

## PHASE II ENVIRONMENTAL SITE ASSESSMENT

PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

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LIST OF ACRONYMS

|       |                                              |
|-------|----------------------------------------------|
| AMSL  | Above Mean Sea Level                         |
| AST   | Aboveground Storage Tank                     |
| BGS   | Below Ground Surface                         |
| BTEX  | Benzene, Toluene, Ethylbenzene, and Xylene   |
| COC   | Chain of Custody                             |
| CPT   | Cone Penetration Testing                     |
| CRA   | Conestoga-Rovers & Associates Inc.           |
| CVO   | Central Vehicle Operations                   |
| DCC   | Direct Contact Criteria                      |
| DPT   | Direct Push Technology                       |
| DWC   | Drinking Water Criteria                      |
| ELPO  | Electrophoretic Priming Operation            |
| ESA   | Environmental Site Assessment                |
| GCC   | Groundwater Contact Criteria                 |
| GM    | General Motors Corporation                   |
| GPM   | Gallons Per Minute                           |
| HASP  | Health and Safety Plan                       |
| HI    | Hazard Index                                 |
| LIF   | Laser-Induced Fluorescence                   |
| LNAPL | Light Non-Aqueous Phase Liquid               |
| MDEQ  | Michigan Department of Environmental Quality |
| NAPL  | Non-Aqueous Phase Liquid                     |
| PA    | Preliminary Assessment                       |
| PAC   | Pontiac Assembly Center                      |
| PAOC  | Potential Area of Concern                    |
| PAOR  | Potential Area of Release                    |
| PCB   | Polychlorinated biphenyl                     |
| PVC   | Pontiac Validation Center                    |
| PID   | Photoionization detector                     |
| PNA   | Polynuclear Aromatic Hydrocarbons            |
| PPE   | Personal Protective Equipment                |
| PR    | Preliminary Review                           |

LIST OF ACRONYMS

|       |                                                       |
|-------|-------------------------------------------------------|
| PSIC  | Particulate Soil Inhalation Criteria                  |
| QA/QC | Quality Assurance/Quality Control                     |
| RCRA  | Resource Conservation and Recovery Act                |
| ROST  | Rapid Optical Screening Tool                          |
| RRD   | Remediation and Redevelopment Division                |
| SOW   | Scope of Work                                         |
| SVIIC | Soil Volatilization to Indoor Air Inhalation Criteria |
| SVOCs | Semi-Volatile Organic Compounds                       |
| TAL   | Target Analyte List                                   |
| TAT   | Turn Around Time                                      |
| TCL   | Target Compound List                                  |
| TMB   | Trimethylbenzenes                                     |
| USCS  | Unified Soil Classification System                    |
| USEPA | United States Environmental Protection Agency         |
| UST   | Underground Storage Tank                              |
| VSI   | Visual Site Inspection                                |
| VSIC  | Infinite Source Volatile Soil Inhalation Criteria     |
| VOCs  | Volatile Organic Compounds                            |
| WMA   | Waste Management Area                                 |
| WP    | Work Plan                                             |
| WWTP  | Wastewater Treatment Plant                            |

## 1.0 INTRODUCTION

Conestoga-Rovers & Associates, Inc. (CRA) was retained by Environmental Corporate Remediation (ENCORE), at the request of General Motors Corporation (GM) Legal Staff, to complete a Phase II Environmental Site Assessment (ESA), at the GM Pontiac Validation Center (PVC), located in Pontiac, Michigan (Site). The Site location is presented on Figure 1.1.

The Phase II ESA was performed to further investigate potential areas of concern (PAOCs) and potential areas of release (PAORs) identified during the Phase I ESA completed by CRA, the results of which are presented in a report dated October 2006 (CRA, 2006). CRA also investigated the area of fill located in the north-central portion of the Site as part of this Phase II ESA. CRA submitted the Phase II ESA Work Plan (WP) to ENCORE in October 2007 (CRA, 2007a). The Phase II ESA subsurface activities were performed between October 2007 and April 2008, in accordance with the WP.

A PAOC is an area with a documented release or likely presence of hazardous substances or petroleum products into the soils, groundwater, or surface water of the property that could pose an unacceptable risk to human health or the environment. The term PAOC is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be subject to an enforcement action if brought to the attention of appropriate government agencies.

A PAOR is an area, piece of equipment, or structure that contains hazardous substances or petroleum products under conditions that, if not managed properly, represent a material threat of a release into the soils, groundwater, or surface water of the property. A PAOR is not a PAOC because there is no evidence of a release to the environment, while if there is evidence of a release then the PAOR would be classified as a PAOC that would require decommissioning.

### 1.1 SITE DESCRIPTION AND BACKGROUND

The Site is located at 200 South Boulevard West in Pontiac, Oakland County, Michigan. The Site consists primarily of vacant land that was occupied by four former manufacturing plants, Plants 1, 3, 4, and 5. The Site is currently occupied by Building 30, an office building, former ancillary structures (a substation, a hazardous waste

90-day storage building, and an aboveground storage tank (AST) farm), paved parking areas, Central Vehicle Operations (CVO) areas, and landscaped areas. The Site location is presented on Figure 1.1. An historical Site plan is presented on Figure 1.2. The current Site plan for the north and south portions of the Site are presented on Figures 1.3 and 1.4, respectively.

