Oil	11/14/08	11:40	X		
O-012635-111408-030	CP-1B	Oil	11/14/08	11:50	X		Field duplicate of O-012635-111408-029
O-012635-111408-031	CP-3B	Oil	11/14/08	12:30	X		
O-012635-111408-032	CP-4A	Oil	11/14/08	12:40	X		
O-012635-111408-033	CP-4B	Oil	11/14/08	12:50	X		
O-012635-111408-034	CP-7A	Oil	11/14/08	13:00	X		
O-012635-111408-035	CP-9B	Oil	11/14/08	13:10	X		
O-012635-111408-036	CP-11B	Oil	11/14/08	13:20	X		
O-012635-111408-037	CP-11B	Oil	11/14/08	13:30	X		Field duplicate of O-012635-111408-036

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
O-012635-111408-038	CP-13	Oil	11/14/08	13:40	X		
O-012635-111408-039	CP-13A	Oil	11/14/08	13:50	X		
GW-12635-111708-KN-001	CP-25B	Groundwater	11/17/08	13:48	X	X	
GW-12635-111808-KN-002	MW-4A	Groundwater	11/18/08	14:00	X	X	
GW-12635-111908-KN-003	MW-801A	Groundwater	11/19/08	9:45	X	X	
O-012635-111908-040	CP-9	Oil	11/19/08	10:00	X		
O-012635-111908-041	B-26 Sump	Oil	11/19/08	10:30	X		
GW-12635-111908-KN-004	MW-2A	Groundwater	11/19/08	13:10	X	X	
GW-12635-111908-KN-005	MW-4	Groundwater	11/19/08	13:30	X	X	
GW-12635-111908-KN-006	MW-3A	Groundwater	11/19/08	13:55	X	X	
GW-12635-112008-KN-007	MW-1B	Groundwater	11/20/08	10:33	X	X	
GW-12635-112008-KN-008	MW-1A	Groundwater	11/20/08	11:05	X	X	
GW-12635-112008-KN-009	MW-405	Groundwater	11/20/08	14:10	X	X	
GW-12635-112108-KN-010	CP-26B	Groundwater	11/21/08	10:05	X	X	
GW-12635-112108-KN-011	CP-26B	Groundwater	11/21/08	11:55	X	X	Field duplicate of GW-12635-112108-KN-010
GW-12635-112408-KN-012	CP-12A	Groundwater	11/24/08	13:05	X	X	
GW-12635-112508-KN-013	CP-20B	Groundwater	11/25/08	8:00	X	X	
GW-12635-112508-KN-014	CP-22B	Groundwater	11/25/08	8:05	X	X	
GW-12635-112508-KN-015	MW-102	Groundwater	11/25/08	12:35	X	X	
GW-12635-112508-KN-016	MW-106	Groundwater	11/25/08	12:48	X	X	
GW-12635-112608-KN-017	MW-409B	Groundwater	11/26/08	9:25	X	X	
GW-12635-112608-KN-019	MW-409B	Groundwater	11/26/08	11:10	X	X	Field duplicate of GW-12635-112608-KN-017
GW-12635-112608-KN-018	CP-18B	Groundwater	11/26/08	10:40	X	X	
GW-12635-112608-KN-020	MW-300A	Groundwater	11/26/08	12:10	X	X	
GW-12635-112608-KN-021	T-1B	Groundwater	11/26/08	13:15	X	X	
GW-12635-120108-SP-022	MW-204	Groundwater	12/01/08	10:45	X	X	
GW-12635-120208-SP-023	MW-408	Groundwater	12/02/08	12:35	X	X	
GW-12635-120208-SP-024	MW-5B	Groundwater	12/02/08	12:55	X	X	
GW-12635-120308-SP-025	MW-6A	Groundwater	12/03/08	9:35	X	X	
GW-12635-120408-SP-026	MW-6B	Groundwater	12/04/08	8:20	X	X	
GW-12635-120408-SP-027	MW-205	Groundwater	12/04/08	11:25	X	X	

Notes:
PCBs Polychlorinated Biphenyls.

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*CP-12A*	*CP-18B*	*CP-20B*	*CP-22B*	*CP-25B*
	Sample ID:	*GW-12635-112408-KN-012*	*GW-12635-112608-KN-018*	*GW-12635-112508-KN-013*	*GW-12635-112508-KN-014*	*GW-12635-111708-KN-001*
	Sample Date:	*11/24/2008*	*11/26/2008*	*11/25/2008*	*11/25/2008*	*11/17/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.086	0.065 U	6.5	0.076	0.42
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.076	0.32 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.32 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*CP-26B*	*CP-26B*	*MW-1A*	*MW-1B*	*MW-2A*
	Sample ID:	*GW-12635-112108-KN-010*	*GW-12635-112108-KN-011*	*GW-12635-112008-KN-008*	*GW-12635-112008-KN-007*	*GW-12635-111908-KN-004*
	Sample Date:	*11/21/2008*	*11/21/2008*	*11/20/2008*	*11/20/2008*	*11/19/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
			(Duplicate)			
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.084	0.066	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.070	0.067	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*MW-3A*	*MW-4*	*MW-4A*	*MW-5B*	*MW-6A*
	Sample ID:	*GW-12635-111908-KN-006*	*GW-12635-111908-KN-005*	*GW-12635-111808-KN-002*	*GW-12635-120208-SP-024*	*GW-12635-120308-SP-025*
	Sample Date:	*11/19/2008*	*11/19/2008*	*11/18/2008*	*12/2/2008*	*12/3/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*MW-6B*	*MW-102*	*MW-106*	*MW-204*	*MW-205*
	Sample ID:	*GW-12635-120408-SP-026*	*GW-12635-112508-KN-015*	*GW-12635-112508-KN-016*	*GW-12635-120108-SP-022*	*GW-12635-120408-SP-027*
	Sample Date:	*12/4/2008*	*11/25/2008*	*11/25/2008*	*12/1/2008*	*12/4/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	9.5

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*MW-300A*	*MW-405*	*MW-408*	*MW-409B*	*MW-409B*
	Sample ID:	*GW-12635-112608-KN-020*	*GW-12635-112008-KN-009*	*GW-12635-120208-SP-023*	*GW-12635-112608-KN-017*	*GW-12635-112608-KN-019*
	Sample Date:	*11/26/2008*	*11/20/2008*	*12/2/2008*	*11/26/2008*	*11/26/2008*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG (Duplicate)*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*MW-801A*	*T-1B*
	Sample ID:	*GW-12635-111908-KN-003*	*GW-12635-112608-KN-021*
	Sample Date:	*11/19/2008*	*11/26/2008*
	Matrix Code:	*WG*	*WG*
Parameters:	*Units*		
Polychlorinated Biphenyls			
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.32 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.32 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.32 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	5.1
Aroclor-1248 (PCB-1248)	µg/L	0.072	0.32 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.32 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.32 U
General Chemistry			
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U

Notes:
U Not present at or above the associated value.