The existing CVO Parking and Product Vehicle Parking areas (located in the north portion of the Site) are present in the area of the former Plant 1. Plant 1 was purchased from the Rapid Motor Company in 1906 and demolished in 1984. Based on the Phase I ESA (CRA, 2006), historical operations conducted at Plant 1 included metal finishing operations (plating, phosphating, pickling, heat treat, and painting), stamping, machining, grinding, polishing, solvent and oil storage, and several other manufacturing processes. Additionally, several underground storage tanks (USTs) and transformer substations were identified within the former Plant 1 area, along with a tunnel leading from a former adjacent Consumers Power Company facility. Building slabs and foundations reportedly remain beneath the existing paved parking areas.

GM acquired the former Plant 3 (located in the southwest portion of the Site) from the Wilson Foundry Company (Wilson) in 1940. According to historical documentation, Plant 3 was used by Wilson to manufacture motors and castings. Historical GM operations have included paint mixing, paint booths/ovens, a phosphate line, and hazardous waste storage. More recently, Plant 3 was referred to as the "Paint Shop", serving the entire complex. Plant processes included color painting; an 8-stage phosphate process located in the northeast corner; an electrode position paint operations (ELPO) dip tank centrally located along the western portion of the building; and paint storage and mixing operations in the basement along the south wall. A former powerhouse (Building 13), and former buildings 12, 14, and 35 were located to the west of Plant 3.

The former Plant 4 (located in the southeast corner of the Site), reportedly acquired by GM from Wilson in 1937, consisted of Buildings 20, 25, 31, and 37. According to available information, Building 20 contained a spray booth and large in-ground conveyors. More recent operations have included a small test spray booth, plant maintenance, a lubricating oil fill station, an enclosed oil drum storage area, and small parts storage. Building 25 was used for material storage until the early 1970s, at which time it was converted to the G-Van body shop. More recently, Building 25 was utilized for welding operations. Historical operations at Building 31 have included a spray booth, material storage, and assembly for school buses. More recently, Building 31 was

utilized for storage, shipping/receiving, quality assurance/quality control laboratories, and plant maintenance and miscellaneous repairs. Building 37 was previously used for assembly operations and as a body shop and, most recently, for equipment storage and maintenance activities.

GM reportedly acquired the former Plant 5 (located in the south-central portion of the Site) from Wilson in 1965. According to documentation reviewed by CRA, historical operations have included the manufacture of motors and castings, and machining operations. Most recently, GM utilized Plant 5 for the final assembly of small and mid-sized trucks.

Building 30 is located in the northeast corner of the Site and was constructed between 1964 and 1968. Building 30 is a long, rectangular one-story structure with high bay ceilings. While previous uses are unknown, the structure was used most recently for railcar loading/unloading operations and temporary parts/equipment storage, with railcars entering the north end of the building.

A switch yard and primary house belonging to Detroit Edison were previously located directly north of Plant 5, along with an industrial wastewater lift station. The industrial wastewater lift station included six large underground storage vaults. Wastewater was periodically pumped via five underground sewers to a neighboring GM facility (Pontiac Assembly Center (PAC)) for treatment.

Four fuel ASTs are located in a tank farm north of the industrial wastewater lift station. According to Site personnel, the ASTs will be emptied for decommissioning in April 2009. The tanks store gasoline and diesel fuel used to supply the adjacent dispensing pump, which dispenses fuel to company vehicles.

A Waste Management Area (WMA) was historically located adjacent to the north of the tank farm. This structure was used to store hazardous waste (up to 90 days) and non-hazardous waste prior to removal from the Site for disposal and for cleaning of empty drums. The structure was constructed on a sealed concrete containment pad with a self-contained spill collection sump, and is enclosed by a concrete curb with an access ramp.

Based on the Phase I ESA (CRA, 2006), and discussions with individuals associated with the Site, additional historical uses of the northern portion of the Site consisted of residential dwellings, commercial stores, and former Fire Station No. 2. West Wilson

Avenue, previously known as West Foot Avenue, historically bisected the Site, running in an east-west direction. Additional uses of the southern portion of the Site consisted of: various commercial properties including a bank and a hospital, industrial properties including Flander's Electrical Company Incorporated (manufacturers of electric automobiles), Pontiac Drop Forge Company, the Wilson Foundry and Machine Company, and Detroit Weather Proof Body Company.

## 1.2 PREVIOUS INVESTIGATIONS

A number of previous investigations have been completed at the Site. The locations of these areas are presented on Figure 1.5. Previous groundwater investigations at the Site were limited to Area C (gasoline UST south of former Plant 3). The previous investigation areas are broken down into the following:

- Area A (AST farm to the west of Building 30, Plant 1);
- Area B (Waste Oil and Gasoline USTs, near Buildings 13 and 16, Plant 3);
- Area C (Gasoline UST south of Building 16, Plant 3);
- WMA south of Plant 3;
- Area D (Paint Trap USTs south of Building 17, Plant 3);
- 8-Stage Phosphate System in Plant 3;
- Building 5 (west of Plant 5); and
- Grand Trunk Railway (along wastewater lines to PAC Wastewater treatment plant (WWTP)).

These areas are further described in the Phase I ESA (CRA, 2006) and the Phase II ESA WP (CRA, 2007a).