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*B-1*	*B-2*	*B-26 SUMP*	*CP-1B*	*CP-1B*	*CP-3B*
	Sample ID:	*O-012635-111408-027*	*O-012635-111408-028*	*O-012635-111908-041*	*O-012635-111408-029*	*O-012635-111408-030*	*O-012635-111408-031*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/19/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL (Duplicate)*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	100000 U	1000 U	2000 U	2000 U	10000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	100000 U	1000 U	2000 U	2000 U	10000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	100000 U	1000 U	2000 U	2000 U	10000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	100000 U	1000 U	2000 U	2000 U	10000 U
Aroclor-1248 (PCB-1248)	µg/kg	10000 U	100000 U	7700	7900	8000	26000
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	100000 U	1000 U	2000 U	2000 U	10000 U
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	100000 U	1000 U	2000 U	2000 U	10000 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*CP-4A*	*CP-4B*	*CP-7A*	*CP-9*	*CP-9B*	*CP-11B*
	Sample ID:	*O-012635-111408-032*	*O-012635-111408-033*	*O-012635-111408-034*	*O-012635-111908-040*	*O-012635-111408-035*	*O-012635-111408-036*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/19/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	100000 U	1000 U	1000 U	1000 U	1000000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	100000 U	1000 U	1000 U	1000 U	1000000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	100000 U	1000 U	1000 U	1000 U	1000000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	100000 U	1000 U	1000 U	1000 U	1000000 U
Aroclor-1248 (PCB-1248)	µg/kg	21000	440000	5200	3900	4600	6200000
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	100000 U	1000 U	1000 U	1000 U	1000000 U
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	100000 U	1000 U	1000 U	1000 U	1000000 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*CP-11B*	*CP-13*	*CP-13A*	*CP-14*	*CP-14A*	*CP-15A*
	Sample ID:	*O-012635-111408-037*	*O-012635-111408-038*	*O-012635-111408-039*	*O-012635-111408-009*	*O-012635-111408-010*	*O-012635-111408-011*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL (Duplicate)*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	1000000 U	100000 U	5000 U	10000 U	10000 U	5000000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000000 U	100000 U	5000 U	10000 U	10000 U	5000000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000000 U	100000 U	5000 U	10000 U	10000 U	5000000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000000 U	100000 U	5000 U	10000 U	10000 U	5000000 U
Aroclor-1248 (PCB-1248)	µg/kg	6000000	100000 U	9200	10000 U	10000 U	20000000
Aroclor-1254 (PCB-1254)	µg/kg	1000000 U	100000 U	5000 U	10000 U	10000 U	5000000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000000 U	100000 U	5000 U	10000 U	10000 U	5000000 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*CP-16B*	*CP-19A*	*CP-26A*	*CP-27A*	*CP-28*	*GP-12*
	Sample ID:	*O-012635-111408-012*	*O-012635-111408-013*	*O-012635-111408-014*	*O-012635-111408-015*	*O-012635-111408-016*	*O-012635-111408-017*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	500000 U	20000 U	50000 U	5000 U	20000 U	20000 U
Aroclor-1221 (PCB-1221)	µg/kg	500000 U	20000 U	50000 U	5000 U	20000 U	20000 U
Aroclor-1232 (PCB-1232)	µg/kg	500000 U	20000 U	50000 U	5000 U	20000 U	20000 U
Aroclor-1242 (PCB-1242)	µg/kg	500000 U	20000 U	50000 U	5000 U	20000 U	20000 U
Aroclor-1248 (PCB-1248)	µg/kg	2600000	140000	250000	7100	68000	86000
Aroclor-1254 (PCB-1254)	µg/kg	500000 U	20000 U	50000 U	5000 U	20000 U	20000 U
Aroclor-1260 (PCB-1260)	µg/kg	500000 U	20000 U	50000 U	5000 U	20000 U	20000 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*M-1*	*M-2A*	*M-3*	*MW-4B*	*MW-305R*	*MW-306*
	Sample ID:	*O-012635-111408-020*	*O-012635-111408-021*	*O-012635-111408-022*	*O-012635-111408-023*	*O-012635-111408-002*	*O-012635-111408-003*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	10000 U	10000 U	50000 U	5000 U	5000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	10000 U	10000 U	50000 U	5000 U	5000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	10000 U	10000 U	50000 U	5000 U	5000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	10000 U	10000 U	50000 U	5000 U	5000 U
Aroclor-1248 (PCB-1248)	µg/kg	10000 U	10000 U	10000 U	390000	6700	16000
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	10000 U	10000 U	50000 U	5000 U	5000 U
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	10000 U	10000 U	50000 U	5000 U	5000 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*MW-307*	*MW-308*	*MW-309*	*MW-309*	*MW-309A*	*MW-400*
	Sample ID:	*O-012635-111408-004*	*O-012635-111408-005*	*O-012635-111408-006*	*O-012635-111408-007*	*O-012635-111408-008*	*O-012635-111408-018*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL (Duplicate)*	*LNAPL*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	5000 U	5000 U	5000 U	5000 U	10000 U	1000 U
Aroclor-1221 (PCB-1221)	µg/kg	5000 U	5000 U	5000 U	5000 U	10000 U	1000 U
Aroclor-1232 (PCB-1232)	µg/kg	5000 U	5000 U	5000 U	5000 U	10000 U	1000 U
Aroclor-1242 (PCB-1242)	µg/kg	5000 U	5000 U	5000 U	5000 U	10000 U	1000 U
Aroclor-1248 (PCB-1248)	µg/kg	8700	10000	5000 U	5000 U	10000 U	3000
Aroclor-1254 (PCB-1254)	µg/kg	5000 U	5000 U	14000	15000	17000	1000 U
Aroclor-1260 (PCB-1260)	µg/kg	5000 U	5000 U	5000 U	5000 U	10000 U	1000 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
NOVEMBER AND DECEMBER 2008

	Sample Location:	*MW-400*	*MW-404*	*MW-802A*	*MW-803A*	*T-1*
	Sample ID:	*O-012635-111408-019*	*O-012635-111408-024*	*O-012635-111408-025*	*O-012635-111408-026*	*O-012635-111408-001*
	Sample Date:	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*	*11/14/2008*
	Matrix Code:	*LNAPL (Duplicate)*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	10000 U	10000 U	50000 U	5000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	10000 U	10000 U	50000 U	5000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	10000 U	10000 U	50000 U	5000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	10000 U	10000 U	50000 U	5000 U
Aroclor-1248 (PCB-1248)	µg/kg	3600	10000 U	10000 U	230000	11000
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	10000 U	10000 U	50000 U	5000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	10000 U	10000 U	50000 U	5000 U

Notes:
U Not present at or above the associated value.

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035010

FROM: Kathleen Willy/bjw/2 KW

DATE: May 5, 2009

E-Mail and Hard Copy if Requested

RE: **Analytical Results and QA/QC Review**
Semi-Annual Monitoring Event
Sewer Lateral Sampling
March 2009

INTRODUCTION

Eight water samples, four sediment samples, and three field duplicate samples were collected in support of the Buffalo Sewer Authority (BSA) Sewer Lateral Sampling Semi-Annual Monitoring Event at the American Axle Manufacturing Site (Site) during March 2009. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
PCBs	SW-846 8082[2]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. Analytical results summaries are presented in Tables 2A, 2B, and 2C. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, and blank spike recoveries.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

2 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

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QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
MARCH 2009

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
SE-12635-032509-DT-001	400' West of Over Flow	Sediment	3/25/2009	10:10	X		
W-12635-032509-DT-002	400' West of Over Flow	Water	3/25/2009	10:15	X		
SE-12635-032509-DT-003	100' West of Over Flow	Sediment	3/25/2009	10:20	X		
W-12635-032509-DT-004	100' West of Over Flow	Water	3/25/2009	10:25	X		
SE-012635-032509-DT-005	25' West of Overflow	Sediment	3/25/2009	10:40	X		
SE-012635-032509-DT-006	25' West of Overflow	Sediment	3/25/2009	10:35	X		Field duplicate of sample SE-012635-032509-DT-005
W-12635-032509-DT-007	25' West of Overflow	Water	3/25/2009	10:45	X		
SE-12635-032509-DT-008	25' East of Overflow	Sediment	3/25/2009	10:50	X		
W-12635-032509-DT-009	25' East of Overflow	Water	3/25/2009	10:55	X		
W-12635-032509-DT-010	25' East of Overflow	Water	3/25/2009	11:00	X	X	Field duplicate of sample W-12635-032509-DT-009
W-12635-033109-CMB-001	Outfall 002	Water	3/31/2009	12:45	X	X	
W-12635-033109-CMB-002	Outfall 002	Water	3/31/2009	13:00	X	X	Field duplicate of sample W-12635-033109-CMB-001
W-12635-033109-DT-003	Outfall 004	Water	3/31/2009	12:30	X	X	
W-12635-033109-KG-004	Outfall 003	Water	3/31/2009	14:15	X	X	
W-12635-033109-DT-005	5x9 Bay E28 Roof Conductor	Water	3/31/2009	16:15	X	X	

Notes:

PCBs - Polychlorinated Biphenyls.

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
MARCH 2009

Sample Location:		*100' West of overflow*	*25' East of overflow*	*25' West of overflow*	*25' West of overflow*	*400' West of overflow*
Sample ID:		*SE-12635-032509-DT-003*	*SE-12635-032509-DT-008*	*SE-12635-032509-DT-005*	*SE-12635-032509-DT-006*	*SE-12635-032509-DT-001*
Sample Date:		*3/25/2009*	*3/25/2009*	*3/25/2009*	*3/25/2009*	*3/25/2009*
Matrix Code:		*SE*	*SE*	*SE*	*SE*	*SE*
					(Duplicate)	
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	610 U	930 U	530 U	340 U	630 U
Aroclor-1221 (PCB-1221)	µg/kg	610 U	930 U	530 U	340 U	630 U
Aroclor-1232 (PCB-1232)	µg/kg	610 U	930 U	530 U	340 U	630 U
Aroclor-1242 (PCB-1242)	µg/kg	610 U	930 U	530 U	340 U	630 U
Aroclor-1248 (PCB-1248)	µg/kg	610 U	930 U	530 U	620	630 U
Aroclor-1254 (PCB-1254)	µg/kg	610 U	930 U	530 U	340 U	630 U
Aroclor-1260 (PCB-1260)	µg/kg	610 U	930 U	530 U	340 U	630 U
General Chemistry						
Percent Moisture	%	94.6	96.4	93.8	90.4	94.8

Notes:
U - Not detected.