## 1.3 SUMMARY OF THE CRA 2006 PHASE I ESA

Further information on each of these areas is presented in the Phase II ESA WP.

The Phase I ESA completed by CRA in October 2006 (CRA, 2006) identified 22 PAOCs associated with the Site, which include the following:

- PAOC 1 – Historical Operations – Former Plant 1;
- PAOC 2 – Historical Operations – Plants 3, 4, and 5;
- PAOC 3 – Historical Adjacent Properties;
- PAOC 4 – USTs – Former Plant 1;
- PAOC 5 – USTs – Plant 3;
- PAOC 6 – USTs – Plant 4;
- PAOC 7 – USTs – Plant 5;
- PAOC 8 – Former Incinerator;
- PAOC 9 – Tunnels;
- PAOC 10 – Former Powerhouse;
- PAOC 11 – Surficial Scarring;
- PAOC 12 – Bare Soil Area;
- PAOC 13 – WMA south of Plant 3;
- PAOC 14 – AST Farm at Plant 1;
- PAOC 15 – Potential Fill Pipes;
- PAOC 16 – Bulk Loading/Unloading Areas;
- PAOC 17 – Former Foundry Sand;
- PAOC 18 – WMA at Plant 1;
- PAOC 19 – Former Wastewater Treatment;
- PAOC 20 – Former Transformers, Substations, and Large Capacitors;
- PAOC 21 – Wastewater Lift Station and Process Lines; and
- PAOC 22 – Former Paint Mix Rooms.

The Phase I ESA identified the following PAORs:

- PAOR 1 - Belowgrade Pits, Trenches, Conveyors, and Sumps;
- PAOR 2 - ASTs;
- PAOR 3 - Waste Management Areas (WMAs);
- PAOR 4 - Releases to Sewers; and

It should be noted that at the time of the Phase I ESA completed by CRA, Plants 3, 4, and 5 (and their associated buildings and ancillary structures) were still present on the Site.

During the time frame that CRA completed the Phase II ESA field activities, demolition of the on-site structures occurred, with the exception of Building 30, the office building, and the AST farm.

The locations of the PAOCs are presented on Figure 1.6 (north parcel) and Figure 1.7 (south parcel). Based on the nature of the PAORs identified in the 2006 Phase I ESA, the PAORs were not investigated during this Phase II ESA.

#### **1.4        REPORT ORGANIZATION**

The remainder of this Phase II ESA Report is organized as follows:

- Section 2.0    -    Scope of Work (SOW);
- Section 3.0    -    Site Geology and Hydrogeology;
- Section 4.0    -    Phase II ESA Results;
- Section 5.0    -    Summary, and
- Section 6.0    -    References

## 2.0 SCOPE OF WORK

The SOW for the Phase II ESA was to determine if there had been adverse impacts to the environment at each PAOC. PAORs were not investigated during this Phase II ESA due to the lack of evidence of a release and the ambiguity of locations that could be specifically targeted during field activities. The Phase II ESA was conducted in general accordance with ENCORE Field Method Guidelines and according to the SOW presented in the Phase II ESA WP (CRA, 2007a). CRA conducted Phase II ESA subsurface activities at the Site from October 2007 through April 2008. The Phase II ESA activities included the following tasks:

- Task 1: Develop Health and Safety Plan (HASP);
- Task 2: Perform utility clearance;
- Task 3: Soil investigation;
- Task 4: Groundwater investigation;
- Task 5: Survey soil boring and monitoring well locations; and
- Task 6: Conduct groundwater hydraulic monitoring events.

The investigative locations for the north and south portions of the Site are presented on Figures 2.1 and 2.2, respectively. Additional details pertaining to the SOW are provided in the following sections (Sections 2.1 through 2.6).

It should be noted that due to concurrent demolition work during the Phase II ESA, or boring refusal, proposed soil borings BH31-07, BH45-07, BH66-08, and BH93-08 were not installed.

### 2.1 HEALTH AND SAFETY

A Site-specific HASP (CRA, 2007b) was developed for work conducted at the Site and included health and safety documentation relevant to the SOW associated with the Phase II ESA investigation. All personnel involved in the fieldwork reviewed the HASP prior to commencing field activities in order to minimize hazards and exposures. All field activities were performed utilizing appropriate Personal Protective Equipment (PPE) in accordance with the Site-specific HASP.

## 2.2 UTILITY CLEARANCE

As a part of the Phase II ESA, penetration of the ground surface was necessary to collect soil samples and install monitoring wells at predetermined locations. Prior to conducting subsurface work, underground hazards in the form of utility lines were identified and marked by private and public utility locators. CRA retained Power Plus Engineering Inc. to complete locates of underground utilities at the proposed drilling locations.

## 2.3 SOIL INVESTIGATION

The task of soil investigation included the advancement of soil borings, the installation of test pits, Shelby Tube sampling, and the collection of soil samples. Table 2.1 presents all soil borings, test pits, and Shelby Tube sampling locations completed at the Site and their corresponding PAOC or area of investigation. Additionally, Table 2.1 presents all soil samples collected during the Phase II ESA and the analytical parameters for which they were tested.