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
MARCH 2009

	Sample Location:	*5X9 BAY E28 ROOF CONDUCTOR*	*Outfall 002*	*Outfall 002*	*Outfall 003*	*Outfall 004*
	Sample ID:	*W-12635-033109-DT-005*	*W-12635-033109-CMB-001*	*W-12635-033109-CMB-002*	*W-12635-033109-KG-004*	*W-12635-033109-DT-003*
	Sample Date:	*3/31/2009*	*3/31/2009*	*3/31/2009*	*3/31/2009*	*3/31/2009*
	Matrix Code:	*SEWER*	*SEWER*	*SEWER (Duplicate)*	*SEWER*	*SEWER*
Parameters:	*Units*					
Pesticides/PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.099	0.065 U	0.065 U	0.065 U	0.080
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	6.4	6.4	5.5	7.0	9.6

Notes:

PCBs - Polychlorinated Biphenyls.
U - Not detected.

TABLE 2C

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
BSA SEWER INVESTIGATION
MARCH 2009

Sample Location:		*100' West of overflow*	*25' East of overflow*	*25' East of overflow*	*25' West of overflow*	*400' West of overflow*
Sample ID:		*W-12635-032509-DT-004*	*W-12635-032509-DT-009*	*W-12635-032509-DT-010*	*W-12635-032509-DT-007*	*W-12635-032509-DT-002*
Sample Date:		*3/25/2009*	*3/25/2009*	*3/25/2009*	*3/25/2009*	*3/25/2009*
Matrix Code:		*WS*	*WS*	*WS*	*WS*	*WS*
				(Duplicate)		
Parameters:	*Units*					
Pesticides/PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.091
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U

Notes:

PCBs - Polychlorinated Biphenyls.
U - Not detected.

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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035009

FROM: Kathleen Willy/bjw/4

DATE: May 15, 2009

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
Groundwater Sampling
March and April 2009

INTRODUCTION

Forty-five water samples, 47 sediment samples, and eight field duplicate samples were collected in support of the Semi-Annual Groundwater Monitoring Event at the American Axle Manufacturing Site (Site) during March and April 2009. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	USEPA 608[1]
PCBs	SW-846 8082[2]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. Analytical results summaries are presented in Tables 2A and 2B. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, duplicate results, surrogate recoveries, matrix and blank spike recoveries.

1 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

2 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

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QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times with the exception of two PCB samples which were re-extracted seven days outside of hold time due to a QC failure. Sample results have been qualified as estimated (see Table 3). All samples were properly preserved and received in good condition.

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy with the exception of three samples with extremely low (<10%) recoveries. The samples were re-extracted with similar results being recorded for the surrogate recoveries indicating a matrix effect. All associated sample results were non-detect and were rejected due to poor analytical efficiency.

Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

Field duplicate samples were submitted "blind" to the laboratory for analyses as specified in Table 1. All of the results showed good precision outside of the estimated regions of detection indicating acceptable analytical and sampling precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
WG-12635-032409-001	MW-812A	Water	03/24/09	10:30	X	X	
WG-12635-032409-002	MW-809A	Water	03/24/09	11:00	X	X	
WG-12635-032409-003	MW-810A	Water	03/24/09	13:30	X	X	
WG-12635-032409-004	MW-2B	Water	03/24/09	14:00	X	X	
WG-12635-032409-005	MW-811A	Water	03/24/09	14:30	X	X	
WG-12635-032509-006	MW-3	Water	03/25/09	9:40	X	X	
WG-12635-032509-007	MW-813A	Water	03/25/09	10:05	X	X	
WG-12635-032509-008	MW-808B	Water	03/25/09	14:05	X	X	
WG-12635-032609-009	CP-31	Water	03/26/09	9:50	X	X	
WG-12635-032609-010	MW-801A	Water	03/26/09	13:00	X	X	
WG-12635-032609-011	MW-801A	Water	03/26/09	14:00	X	X	Field duplicate of sample WG-12635-032609-010
WG-12635-032709-012	MW-405	Water	03/27/09	11:25	X	X	
WG-12635-032709-013	MW-3A	Water	03/27/09	12:55	X	X	
O-12635-032709-001	MW-803A	LNAPL	03/27/09	9:55	X		
O-12635-032709-002	MW-404	LNAPL	03/27/09	9:57	X		
O-12635-032709-003	MW-802A	LNAPL	03/27/09	10:02	X		
O-12635-032709-004	CP-1B	LNAPL	03/27/09	10:25	X		
O-12635-032709-005	CP-1B	LNAPL	03/27/09	10:25	X		Field duplicate of sample O-12635-032709-004
O-12635-032709-006	CP-2A	LNAPL	03/27/09	10:32	X		
O-12635-032709-007	CP-3B	LNAPL	03/27/09	10:40	X		
O-12635-032709-008	MW-102B	LNAPL	03/27/09	10:50	X		
O-12635-032709-009	CP-4A	LNAPL	03/27/09	11:10	X		
O-12635-032709-010	CP-4B	LNAPL	03/27/09	11:17	X		
O-12635-032709-011	MW-308	LNAPL	03/27/09	11:22	X		
O-12635-032709-012	MW-805A	LNAPL	03/27/09	11:35	X		
O-12635-032709-013	MW-4B	LNAPL	03/27/09	11:55	X		
WG-12635-033009-014	MW-4A	Water	03/30/09	9:35	X	X	
WG-12635-033009-015	MW-2A	Water	03/30/09	13:10	X	X	
WG-12635-033009-016	MW-1B	Water	03/30/09	13:25	X	X	
WG-12635-033009-017	MW-4	Water	03/30/09	14:40	X	X	
WG-12635-033109-018	MW-806B	Water	03/31/09	8:55	X	X	MS/MSD
WG-12635-033109-019	MW-409R	Water	03/31/09	10:15	X	X	
WG-12635-033109-021	MW-409R	Water	03/31/09	11:20	X	X	Field duplicate of sample WG-12635-033109-019

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
WG-12635-033109-020	MW-409B	Water	03/31/09	10:35	X	X	
WG-12635-033109-022	MW-1A	Water	03/31/09	10:40	X	X	
WG-12635-033109-023	MW-107R	Water	03/31/09	13:20	X	X	
WG-12635-040109-024	MW-106	Water	04/01/09	9:35	X	X	
WG-12635-040109-025	MW-408R	Water	04/01/09	10:20	X	X	
WG-12635-040109-026	MW-102	Water	04/01/09	13:20	X	X	
O-12635-033009-014	B-26	LNAPL	03/30/09	10:00	X		
O-12635-033009-015	B-1	LNAPL	03/30/09	10:15	X		
O-12635-033009-016	B-2	LNAPL	03/30/09	10:30	X		
O-12635-033009-017	CP-7A	LNAPL	03/30/09	10:45	X		
O-12635-033009-018	CP-9	LNAPL	03/30/09	11:00	X		
O-12635-033009-019	CP-9B	LNAPL	03/30/09	11:15	X		
O-12635-033009-020	CP-11B	LNAPL	03/30/09	11:30	X		
O-12635-033009-021	CP-13	LNAPL	03/30/09	11:45	X		
O-12635-033009-022	CP-14	LNAPL	03/30/09	12:00	X		
O-12635-033009-023	CP-14AR	LNAPL	03/30/09	12:15	X		
O-12635-033009-024	CP-14A	LNAPL	03/30/09	12:30	X		
O-12635-033009-025	CP-14A	LNAPL	03/30/09	12:45	X		Field duplicate of sample O-12635-033009-024
O-12635-033009-026	CP-13A	LNAPL	03/30/09	13:00	X		
O-12635-040109-027	CP-15A	LNAPL	04/01/09	11:00	X		
O-12635-040109-028	CP-19A	LNAPL	04/01/09	11:08	X		
O-12635-040109-029	CP-26	LNAPL	04/01/09	11:15	X		
O-12635-040109-030	CP-26A	LNAPL	04/01/09	11:19	X		
O-12635-040109-031	CP-28	LNAPL	04/01/09	11:35	X		
O-12635-040109-032	GP-08	LNAPL	04/01/09	13:35	X		
O-12635-040109-033	GP-12	LNAPL	04/01/09	13:45	X		
O-12635-040109-034	MW-400	LNAPL	04/01/09	13:52	X		
O-12635-040109-035	MW-400	LNAPL	04/01/09	13:52	X		Field duplicate of sample O-12635-040109-034
O-12635-040109-036	MW-401	LNAPL	04/01/09	13:55	X		
O-12635-040109-037	M-1	LNAPL	04/01/09	13:59	X		
O-12635-040109-038	M-1A	LNAPL	04/01/09	14:03	X		
O-12635-040109-039	M-2A	LNAPL	04/01/09	14:06	X		
O-12635-040109-040	M-3	LNAPL	04/01/09	14:13	X		