Drilling activities associated with the Phase II ESA investigation were conducted from October 9 to 18, 2007, December 3 to 7, 2007, and March 5 to 14, 2008. Eighty-two soil borings were advanced and sampled using a Geoprobe direct push technology with a MacroCore® sampler to investigate the PAOCs. The soil borings were advanced until a continuous clay layer/confining layer was reached (a depth of between 10 and 60 feet below ground surface (bgs)). After the continuous clay layer/confining layer was reached, each boring was advanced an additional 5 feet into the confining layer (to verify the lateral and vertical continuity of a confining layer).

Continuous soil samples were collected from each soil boring and examined by CRA field personnel for soil type, stratigraphy, banding, moisture, color, visual and olfactory evidence of impact, and screened for total volatile organic compounds (VOCs) with a photoionization detector (PID) with an 11.7 eV lamp in 2 to 2.5-foot intervals. All soil samples collected were described and classified according to the modified Unified Soil Classification System (USCS). Stratigraphic logs are presented in Appendix A.

Generally one to three soil samples were selected from a boring for chemical analysis. Depending on field conditions, soil samples were collected from the following unsaturated zone intervals for consideration:

- 0 to 2-foot interval below grade;
- 8 to 10-foot interval below grade;
- 2-foot interval above the water table;
- 2-foot interval above the confining layer if groundwater was not encountered; and
- 2-foot interval with the highest evidence of visual/olfactory impact and PID response.

Samples were submitted for laboratory analysis based on the following conditions:

- 1) **If evidence of impact was observed** (visual/olfactory or elevated PID response), the soil sample in the unsaturated zone with the highest evidence of visual/olfactory impact and PID response was selected for laboratory analysis of parameters as indicated in Table 2.1.  
Any sample collected for fractionated lead was placed on hold pending review of total lead analysis. If the total lead was greater than 75 milligrams per kilogram (mg/kg), the soil sample was also analyzed for fractionated lead.
- 2) **In the absence of evidence of impact** (visual/olfactory or elevated PID response), the 0 to 2-foot sample interval was selected for analysis unless there was information available specific to the PAOC to suggest the likely impacts would be deeper (e.g. former UST area). The remaining sample intervals were placed on hold (8 to 10 feet, 2 feet above water table, or 2 feet above confining layer if groundwater is not encountered).

Samples that were collected but not submitted were archived pending review of the results of the submitted samples. Archived samples were selected for analysis as required, based on analytical results of original samples (See Table 2.1). CRA ensured that holding times were not exceeded.

All soil samples were analyzed on a 5-day turnaround time (TAT), following the ENCORE Laboratory Program requirements, so as to not exceed recommended holding times for the additional archived samples. The field quality assurance/quality control (QA/QC) sampling strategy is outlined in the Phase II ESA WP (CRA, 2007a).

It should be noted that the soil sample collected from the 15 to 17 feet bgs interval at monitoring well MW32-07 was collected from below the water table (i.e., the sample was

fully saturated). The sample collected from below the water table was submitted to identify potential contaminants, but was not considered for evaluation given that it consisted of more than one subsurface media.

In addition to the laboratory analysis, preliminary tests for the potential presence of non-aqueous phase liquid (NAPL) were completed at soil borings where field observations indicated evidence of potential impacts using Sudan IV jar tests. The results of Sudan IV jar testing are summarized in Section 4.1.1. Sudan IV jar test results are also presented in Table 2.1.

Four test pits (TP-1 through TP-4) were excavated in the bare soil area (PAOC 12) to depths ranging from 6.5 to 10 feet bgs. This area was suspected to be the location where thermal soil destruction operations occurred in 1995 and is just north of the area where there was historically a large underground tank farm. The soils within the test pits were examined by CRA field personnel for soil type, stratigraphy, banding, moisture, color, visual and olfactory evidence of impact, and screened for total VOCs with a PID. Analysis of soil samples was based on the above strategy with two to four samples being analyzed per test pit. The results of the test pit investigation are summarized in Section 4.5.

In addition to the soil borings previously discussed, ten soil borings (BH51-07 through BH60-07) were advanced to evaluate the soil for use as fill in the basements of demolished buildings associated with Plants 3 and 4. Soil borings were advanced to a depth of 15 feet bgs and soil samples were analyzed for soil type, stratigraphy, banding, moisture, color, visual and olfactory evidence of impact, and screened for total VOCs with a PID with an 11.7 eV lamp in 2 to 2.5-foot intervals. All soil samples collected were described and classified according to the modified USCS. The results of the additional soil borings are summarized in Section 4.0.

Soil samples were placed in coolers with ice to maintain a cooler temperature of approximately 4°C and were sent to Test America Laboratories, Inc. (Test America) under standard chain-of-custody (COC) procedures.

During drilling activities, refusal was encountered at various depths at some soil boring locations throughout the Site. In most instances (with the exception of soil boring BH66-08), offset soil borings were installed adjacent to the original refusal locations and samples were collected from the intended intervals. Refusal locations are indicated on the stratigraphic logs presented in Appendix A. At soil boring BH66-08, refusal was

encountered at 3 feet bgs. Multiple off-set attempts were made; however, refusal was encountered at all off-set locations at 3 feet bgs. As such, no soil sample was collected from BH66-08 and the soil boring was not completed.

Undisturbed Shelby tube soil samples were collected from three locations (adjacent to soil borings BH5-07, BH23-07, and MW35-07) where a native continuous clay layer/confining layer was identified, and the samples were analyzed for moisture content, grain size distribution, and soil permeability (vertical hydraulic conductivity) to determine if the underlying native material is acting as an effective aquitard/aquiclude.