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

					Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*	*Comments*
O-12635-040109-041	T-1	LNAPL	04/01/09	14:22	X		
WG-12635-040209-027	CP-20B	Water	04/02/09	9:00	X	X	
WG-12635-040209-028	CP-26B	Water	04/02/09	13:30	X	X	
WG-12635-040309-029	CP-22B	Water	04/03/09	8:05	X	X	
WG-12635-040309-030	T-1B	Water	04/03/09	9:20	X	X	
WG-12635-040309-031	MW-300A	Water	04/03/09	9:30	X	X	
WG-12635-040309-032	CP-24B	Water	04/03/09	9:45	X	X	
WG-12635-040309-033	CP-18B	Water	04/03/09	12:00	X	X	
WG-12635-040309-034	CP-23B	Water	04/03/09	12:50	X	X	
WG-12635-040309-035	CP-18B	Water	04/03/09	13:10	X	X	Field duplicate of sample WG-12635-040309-033
O-12635-040209-042	MW-309	LNAPL	04/02/09	11:30	X		
O-12635-040209-043	MW-309	LNAPL	04/02/09	11:33	X		Field duplicate of sample O-12635-040209-042
O-12635-040209-044	MW-309A	LNAPL	04/02/09	11:35	X		
O-12635-040209-045	MW-306	LNAPL	04/02/09	11:42	X		
O-12635-040209-046	MW-305R	LNAPL	04/02/09	11:50	X		
O-12635-040209-047	MW-307	LNAPL	04/02/09	12:45	X		
WG-12635-040709-038	CP-21B	Water	04/07/09	8:55	X	X	
WG-12635-040709-039	CP-27B	Water	04/07/09	9:10	X	X	MS/MSD
WG-12635-040709-040	MW-204	Water	04/07/09	11:50	X	X	
WG-12635-040709-041	MW-204	Water	04/07/09	13:00	X	X	Field duplicate of sample WG-12635-040709-040
WG-12635-040809-042	CP-14B	Water	04/08/09	10:15	X	X	
WG-12635-040809-043	MW-5B	Water	04/08/09	13:20	X	X	
WG-12635-040809-044	MW-6A	Water	04/08/09	13:35	X	X	
WG-12635-040809-045	MW-6B	Water	04/08/09	14:20	X	X	
WG-12635-040609-036	CP-12A	Water	04/09/09	9:15	X	X	
WG-12635-040609-037	CP-25	Water	04/09/09	10:30	X	X	

Notes:

MS - Matrix Spike.
MSD - Matrix Spike Duplicate.
PCBs - Polychlorinated Biphenyls.

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*B-1*	*B-2*	*B-26*	*CP-1B*	*CP-1B*	*CP-2A*
	Sample ID:	*O-012635-033009-015*	*O-012635-033009-016*	*O-012635-033009-014*	*O-012635-032709-004*	*O-012635-032709-005*	*O-012635-032709-006*
	Sample Date:	*3/30/2009*	*3/30/2009*	*3/30/2009*	*3/27/2009*	*3/27/2009*	*3/27/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL (Duplicate)*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	10000 U	2000 U	2000 U	1000 U	20000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	10000 U	2000 U	2000 U	1000 U	20000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	10000 U	2000 U	2000 U	1000 U	20000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	10000 U	2000 U	2000 U	1000 U	20000 U
Aroclor-1248 (PCB-1248)	µg/kg	5600	10000 U	11000	8200	3800	100000
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	10000 U	2000 U	2000 U	1000 U	20000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	10000 U	2000 U	2000 U	1000 U	20000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*CP-3B*	*CP-4A*	*CP-4B*	*CP-7A*	*CP-9*	*CP-9B*
	Sample ID:	*O-012635-032709-007*	*O-012635-032709-009*	*O-012635-032709-010*	*O-012635-033009-017*	*O-012635-033009-018*	*O-012635-033009-019*
	Sample Date:	*3/27/2009*	*3/27/2009*	*3/27/2009*	*3/30/2009*	*3/30/2009*	*3/30/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	*Units*						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	10000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	10000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	10000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	10000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1248 (PCB-1248)	µg/kg	27000	20000	490000	4800	10000 U	8100
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	10000 U	100000 U	1000 U	10000 U	1000 U
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	10000 U	100000 U	1000 U	10000 U	1000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*CP-11B*	*CP-13*	*CP-13A*	*CP-14*	*CP-14A*	*CP-14A*
	Sample ID:	*O-012635-033009-020*	*O-012635-033009-021*	*O-012635-033009-026*	*O-012635-033009-022*	*O-012635-033009-024*	*O-012635-033009-025*
	Sample Date:	*3/30/2009*	*3/30/2009*	*3/30/2009*	*3/30/2009*	*3/30/2009*	*3/30/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL (Duplicate)*
Parameters:	***Units***						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	500000 U	10000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1221 (PCB-1221)	µg/kg	500000 U	10000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1232 (PCB-1232)	µg/kg	500000 U	10000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1242 (PCB-1242)	µg/kg	500000 U	10000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1248 (PCB-1248)	µg/kg	4300000	10000 U	11000	10000 U	10000 U	10000 U
Aroclor-1254 (PCB-1254)	µg/kg	500000 U	10000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1260 (PCB-1260)	µg/kg	500000 U	10000 U	5000 U	10000 U	10000 U	10000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*CP-14AR*	*CP-15A*	*CP-19A*	*CP-26*	*CP-26A*	*CP-28*
	Sample ID:	*O-012635-033009-023*	*O-012635-040109-027*	*O-012635-040109-028*	*O-012635-040109-029*	*O-012635-040109-030*	*O-012635-040109-031*
	Sample Date:	*3/30/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	***Units***						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	10000 U	5000000 U	50000 U	50000 U	50000 U	10000 U
Aroclor-1221 (PCB-1221)	µg/kg	10000 U	5000000 U	50000 U	50000 U	50000 U	10000 U
Aroclor-1232 (PCB-1232)	µg/kg	10000 U	5000000 U	50000 U	50000 U	50000 U	10000 U
Aroclor-1242 (PCB-1242)	µg/kg	10000 U	5000000 U	50000 U	50000 U	50000 U	10000 U
Aroclor-1248 (PCB-1248)	µg/kg	10000 U	16000000	180000	350000	360000	54000
Aroclor-1254 (PCB-1254)	µg/kg	10000 U	5000000 U	50000 U	50000 U	50000 U	10000 U
Aroclor-1260 (PCB-1260)	µg/kg	10000 U	5000000 U	50000 U	50000 U	50000 U	10000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*GP-08*	*GP-12*	*M-1*	*M-1A*	*M-2A*	*M-3*
	Sample ID:	*O-012635-040109-032*	*O-012635-040109-033*	*O-012635-040109-037*	*O-012635-040109-038*	*O-012635-040109-039*	*O-012635-040109-040*
	Sample Date:	*4/1/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	***Units***						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	5000 U	20000 U	10000 U	10000 U	10000 U	10000 U
Aroclor-1221 (PCB-1221)	µg/kg	5000 U	20000 U	10000 U	10000 U	10000 U	10000 U
Aroclor-1232 (PCB-1232)	µg/kg	5000 U	20000 U	10000 U	10000 U	10000 U	10000 U
Aroclor-1242 (PCB-1242)	µg/kg	5000 U	20000 U	10000 U	10000 U	10000 U	10000 U
Aroclor-1248 (PCB-1248)	µg/kg	33000	130000	10000 U	10000 U	10000 U	12000
Aroclor-1254 (PCB-1254)	µg/kg	5000 U	20000 U	10000 U	10000 U	10000 U	10000 U
Aroclor-1260 (PCB-1260)	µg/kg	5000 U	20000 U	10000 U	10000 U	10000 U	10000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-4B*	*MW-102B*	*MW-305R*	*MW-306*	*MW-307*	*MW-308*
	Sample ID:	*O-012635-032709-013*	*O-012635-032709-008*	*O-012635-040209-046*	*O-012635-040209-045*	*O-012635-040209-047*	*O-012635-032709-011*
	Sample Date:	*3/27/2009*	*3/27/2009*	*4/2/2009*	*4/2/2009*	*4/2/2009*	*3/27/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	***Units***						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U	5000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U	5000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U	5000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	1000 U	3900	4100	1000 U	5000 U
Aroclor-1248 (PCB-1248)	µg/kg	6100	2300	1000 U	1000 U	10000	11000
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	1000 U	6900	10000	1000 U	5000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	1000 U	1000 U	1000 U	1000 U	5000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-309*	*MW-309*	*MW-309A*	*MW-400*	*MW-400*	*MW-401*
	Sample ID:	*O-012635-040209-042*	*O-012635-040209-043*	*O-012635-040209-044*	*O-012635-040109-034*	*O-012635-040109-035*	*O-012635-040109-036*
	Sample Date:	*4/2/2009*	*4/2/2009*	*4/2/2009*	*4/1/2009*	*4/1/2009*	*4/1/2009*
	Matrix Code:	*LNAPL*	*LNAPL (Duplicate)*	*LNAPL*	*LNAPL*	*LNAPL (Duplicate)*	*LNAPL*
Parameters:	***Units***						
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	µg/kg	5000 U	5000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1221 (PCB-1221)	µg/kg	5000 U	5000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1232 (PCB-1232)	µg/kg	5000 U	5000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1242 (PCB-1242)	µg/kg	5000 U	5000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1248 (PCB-1248)	µg/kg	5000 U	5000 U	5000 U	10000 U	10000 U	10000 U
Aroclor-1254 (PCB-1254)	µg/kg	16000	14000	17000	10000 U	10000 U	10000 U
Aroclor-1260 (PCB-1260)	µg/kg	5000 U	5000 U	5000 U	10000 U	10000 U	10000 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-404*	*MW-802A*	*MW-803A*	*MW-805A*	*T-1*
	Sample ID:	*O-012635-032709-002*	*O-012635-032709-003*	*O-012635-032709-001*	*O-012635-032709-012*	*O-012635-040109-041*
	Sample Date:	*3/27/2009*	*3/27/2009*	*3/27/2009*	*3/27/2009*	*4/1/2009*
	Matrix Code:	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*	*LNAPL*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/kg	1000 U	1000 U	20000 U	1000 U	1000 U
Aroclor-1221 (PCB-1221)	µg/kg	1000 U	1000 U	20000 U	1000 U	1000 U
Aroclor-1232 (PCB-1232)	µg/kg	1000 U	1000 U	20000 U	1000 U	1000 U
Aroclor-1242 (PCB-1242)	µg/kg	1000 U	1000 U	20000 U	1000 U	1000 U
Aroclor-1248 (PCB-1248)	µg/kg	7300	6300	260000	1000 U	8600
Aroclor-1254 (PCB-1254)	µg/kg	1000 U	1000 U	20000 U	1000 U	1000 U
Aroclor-1260 (PCB-1260)	µg/kg	1000 U	1000 U	20000 U	1000 U	1000 U