All sampling equipment that contacted potentially impacted materials was decontaminated prior to field use and following collection of each sample. Decontamination of sampling equipment was performed as follows:

- i) removing any debris or soil using a stiff brush, as necessary;
- ii) cleaning thoroughly with water and a non-phosphate (Alconox) detergent; and
- iii) rinsing with potable water and/or de-ionized water.

Soil cuttings and wash water were containerized in 55-gallon drums and taken for off-Site disposal on January 21, 2009.

## 2.4 GROUNDWATER INVESTIGATION

Monitoring wells were installed at locations where a porous saturated media greater than 1 foot was encountered. Where this condition was present at multiple locations in proximity to each other, one monitoring well was installed per three to four soil borings. The monitoring well was typically installed in the boring with the highest evidence of impact or the location closest to the property boundary to assess the likelihood of contaminants migrating off Site. Thirty-five (including 5 temporary) monitoring wells were installed utilizing a Geoprobe® direct push method with a dual-tube rod system. Well screens were typically installed at each monitoring well location as presented in Table 2.2, such that the screen extended approximately 2 feet above the water table and 6 to 12 inches into the confining layer (when present). Well completion details are included on the stratigraphic logs presented in Appendix A.

Five temporary monitoring wells (TMW70-08, TMW71-08, TMW80-08, TMW81-08, and TMW87-08) were installed on March 5, 2008 in the basements of Plants 3 and 4. The

temporary monitoring wells were abandoned prior to backfilling activities completed by the demolition contractor on March 11, 2008. As a result, the temporary wells only received minimal recharge time, and thus, only temporary monitoring wells TMW71-08 and TMW81-08 generated enough groundwater for sample collection.

The monitoring wells were developed and groundwater samples were collected consistent with the Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Division (RRD) Operational Memorandum No. 2 - Attachment 5 (Collection of Samples for Comparison to Generic Criteria). All groundwater samples were collected using low-flow purging techniques. Some monitoring wells did not recharge, and as a result samples were only collected from 24 of the 35 monitoring wells. Monitoring well development and low-flow purging records are presented in Appendix B.

Groundwater samples were analyzed for target compound list (TCL) VOCs, including trimethylbenzenes (TMBs); TCL semi-volatile organic compounds (SVOCs), including pyridine; target analyte list (TAL) metals; speciated chromium (Cr(III)/Cr(VI)); and TCL polychlorinated biphenyls (PCBs). All groundwater samples were analyzed on a standard TAT. The field (QA/QC) sampling strategy is outlined in the Phase II ESA WP (CRA, 2007a).

All groundwater samples were packed in a cooler on ice to maintain a cooler temperature of approximately 4°C and were sent to Test America under standard COC procedures. A summary of all groundwater samples collected is presented in Table 2.3.

All sampling equipment that contacted potentially impacted materials was decontaminated prior to field use and following collection of each sample. Decontamination of sampling equipment was performed as follows:

- i) removing any debris or soil using a stiff brush, as necessary;
- ii) cleaning thoroughly with water and a non-phosphate (Alconox) detergent; and
- iii) rinsing with potable water and/or de-ionized water.

Wash and purge waters were containerized in 55-gallon drums and removed for off-Site disposal on January 21, 2009.

## 2.5 SURVEYING

Investigation location surveys were conducted on December 20, 2007 and January 21, March 10, March 17, and May 8, 2008 to provide accurate locations of installed soil borings and monitoring wells. Surveying was completed in the Michigan State Planes, Southern Zone NAD 83 coordinate system. Multiple surveying events were required due to weather restrictions (e.g. ice and snow) and to accommodate concurrent demolition activities.

It should be noted that soil borings MW46-07 and BH59-07 could not surveyed due to the demolition activities at the Site during the Phase II ESA. The locations of these soil borings on Site figures are approximate.

## 2.6 GROUNDWATER ELEVATION MONITORING

Groundwater elevation monitoring events were conducted on December 20, 2007 and December 15, 2008 to provide a summary of groundwater elevations in each monitoring well located at the Site at that time. An oil-water interface probe was used to check for the presence and thickness of light NAPL (LNAPL). The water elevation measurements are presented in Table 2.4. The results of the monitoring event were used to evaluate Site hydrogeological conditions, as discussed in Section 3.2.2.

### 3.0 SITE GEOLOGY AND HYDROGEOLOGY

#### 3.1 REGIONAL SETTING

This section provides a summary of the regional physiography, geology, and hydrogeology. The regional information for the City of Pontiac area was obtained from numerous published reports. The main sources are a report entitled, "Groundwater Resources of Southeastern Oakland County, Michigan", as prepared by Ferris, J.G., Burt, E.M., Stramel, G.J., and Crosthwaite, E.G., 2003; and "Hydrogeologic Framework of the Michigan Basin Regional Aquifer System", as prepared by Westjohn, D.B., and Weaver, T.L., 1998.

##### 3.1.2 REGIONAL GEOLOGY

The Site is located in the City of Pontiac, Oakland County, in southeast Michigan. Oakland County is within the Central Lowlands portion of the Great Lakes Basin. Regional topography is variable, ranging from upland moraines to low-lying till plains and glacial outwash. The regional land surface slopes from the northwest to the southeast. Maximum topographic relief within Oakland County is approximately 360 feet.

The surficial geology of the Oakland County area consists of sediments deposited primarily during the Wisconsin glacial stage by continental scale glaciers. At least four 'pulses' of ice advance and retreat have covered all or part of Michigan during the Late Wisconsin stage of the Pleistocene epoch (approximately 21,000 to 10,000 years before present). As a result, Oakland County has numerous heterogeneous moraines and till plains of glacial drift that were deposited directly by the meltwater of the glacier.

The overburden for the City of Pontiac is Quaternary aged glacial drift, glaciolacustrine deposits, and glacial outwash deposits of recent and Pleistocene age. Due to the deposits from retreating glaciers, there is a wide assortment of particle sizes in the glacial drift from a lack of sorting; it is common to find clay, silt, fine to coarse sand, gravel, and boulders intermixed. The glaciolacustrine sediments, commonly silts and clays, were suspended in the load of a stream and transported to glacial lakes for deposition. The glacial outwash contains rounded sand and gravel particles as well as some post-glacial alluvium. The glacial outwash is well sorted when compared to the glacial drift, due to transportation and stratification by flowing water. The glacial

deposits thickness for the City of Pontiac area is generally greater than 300 feet (Ferris, Burt, Stramel, and Crosthwaite, 2003).

The glacial drift, glaciolacustrine, and glacial outwash deposits for the City of Pontiac region are underlain by a thick section of clay, sandy clay, and gravelly clay that separates a layer of buried outwash. This clay sequence is less permeable than the surrounding glacial drift and, therefore, acts as a confining layer (Ferris, Burt, Stramel, and Crosthwaite, 2003). The buried outwash ranges from 20 feet to 150 feet thick and overlies the bedrock throughout the region. These Quarternary aged sediments overly the bedrock throughout Pontiac.

The bedrock beneath the City of Pontiac is Paleozoic in age and is found generally at an elevation of approximately 650 feet above mean sea level (AMSL). Most of the bedrock is from the early Mississippian system, and is from the Kinderhookian series. This formation is termed Coldwater Shale. The Coldwater Shale is of marine origin, evident by sporadic fossil assemblages contained throughout. The bedrock is composed of northwest-dipping strata and the direction of the Michigan Basin center. The Coldwater Shale ranges from 0 to 400 feet thick (Ferris, Burt, Stramel, and Crosthwaite, 2003). It contains shales, sandy shales, and shaly sandstones. It is predominantly gray, with some bluish-gray and blue shales. There tends to be a minor amount of dolomite, limestone, siltstone, and sandstone in this Formation. Most of the shales are thin-bedded, range from soft to hard, and are brittle and slate-like. The contacts with the Sunbury Shale below, and the Marshall Sandstone Formation above are conformable and can present difficulties in Formation identification.

In some regions of Pontiac, beneath the Coldwater Shale Formation exist other formations. One formation directly beneath the Coldwater Shale is the early Mississippian aged Sunbury Shale. The Sunbury Shale ranges from 0 to approximately 50 feet thick and is observed as a brown to black shale.

Beneath the Sunbury Shale Formation is the early Mississippian aged Berea Sandstone and Late Devonian aged Bedford Shale. The Berea Sandstone is from 0 to 100 feet thick and is observed to be a gray, massive, fine-grained sandstone with interbedded hard blue gray shale. The Bedford Shale unit ranges from 0 to 100 feet thick and is a soft gray and blue-gray shale.

Below the Berea Sandstone and Bedford Shale is the early Mississippian/late Devonian aged Antrim Shale. The Antrim Shale ranges from 70 to 170 feet thick and is black and brown carbonaceous shale.

### 3.1.3 REGIONAL HYDROGEOLOGY

The hydrogeologic features of Michigan are highly variable. Some areas have abundant supplies of groundwater and surface water of potable quality, while others have difficulty obtaining suitable water supplies. Oakland County has abundant groundwater supplies available (Huffman and Whited, 1993). Oakland County acquires most of its potable groundwater from the overburden glacial deposit aquifers; however, Michigan relies primarily on surface water from the Great Lakes for its water supply (Rheume, 1991).

Although the Coldwater Shale Formation comprises the majority of the bedrock in the City of Pontiac, only some stray sandstones within the Formation yield potable water locally, which limits the use solely to domestic wells. In general, Coldwater Shale is extremely low yielding in terms of water content (Ferris, Burt, Stramel, and Crosthwaite, 2003).

Most of the groundwater is located in the surficial outwash and the buried outwash deposits within the upper 100 feet of the area. The groundwater in the buried outwash is under confined conditions due to the relatively thick layer of clay it underlies. This clay sequence is less permeable than the surrounding glacial drift and therefore acts as a confining layer. The outwash deposits tend to have a high permeability and are very transmissive (Ferris, Burt, Stramel, and Crosthwaite, 2003). The majority of the local recharge for these glacial deposit aquifers is limited to the gravelly outwash plains bordering rivers and streams.

### 3.2 SITE SETTING

This section provides a summary of the Site geology and hydrogeology. The information in this section was obtained from investigative activities completed historically and during this Phase II ESA at the Site.

### 3.2.1 SITE GEOLOGY

The geologic (stratigraphic) framework for the Site was defined from a review of stratigraphic and instrumentation logs from investigative activities. The stratigraphic logs from this Phase II ESA are provided in Appendix A.