Notes:

U - Not detected.

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*CP-12A*	*CP-14B*	*CP-18B*	*CP-18B*	*CP-20B*
	Sample ID:	*WG-12635-040609-036*	*WG-12635-040809-042*	*WG-12635-040309-033*	*WG-12635-040309-035*	*WG-12635-040209-027*
	Sample Date:	*4/9/2009*	*4/8/2009*	*4/3/2009*	*4/3/2009*	*4/2/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG (Duplicate)*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	6.3
Aroclor-1248 (PCB-1248)	µg/L	0.19	0.065 U	0.065 U	0.065 U	0.13 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.5	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*CP-21B*	*CP-22B*	*CP-23B*	*CP-24B*	*CP-25*
	Sample ID:	*WG-12635-040709-038*	*WG-12635-040309-029*	*WG-12635-040309-034*	*WG-12635-040309-032*	*WG-12635-040609-037*
	Sample Date:	*4/7/2009*	*4/3/2009*	*4/3/2009*	*4/3/2009*	*4/9/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 UJ	0.065 U	0.065 U	1.5	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 UJ	0.48	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 UJ	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	24.8

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*CP-26B*	*CP-27B*	*CP-31*	*MW-1A*	*MW-1B*
	Sample ID:	*WG-12635-040209-028*	*WG-12635-040709-039*	*WG-12635-032609-009*	*WG-12635-033109-022*	*WG-12635-033009-016*
	Sample Date:	*4/2/2009*	*4/7/2009*	*3/26/2009*	*3/31/2009*	*3/30/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 UJ	0.32 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 UJ	0.32 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 UJ	0.32 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.24	0.065 UJ	0.32 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 UJ	0.32 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 UJ	0.32 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 UJ	0.32 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-2A*	*MW-2B*	*MW-3*	*MW-3A*	*MW-4*
	Sample ID:	*WG-12635-033009-015*	*WG-12635-032409-004*	*WG-12635-032509-006*	*WG-12635-032709-013*	*WG-12635-033009-017*
	Sample Date:	*3/30/2009*	*3/24/2009*	*3/25/2009*	*3/27/2009*	*3/30/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.14	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.075	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-4A*	*MW-5B*	*MW-6A*	*MW-6B*	*MW-102*
	Sample ID:	*WG-12635-033009-014*	*WG-12635-040809-043*	*WG-12635-040809-044*	*WG-12635-040809-045*	*WG-12635-040109-026*
	Sample Date:	*3/30/2009*	*4/8/2009*	*4/8/2009*	*4/8/2009*	*4/1/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U	0.065 U	R
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-106*	*MW-107R*	*MW-204*	*MW-204*	*MW-300A*
	Sample ID:	*WG-12635-040109-024*	*WG-12635-033109-023*	*WG-12635-040709-040*	*WG-12635-040709-041*	*WG-12635-040309-031*
	Sample Date:	*4/1/2009*	*3/31/2009*	*4/7/2009*	*4/7/2009*	*4/3/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG (Duplicate)*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.65 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-405*	*MW-408R*	*MW-409B*	*MW-409R*	*MW-409R*
	Sample ID:	*WG-12635-032709-012*	*WG-12635-040109-025*	*WG-12635-033109-020*	*WG-12635-033109-019*	*WG-12635-033109-021*
	Sample Date:	*3/27/2009*	*4/1/2009*	*3/31/2009*	*3/31/2009*	*3/31/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG (Duplicate)*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.32 U	R	0.32 U	0.32 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-801A*	*MW-801A*	*MW-806B*	*MW-808B*	*MW-809A*
	Sample ID:	*WG-12635-032609-010*	*WG-12635-032609-011*	*WG-12635-033109-018*	*WG-12635-032509-008*	*WG-12635-032409-002*
	Sample Date:	*3/26/2009*	*3/26/2009*	*3/31/2009*	*3/25/2009*	*3/24/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
			(Duplicate)			
Parameters:	*Units*					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	R	0.065 U	0.32 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

	Sample Location:	*MW-810A*	*MW-811A*	*MW-812A*	*MW-813A*	*T-1B*
	Sample ID:	*WG-12635-032409-003*	*WG-12635-032409-005*	*WG-12635-032409-001*	*WG-12635-032509-007*	*WG-12635-040309-030*
	Sample Date:	*3/24/2009*	*3/24/2009*	*3/24/2009*	*3/25/2009*	*4/3/2009*
	Matrix Code:	*WG*	*WG*	*WG*	*WG*	*WG*
Parameters:	***Units***					
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	µg/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.32 U	0.065 U	0.065 U	0.065 U	4.4
Aroclor-1248 (PCB-1248)	µg/L	0.32 U	0.067	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.32 U	0.065 U	0.065 U	0.065 U	0.065 U
General Chemistry						
n-Hexane Extractable Material	mg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Notes:

R - Rejected
U - Not detected.
UJ - Not detected, estimated reporting Limit.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

Parameter	*Sample ID*	*Holding Time (days)*	*Holding Time Criteria (days)*	*Analyte*	*Qualified Sample Results*	*Units*
PCBs	WG-12635-040709-038	14	7	Aroclor 1016	0.065 UJ	µg/L
				Aroclor 1221	0.065 UJ	µg/L
				Aroclor 1232	0.065 UJ	µg/L
				Aroclor 1242	0.065 UJ	µg/L
				Aroclor 1248	0.065 UJ	µg/L
				Aroclor 1254	0.065 UJ	µg/L
				Aroclor 1260	0.065 UJ	µg/L
PCBs	WG-12635-040709-039	14	7	Aroclor 1016	0.065 UJ	µg/L
				Aroclor 1221	0.065 UJ	µg/L
				Aroclor 1232	0.065 UJ	µg/L
				Aroclor 1242	0.065 UJ	µg/L
				Aroclor 1248	0.065 UJ	µg/L
				Aroclor 1254	0.065 UJ	µg/L
				Aroclor 1260	0.065 UJ	µg/L

Notes:

PCBs - Polychlorinated Biphenyls.
UJ - Not detected, estimated reporting Limit.

TABLE 4

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER SAMPLING
MARCH AND APRIL 2009

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Qualified Sample Results*	*Units*
PCBs	Decachlorobiphenyl	2.5	10 - 127	WG-12635-033109-018	Aroclor 1016	R	µg/L
					Aroclor 1221	R	µg/L
					Aroclor 1232	R	µg/L
					Aroclor 1242	R	µg/L
					Aroclor 1248	R	µg/L
					Aroclor 1254	R	µg/L
					Aroclor 1260	R	µg/L
PCBs	Decachlorobiphenyl	0.6	10 - 127	WG-12635-033109-020	Aroclor 1016	R	µg/L
					Aroclor 1221	R	µg/L
					Aroclor 1232	R	µg/L
					Aroclor 1242	R	µg/L
					Aroclor 1248	R	µg/L
					Aroclor 1254	R	µg/L
					Aroclor 1260	R	µg/L
PCBs	Decachlorobiphenyl	9.7	10 - 127	WG-12635-033109-026	Aroclor 1016	R	µg/L
					Aroclor 1221	R	µg/L
					Aroclor 1232	R	µg/L
					Aroclor 1242	R	µg/L
					Aroclor 1248	R	µg/L
					Aroclor 1254	R	µg/L
					Aroclor 1260	R	µg/L

Notes:

PCBs - Polychlorinated Biphenyls.
R - Rejected.

CONESTOGA-ROVERS & ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
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MEMORANDUM

TO: Kathy Galanti

REF. NO.: 012650-035009

FROM: Kathleen Willy/bjw/16

DATE: June 26, 2009

E-Mail and Hard Copy if Requested

RE: Analytical Results and QA/QC Review
Semi-Annual Monitoring Event
Groundwater Resampling
June 2009

INTRODUCTION

Three water samples were collected in support of the Semi-Annual Groundwater Monitoring Event at the American Axle Manufacturing Site (Site) during June 2009. The samples were submitted to TestAmerica Laboratories (TA) in North Canton, Ohio, and analyzed for the following:

Parameter	*Methodology*
Polychlorinated Biphenyls (PCBs)	SW-846 8082[1]
n-Hexane Extractable Materials (Oil & Grease)	USEPA 1664[1]

A sampling and analysis summary is presented in Table 1. Analytical results summaries are presented in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "National Functional Guidelines for Organic Data Review" (October 1999), and the "National Functional Guidelines for Inorganic Data Review" (February 1994).

Data assessment was based on information obtained from the final data sheets, blank data, surrogate recoveries and blank spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the method specified holding times. All samples were properly preserved and received in good condition.

Surrogates were added to all samples, blanks, and QC samples prior to extraction for PCBs. All surrogate recoveries met the method criteria, indicating acceptable analytical accuracy.

---

1 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

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Method blanks were extracted and/or analyzed for all parameters and all results were non-detect for the compounds of interest.

Blank spikes (BS) were prepared and analyzed for all parameters. All recoveries showed acceptable analytical accuracy. Some BSs were analyzed and prepared in duplicate. All results were acceptable indicating good analytical precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER RESAMPLING
JUNE 2009

					Analysis/Parameters	
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*PCBs*	*Oil & Grease*
WG-12635-060409-001	MW-102	Water	06/04/09	9:10	X	X
WG-12635-060409-002	MW-409B	Water	06/04/09	12:15	X	X
WG-12635-061109-003	806B	Water	06/11/09	10:00	X	X

Note:

PCBs - Polychlorinated Biphenyls.

TABLE 2

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL MONITORING EVENT
GROUNDWATER RESAMPLING
JUNE 2009

	Sample Location:	*MW-102*	*MW-409B*	*MW-806B*
	Sample ID:	*WG-12635-060409-001*	*WG-12635-060409-002*	*WG-12635-061109-003*
	Sample Date:	*6/4/2009*	*6/4/2009*	*6/11/2009*
Parameters:	*Units*			
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1221 (PCB-1221)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1232 (PCB-1232)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1242 (PCB-1242)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1248 (PCB-1248)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1254 (PCB-1254)	µg/L	0.065 U	0.065 U	0.065 U
Aroclor-1260 (PCB-1260)	µg/L	0.065 U	0.065 U	0.065 U
General Chemistry				
n-Hexane Extractable Material	mg/L	6.0	5.0 U	5.0 U

Note:

U - Not detected.

APPENDIX F

SEWER INSPECTION LOG

TABLE F.1

5x9 SEWER INSPECTION
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Feature	*Figure 3.5 Identifier*	*Distance*	*Direction from Reference Point*	*Lateral Entering from E/W*	*Diameter*	*Blind Stub or Open Lateral*	*Type of Pipe*	*Flowing? (Y/N) Volume (gpm)*	*Notes*
MH/Vault	A	0							Enter at A, South Yard MH - Offset East
L	1	0	On Line	W	18"	Open	CMP	Y	
L	2	2.6	S from S Yard	W	22"	Open	VCP	1 - 2 gpm	
L		26.62	S from S Yard	E	6"	Blind Stub	VCP	N	
L		26.62	S from S Yard	W	7"	Blind Stub	VCP	N	
L		59.92	S from S Yard	E	7"	Blind Stub	VCP	N	
L		59.9	S from S Yard	W	7"	Blind Stub	VCP	N	
L	3	61.51	S from S Yard	E	6"	Open	VCP	1 - 2 gpm	
L	4	61.64	S from S Yard	TDC	6"	Open	Steel	N	
L	5	73.64	S from S Yard	TDC	6"	Open	VCP	<1 gpm	
L	6	127.29	S from S Yard	W	6"	Open	VCP	trace	Mud inside - may be broken
L		129.03	S from S Yard	E	6"	Blind Stub	VCP	N	
L	7	162.21	S from S Yard	TDC	6"	Open	Steel	N	
L	8	213	S from S Yard	E	6"	Open	Steel	trace	
OBS		213	S from S Yard	W					Hole in wall
L	9	240	S from S Yard	E	10"	Open	VCP	trace	
L	10	263.57	S from S Yard	E	6"	Open	VCP	0.5 - 1 gpm	
L	11	272.43	S from S Yard	E	6"	Open	VCP	0.5 - 1 gpm	
L		272.5	S from S Yard	W	6"	Blind Stub	VCP	N	
L	12	290	S from S Yard	E	6"	Open	VCP	trace	
L		301.79	S from S Yard	W	6"	Blind Stub	VCP	N	
L	13	329	S from S Yard	E	6"	Open	VCP	<0.5 gpm	
L	14	342.75	S from S Yard	W	6"	Open	VCP	<1 gpm	
L	15	350.62	S from S Yard	E	6"	Open	VCP	trace	
L	16	374.95	S from S Yard	W	4"	Open	Steel	trace	
L		381	S from S Yard	E	6"	Blind Stub	VCP		Trace groundwater seepage from pipe
L	17	382	S from S Yard	W	6"	Open	VCP	trace	
L	18	393	S from S Yard	W	14"	Open	Plastic	N	
L	19	396.7	S from S Yard	E	10"	Open	VCP	<0.5 gpm	
L	20	398.7	S from S Yard	W	10"	Open	VCP	N	Turns to PVC about 2' up pipe
L	21	412.5	S from S Yard	E	6"	Open	Steel	trace	
L		422	S from S Yard	W	6"	Blind Stub	VCP	N	
L	22	441.44	S from S Yard	W	6"	Open	VCP	trace	
L	23	453.79	S from S Yard	E	6"	Open	VCP	trace	
MH/Vault	B	455.8	S from S Yard						North Edge of MH Vault - Colorado St before CSO (offset west)

TABLE F.1

5x9 SEWER INSPECTION
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Feature	*Figure 3.5 Identifier*	*Distance*	*Direction from Reference Point*	*Lateral Entering from E/W*	*Diameter*	*Blind Stub or Open Lateral*	*Type of Pipe*	*Flowing? (Y/N) Volume (gpm)*	*Notes*
MH/Vault	A	0							Enter at A, South Yard MH
L		88.51	N from S Yard	W	6"	Blind Stub	Steel	N	
L		89.32	N from S Yard	E	6"	Blind Stub	Steel	N	
L	24	108.36	N from S Yard	TDC	10"	Open	Unknown	trace	
MH	C	122.85	N from S Yard						Offset west. Distance measured from C/L of MH
L	25	124.57	N from S Yard	NW	36"	Open	Brick	50 - 100 gpm	Distance measured from C/L of lateral. Lat. enters at 45 from NW then has 2nd 45 to west
MH	D	149.76	N from S Yard	TDC			Concrete		Distance measured from C/L of MH
	26			NW	14"		Steel		
	27			W	8"		Steel		All 4 inverts enter into the manhole, above the top of the 5x9
	28			W	8"		CMP		
	29			E	10"		VCP		
L	30	152.28	N from S Yard	W	6"	Plugged	VCP	trace	Calcified material
L		200	N from S Yard	W	6"	Blind Stub	VCP	N	
L		201.62	N from S Yard	E	6"	Blind Stub	VCP	N	
L	31	215.25	N from S Yard	NE	12"	Open	Steel	2 gpm	
OBS		225.28	N from S Yard	E	16"			N	Hole blocked off
L		231.18	N from S Yard	W	6"	Blind Stub	Steel	N	
L		231.42	N from S Yard	E	6"	Blind Stub	Steel	N	
OBS		235.45	N from S Yard	E	10"			N	Open hole
L		261.51	N from S Yard	W	6"	Blind Stub	VCP	N	
L		261.56	N from S Yard	E	6"	Blind Stub	VCP	N	
L	32	283.25	N from S Yard	E					Possible calcified pipe
L	33	285.38	N from S Yard	E	8"	Open	Steel	N	
L	34	291.12	N from S Yard	W	6"				Possible calcified pipe
L		291.47	N from S Yard	E	6"	Blind Stub	VCP	N	
L		321.92	N from S Yard	E	6"	Blind Stub	VCP	N	
L		321.92	N from S Yard	W	6"	Blind Stub	VCP	N	
L	35	334.83	N from S Yard	W	24"	Open	VCP	2+ gpm	Center of manhole is located up lateral, 4.8' west of 5x9
L	36	342.76	N from S Yard	E	6"	Open	Steel	trace	
L		351.5	N from S Yard	W	6"	Blind Stub	VCP	N	
L		351.5	N from S Yard	E	6"	Blind Stub	VCP	N	
L	37	372.91	N from S Yard	TDC	8"	Open	Steel	N	