Drilling activities associated with the Phase II ESA investigation were conducted from October 9 to 18, 2007, December 3 to 7, 2007, and March 5 to 14, 2008. During this Phase II ESA, approximately 92 soil borings (including 10 fill investigation locations) were drilled at the Site. The deepest soil boring extends approximately 60 feet bgs (MW28-07).

Three geologic cross-sections were prepared utilizing the subsurface data obtained from Site investigations. The locations of the geologic cross-sections are shown on Figure 3.1. Geologic cross-sections A-A' (west-east along the southern portion of the Site), B-B' (west-east along the northern portion of the Site), and C-C' (north-south across entire Site) are presented on Figures 3.2, 3.3, and 3.4, respectively. Based on the distribution of the stratigraphic data shown on the geologic cross-sections, the main layers that underlie the Site to the maximum depth of investigation of 60 feet bgs are: a thin and discontinuous surficial sand and gravel fill layer, an underlying regionally significant layer of clay/silt glacial deposits, and bedrock.

The sand and gravel fill layer is geologically insignificant and consists of fine- to medium-grained sand and medium- to coarse-grained sand and gravel deposits, with trace amounts of mixed clays, sandy clays, and silts. The fill layer tends to exist with varying amounts of concrete, asphalt, wood, and brick debris. The thickness of this fill layer varies, but is generally less than 0.5 feet in thickness. The fill material is poorly to moderately graded, quite loose in terms of compaction, and ranges in color from brown to black. This layer is dry to moist and is not water-bearing.

Glacial clay and silt deposits were encountered below the surficial fill horizon, extending to the depth of investigation (approximately 60 feet bgs). These deposits varied from clay, silty clay, sandy clay, or sand and clay. The clay/silt glacial deposits are stratigraphically equivalent to the glacial drift deposits discussed in Section 3.1.2. Stratigraphically isolated and discontinuous sand layers were encountered within this clay/silt glacial deposit.

The sand layers occur at various depths and range in thickness from 0.25 feet to a maximum thickness of 20 feet at BH49-07 (shown on the easternmost portion of geologic cross-section A-A'). The average thickness of the sand layer is less than 5 feet. The sand layers cannot be correlated laterally with a high degree of certainty on the geologic cross-sections and, as discussed in Section 3.1.2, are likely the result of heterogeneous meltwater deposits of retreating glaciers.

The clay/silt glacial deposits contain, as described previously, primarily fine-grained material (clay and silt) with traces of fine sand and, locally, some gravel. Grain size analysis (see Section 4.2) confirmed the field descriptions and indicated that the combined clay and silt content of the clay/silt glacial deposits ranges from 55 to 100 percent. The fine sand content ranges from 0 to 42 percent and the gravel content ranges from 0 to 3 percent. This horizon exhibits a plasticity ranging from very low (in the case of the sandy clays) to very high (in the case of the fat clays). It shows a great variety from soft to very stiff, and can be found in an assortment of colors such as gray, brown, dark brown, dark gray, olive green, and brown/gray mottled. The clay layers tend to be moist to very moist in terms of water content.

The deep stratigraphy sequence at the Site was not investigated since the maximum depth of investigation was approximately 60 feet bgs. However, regional stratigraphic data indicated that the clay/silt glacial deposits and other fine-grained materials of glacial origin extend to the bedrock at depths of approximately 650 feet AMSL. According to regional information of Oakland County, a layer of buried outwash exists between the clay/silt glacial deposits and the bedrock (Ferris, Burt, Stramel, and Crosthwaite, 2003). Bedrock beneath the Site consists of Early Mississippian Coldwater Shale Formation, a gray to blue-gray shale.

### **3.2.2 SITE HYDROGEOLOGY**

The majority of the overburden beneath the Site is underlain by fine-grained material of the clay/silt glacial deposits and subordinate layers of sand. The hydrogeologic behavior of the overburden would therefore be controlled by the hydraulic (i.e., permeability or hydraulic conductivity) properties of the clay and silt material.

Vertical hydraulic conductivity values of the fine-grained material calculated by the Flexible Wall Permeameter (Constant Head Method ASTM D-5084) range from  $1.4 \times 10^{-7}$  to  $1.5 \times 10^{-8}$  centimeter per second (cm/sec), and are typical for this type of glacial

environment. Horizontal hydraulic conductivity values for the fine-grained material would be approximately one order of magnitude less (Freeze and Cherry, 1979) or on the order of  $1 \times 10^{-6}$  to  $1 \times 10^{-7}$  cm/sec. The clay materials provide a very good aquitard to the downward migration of groundwater. Although not measured, the hydraulic conductivity of the sand layers would be  $1 \times 10^{-3}$  cm/sec based on the textural nature of these layers (Freeze and Cherry, 1979).

It should be noted that the majority of the groundwater monitoring wells are screened primarily in the coarser-grained (sand layers) deposits or straddling the interface between the fine-grained and coarse-grained deposits at shallow depths (less than 15 feet bgs), equivalent to an approximate elevation of 935 feet AMSL or higher. This represents the shallower groundwater environment or the depths where groundwater was first encountered during drilling. Other wells were installed at deeper levels within the clay/silt glacial deposits primarily to screen the sand layers found at greater depths.