TABLE F.1

5x9 SEWER INSPECTION
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Feature	*Figure 3.5 Identifier*	*Distance*	*Direction from Reference Point*	*Lateral Entering from E/W*	*Diameter*	*Blind Stub or Open Lateral*	*Type of Pipe*	*Flowing? (Y/N) Volume (gpm)*	*Notes*
L		411.35	N from S Yard	E	6"	Blind Stub	VCP	N	
L		411.35	N from S Yard	W	6"	Blind Stub	VCP	N	
L		440.75	N from S Yard	E	6"	Blind Stub	Steel	N	
L		440.75	N from S Yard	W	6"	Blind Stub	Steel	N	
L	38	446.15	N from S Yard	W	12"	Open	VCP	1 - 2 gpm	Center of manhole is located up lateral, 10.3' west of 5x9
MH	E	454.65	N from S Yard						Bay E37/38
MH	F								Enter at F, Bay E24 MH
	39	0	W/in manhole	SE	4"	Open	Steel	N	
L		34.6	S from MH E-24	E	6.5"	Blind Stub	VCP	N	
L		34.6	S from MH E-24	W	6"	Blind Stub	VCP		Trace groundwater seepage from pipe
L		63	S from MH E-24	E	6"	Blind Stub	VCP		Trace oil within pipe
L		64.62	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	40	77.81	S from MH E-24	W	10"	Open	Steel	trace	Fed from 2nd floor men's locker room
OBS		88	S from MH E-24	E					Start to show oil infiltration along E wall
L		94.52	S from MH E-24	E	6"	Blind Stub	VCP	N	Trace oil within pipe
L		94.52	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	41	95.8	S from MH E-24	E	8"	Open	Steel	<1.0 gpm	Bay E-28 roof conductor
L		123.22	S from MH E-24	E	6"	Blind Stub	VCP	N	
L		124.54	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	42	129.04	S from MH E-24	TDC	8"	Open	Steel	trace	Oil infiltration from around pipe
OBS		144	S from MH E-24	E/W					Oil infiltration on east wall. Line of infiltration extends over crown to west wall
L	43	147	S from MH E-24	W	10"	Open	Steel	N	Bay E-30 roof conductor
L		153.63	S from MH E-24	E	6"	Blind Stub	VCP	N	
L		153.63	S from MH E-24	W	6"	Blind Stub	VCP	N	
OBS		162	S from MH E-24	E					Oil infiltration diminishes
L		183.27	S from MH E-24	W	6"	Blind Stub	VCP	N	
OBS		184	S from MH E-24	E					Oil seepage (point)
L		184.69	S from MH E-24	E	6"	Blind Stub	VCP	N	Oil infiltration around and within stub
OBS		188-190	S from MH E-24	E					Oil seepage (seam)
OBS		206	S from MH E-24	W					Oil infiltration on west wall
OBS		210	S from MH E-24	E					Oil seepage (point)
L		213.53	S from MH E-24	E	6"	Blind Stub	VCP	N	

TABLE F.1

5x9 SEWER INSPECTION
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Feature	*Figure 3.5 Identifier*	*Distance*	*Direction from Reference Point*	*Lateral Entering from E/W*	*Diameter*	*Blind Stub or Open Lateral*	*Type of Pipe*	*Flowing? (Y/N) Volume (gpm)*	*Notes*
L		213.53	S from MH E-24	W	6"	Blind Stub	VCP	N	
OBS		215-230	S from MH E-24	E					Oil seepage (seam) at base of stone and points
OBS		234	S from MH E-24	E					Oil seepage (point)
OBS		242	S from MH E-24	E					More frequent seeps (points)
L		243.74	S from MH E-24	E	6"	Blind Stub	VCP	N	
L		243.74	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	44	247.87	S from MH E-24	W	8"	Open	Steel	trace	Bay E-34 roof conductor + GM water treatment system discharge
L	45	247.89	S from MH E-24	E	10"	Open	Steel	trace	Bay E-34 roof conductor
OBS		254	S from MH E-24	E					Seeps diminish and walls are dry
OBS		261	S from MH E-24	E					Frequent seeps along east wall (points)
L	46	262.88	S from MH E-24	Top W	3"	Open	Steel	N	
L		274	S from MH E-24	E	6"	Blind Stub	VCP	N	
L		274	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	47	303.11	S from MH E-24	W	10"	Open	Steel	trace	Former WWTP discharge
L		305.11	S from MH E-24	E	6"	Blind Stub	VCP		Trace oil seepage from pipe
L		305.11	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	48	318	S from MH E-24	W	6"	Open	VCP	N	
OBS		321	S from MH E-24	E					End of oil infiltration
L		335.6	S from MH E-24	E	6"	Blind Stub	VCP	N	
L		335.6	S from MH E-24	W	6"	Blind Stub	VCP	N	
L	49	348.87	S from MH E-24	E	10"	Open	VCP	trace	
MH	E	350.58	S from MH E-24						Bay E37/38. Measured to north edge
MH	G								Enter at G, Bay E11 MH
L	50	4.17	S from MH E-11	E	8"	Open	Steel	<0.5 gpm	
L		5.55	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		6.17	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	51	30.88	S from MH E-11	W	6"	Open	Steel	N	Oil in line
L	52	33.76	S from MH E-11	W	10"	Open	Steel	<0.5 gpm	
L		35.95	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		36.51	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	53	64.11	S from MH E-11	E	8"	Open	Steel	trace	
L		67.26	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		67.26	S from MH E-11	W	6"	Blind Stub	VCP	N	

TABLE F.1

5x9 SEWER INSPECTION
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Feature	*Figure 3.5 Identifier*	*Distance*	*Direction from Reference Point*	*Lateral Entering from E/W*	*Diameter*	*Blind Stub or Open Lateral*	*Type of Pipe*	*Flowing? (Y/N) Volume (gpm)*	*Notes*
L		97.41	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		97.41	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	54	101.9	S from MH E-11	E	6"	Open	Steel	<0.5 gpm	
L		126.89	S from MH E-11	E	6"	Blind Stub	VCP	trace	Trace oil seeping out
L		126.89	S from MH E-11	W	6"	Blind Stub	VCP	N	
L		156.11	S from MH E-11	E	6"	Blind Stub	VCP	trace	Possible oil seepage
L		156.11	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	55	185.22	S from MH E-11	W	10"	Open	Steel	<0.5 gpm	
L	56	185.66	S from MH E-11	E	10"	Open	Steel	<0.5 gpm	
L		186.08	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		186.08	S from MH E-11	W	6"	Blind Stub	VCP	N	
L		215.96	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		215.96	S from MH E-11	W	6"	Blind Stub	VCP	N	
L		244.16	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		244.16	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	57	266.21	S from MH E-11	W	6"	Open	Steel	N	
L		275.68	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		275.68	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	58	284.58	S from MH E-11	E of TDC	4"	Open	VCP	N	2 o'clock position looking northward
L	59	305.73	S from MH E-11	E	10"	Open	Steel	<0.5 gpm	
L		305.73	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		305.73	S from MH E-11	W	6"	Blind Stub	VCP	N	
L	60	311.3	S from MH E-11	W	10"	Open	Steel	<0.25 gpm	
L		335.93	S from MH E-11	E	6"	Blind Stub	VCP	N	
L		335.93	S from MH E-11	W	6"	Blind Stub	VCP	N	
MH	F	338.58	S from MH E-11						MH E24. Offset west
MH	G								Enter at G, Bay E11 MH
L	61	7.65	N from MH E-11	W	6"	Open	Steel	<0.5 gpm	
L		24.8	N from MH E-11	E	6"	Blind Stub	VCP	N	Possible coolant seepage
L		24.8	N from MH E-11	W	6"	Blind Stub	VCP	N	
L		53.94	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		53.94	N from MH E-11	W	6"	Blind Stub	VCP	N	
L		83.95	N from MH E-11	E	6"	Blind Stub	VCP	Y	Very slight oil seepage
L		83.95	N from MH E-11	W	6"	Blind Stub	VCP	N	
L	62	106.9	N from MH E-11	W	6"	Open	Steel	N	Oil seepage across sewer on east side
L	63	111.74	N from MH E-11	E	8"	Open	Steel	1+ gpm	

TABLE F.1

5x9 SEWER INSPECTION
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

Feature	*Figure 3.5 Identifier*	*Distance*	*Direction from Reference Point*	*Lateral Entering from E/W*	*Diameter*	*Blind Stub or Open Lateral*	*Type of Pipe*	*Flowing? (Y/N) Volume (gpm)*	*Notes*
OBS		112.5	N from MH E-11	E					Coolant seeping in at base of wall
L		113.97	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		113.97	N from MH E-11	W	6"	Blind Stub	VCP	N	
L		142.78	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		142.78	N from MH E-11	W	6"	Blind Stub	VCP	N	
L		172.31	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		172.31	N from MH E-11	W	6"	Blind Stub	VCP	N	
OBS		180	N from MH E-11	E/W					Coolant seeping in at base of wall - both sides
L	64	197.51	N from MH E-11	W	10"	Open	Steel	<0.25 gpm	
L		201.35	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		203.78	N from MH E-11	W	6"	Blind Stub	VCP	N	
L	65	221.78	N from MH E-11	E	8"	Open	Steel	1-2 gpm	
L		232.12	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		234.52	N from MH E-11	W	6"	Blind Stub	VCP	N	
L	66	257.49	N from MH E-11	W	6"	Open	Steel	N	
L		287.11	N from MH E-11	E	6"	Blind Stub	VCP	N	
L		287.11	N from MH E-11	W	6"	Blind Stub	VCP	N	
WEIR		320.94	N from MH E-11						To center of weir
L	67	326.62	N from MH E-11	W	24"	Open	PVC	1-2 gpm	
L	68	330.26	N from MH E-11	E	12"	Open	VCP	20+ gpm	
L	69	331.88	N from MH E-11	E	14"	Open	VCP	1+ gpm	
MH	H	333	N from MH E-11						Offset west. Distance measured from C/L of MH. Delavan Ave MH

Notes:

C/L	Center line.
CMP	Corrugated metal pipe.
gpm	Gallon per minute.
L	Lateral.
MH	Manhole.
OBS	Observation.
TDC	Top dead center.
VCP	Vitrified clay pipe.

APPENDIX G

SEWER MODELING

APPENDIX G

DETERMINATION OF PERCENT OF TOTAL LOAD THAT GOES TO SCAJAQUADA CREEK DRAIN UNDER BASELINE CONDITIONS

1. Use SWMM Model results.
2. Dry weather flow (DWF) PCB concentration assumed to be 0.131 µg/L.
3. BSA's XP-SWMM model is used to predict total load and flow. Total flow is adjusted i) to account for winter months (model only predicts spring, summer, and fall flow); and ii) to account for periods of dry weather.

CALCULATE TOTAL PCB LOAD TO THE DRAIN:

Total load to drain = (0.00060 + 0.00100 + 0.00085) = 0.00245 lbs [From Table G.1, 8213 (to Drain)]

Convert from 3 seasons to full year,

0.00245 x 4/3 = 0.00327 lbs

CALCULATE TOTAL PCB LOAD TO THE INTERCEPTOR:

Total load to interceptor = (0.0652 + 0.08163 + 0.09286) = 0.2397 lbs [From Table G.1, SPP337.3 (to Interceptor)]

Convert from 3 seasons to full year,

0.2397 x 4/3 = 0.3196 lbs

ADJUST FOR DRY WEATHER FLOW (DWF) OF 5x9 SEWER:

Model accounts for 3,867 hours of WWF. The loading must be adjusted to account for the dry weather flow component to the Interceptor.

Load to Interceptor = 0.3196 lbs x (8760/3867) = 0.7240 lbs

CALCULATE TOTAL LOAD:

Total Load = 0.00327 lbs + 0.7240 lbs = 0.7273 lbs

Percent of flow to Interceptor = 0.7240 / 0.7273 = 99.55%

Percent of flow to Drain = 0.00327 / 0.7273 = 0.45%

ESTIMATED PCB TEMPORAL CONCENTRATION TO SCAJAQUADA CREEK USING XP-SWMM MODEL DATA

1. Temporal concentration represents the average annual concentration to Scajaquada Creek based on total load and total volume of flow.
2. BSA's XP-SWMM model is used to predict total load and flow. Total flow is adjusted i) to account for winter months (model only predicts spring, summer, and fall flow); and ii) to account for periods of dry weather.

CALCULATE TOTAL PCB LOAD TO SCAJAQUADA CREEK:

Total load to creek = (0.00024 + 0.00015 + 0.00017) = 0.00056 lbs [From Table G.1, 5943 (to Creek)]

Convert from 3 seasons to full year,

0.00056 x 4/3 = 0.000747 lbs x 0.4536 (kg/lb) = 0.000339 kg x 1,000,000 mg/kg = 338.7 mg

CALCULATE TOTAL ANNUAL WET WEATHER FLOW (WWF) TO CREEK:

WWF = (93,120,364 + 75,303,176 + 77,556,413) = 245,979,953 CF [From Table G.1, 5943 (to Creek)]

Convert from 3 seasons to full year,

245,979,953 x 4/3 = 327,973,271 CF

ADD DRY WEATHER FLOW (DWF) OF SCAJAQUADA CREEK DRAIN:

Model accounts for 3,867 hours of WWF.

DWF Hours = (24 x 365) – 3,867 = 4,893 hrs

DWF = 4,893 hrs x 2.33 CFS x 3600 sec/hr = 41,042,484 CF

COMBINE WET AND DRY WEATHER FLOW:

Total Flow = 327,973,270 CF + 41,042,484 CF = 369,015,754 CF x 7.48 gal/CF = 2,760,237,840 gal x 3.785 L/gal = 1.045×10^{10} L

DETERMINE TEMPORAL CONCENTRATION:

Temporal Concentration = 338.7 mg / 1.045×10^{10} L = 3.24×10^{-8} mg/L (ppm) x 1,000 = 3.24×10^{-5} ug/L (ppb) x 1,000 = 3.24×10^{-2} ng/L (ppt) x 1,000 = 32.4 pg/L (ppq)

TEMPORAL CONCENTRATION AT DETECTION LIMIT OF 0.065 µg/L:

If the concentration of PCBs in the 5x9 Sewer were reduced to ≤0.065 µg/L (the current analytical instrument detection limit for PCBs), the baseline temporal concentration would adjust accordingly.

If PCB = 0.065 µg/L,
Temporal Concentration = 32.4 (0.065/0.131) = 16.1 ppq.

Therefore, a concentration within the 5x9 Sewer of ND at 0.065 µg/L indicates that the PCB concentration in Scajaquada Creek is less than 16.1 ppq.

TABLE G.1

5x9 SEWER MODEL OUTPUTS
AMERICAN AXLE PLANT SITE, NYSDEC SITE NO. 915196
BUFFALO, NEW YORK

BASELINE CONDITIONS

Peak flow [cfs]

Node:	**8213 (to Drain)**	**SPP337.3 (to Interceptor)**	**5943 (to Creek)**
Spring	313	36	4966
Summer	183	33	1201
Fall	172	33	1947

Total flow [ft3]

Node:	**8213 (to Drain)**	**SPP337.3 (to Interceptor)**	**5943 (to Creek)**
Spring	3,008,826	12,383,756	93,120,364
Summer	2,983,767	14,777,616	75,303,176
Fall	2,556,305	16,992,460	77,556,413

Peak PCB concentration [µg/L]

Node:	**8213 (to Drain)**	**SPP337.3 (to Interceptor)**	**5943 (to Creek)**
Spring	0.0247	0.1341	0.0004
Summer	0.0251	0.1343	0.0005
Fall	0.0243	0.1338	0.0005

Total PCB load [lbs]

Node:	**8213 (to Drain)**	**SPP337.3 (to Interceptor)**	**5943 (to Creek)**
Spring	0.00060	0.06520	0.00024
Summer	0.00100	0.08163	0.00015
Fall	0.00085	0.09286	0.00017