Groundwater contours were generated using the groundwater elevations measured on December 15, 2008, in the shallow monitoring wells and are presented on Figure 3.5. The groundwater flow patterns shown on Figure 3.5 therefore represent the shallow groundwater flow environment for both the predominantly fine-grained material and sand layers within the clay/silt glacial deposits fine-grained matrix. Only the groundwater elevations representative of the monitoring wells with screens at elevations higher than 935 feet AMSL were used to generate the groundwater contours.

Groundwater elevations in the shallow clay/silt glacial deposits range from about 955 feet AMSL at the extreme southeast part of the Site to about 935 feet AMSL at the extreme northern portion of the Site. These elevations correspond to water table depths on the order of 1.5 to 15.5 feet bgs.

As shown on Figure 3.5, groundwater in the shallow portions of the clay/silt glacial deposits flows generally to the north-northwest and follows the ground surface topography. The average horizontal hydraulic gradient is between 0.01 and 0.02.

A groundwater high is identified on Figure 3.5 at the center of the Site and is defined by the 945 feet AMSL groundwater contour. This groundwater high corresponds to a topographically high portion of the Site.

Assuming a conservative horizontal hydraulic gradient of 0.02, a conservative horizontal hydraulic conductivity of  $1 \times 10^{-6}$  cm/sec (0.0028 feet/day) for the fine-grained material,

and a porosity of 30 percent (0.3), the resulting horizontal groundwater flow velocity would be 0.0002 feet/day or 0.07 feet/year within the clay and silt of the clay/silt glacial deposits. Assuming a hydraulic conductivity of  $1 \times 10^{-3}$  cm/sec (2.8 feet/day) and the same horizontal hydraulic gradient and porosity values as for the fine-grained material would result in a groundwater flow velocity of 0.2 feet/day or 73 feet/year.

The groundwater flux within the upper 15 feet of the clay/silt glacial deposits, based on the hydraulic properties of the fine-grained material and sand layers discussed above, would be about 0.0002 to 0.2 gallons per minute (gpm), per linear foot perpendicular to groundwater flow for the fine-grained and sand layers, respectively.

### 3.3 GEOLOGIC AND HYDROGEOLOGIC SUMMARY

The regional and Site geologic and hydrogeologic framework is summarized as follows:

- the regional overburden is primarily dominated by Quaternary-aged glacial drift, glaciolacustrine deposits, and glacial outwash deposits of recent and Pleistocene age;
- the regional glacial deposits are underlain by a thick section of clay, sandy clay, and gravelly clay that separates a layer of buried outwash (e.g. sand);
- the regional bedrock is from the Coldwater Shale Formation which is up to 400 feet thick, contains shales, sandy shales, and shaly sandstones, and is predominantly gray with some bluish-gray and blue shales;
- bedrock is locally found at an elevation of approximately 650 feet AMSL, or about 310 feet bgs;
- the Site geologic setting is primarily dominated by a sand and gravel fill layer, underlain by native clay/silt glacial deposits, underlain by bedrock;
- the water table is found at depths from 1.5 to 15.5 feet bgs within the fine-grained material and the sand layers of the clay/silt glacial deposits;
- groundwater flow in the shallow system is mainly to the north-northwest at an average horizontal hydraulic gradient of 0.01 to 0.02;
- horizontal groundwater flow velocity would be 0.0002 feet/day or 0.07 feet/year within the clay and silt of the clay/silt glacial deposits. The horizontal groundwater flow velocity would be 0.2 feet/day or 73 feet/year in the fine-grained silty material;

- the clay till has a vertical hydraulic conductivity of approximately  $1.0 \times 10^{-7}$  cm/s prohibiting the downward migration of groundwater (e.g. the clay acts as an aquitard); and
- groundwater flux within the upper 15 feet of the clay/silt glacial deposits would be about 0.0002 to 0.2 gpm, per linear foot perpendicular to groundwater flow for the fine-grained and sand layers, respectively.

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#### 4.0 PHASE II ESA RESULTS

Soil and groundwater samples were collected from the Site as discussed throughout Section 2.0. Investigative soil and groundwater samples were analyzed for constituents as indicated in Tables 2.1 and 2.3, respectively. The sampling locations for the north and south portions of the Site are shown on Figures 2.1 and 2.2, respectively. Laboratory Analytical Data Reports are presented in Appendix C.

#### 4.1 FIELD TESTS AND OBSERVATIONS

##### 4.1.1 SUDAN IV JAR TESTS

Sudan IV jar tests were used to identify the potential presence of NAPL during field activities. The purpose of a Sudan IV jar test is to assess in the field which borings may be located in an area containing potential NAPL by identifying NAPL entrained in the soil pore space. Sudan IV jar tests were used on soil borings exhibiting the potential presence of NAPL. The potential presence of NAPL (i.e., a positive jar test result) was identified in soil borings MW32-07, MW33-07, MW69-07, BH72-08, and BH79-08. The results of the jar tests are indicated on Table 2.1.

##### 4.1.2 FIELD OBSERVATIONS

Based on field observations, the following notes were made:

###### PAOC 1 – Historical Operations – Plant 1

- Soil retrieved from soil boring MW20-07 was observed to be black throughout the 0.5 to 4.25 feet bgs interval. However, PID readings for the interval ranged from 0.1 to 0.3 ppm.

###### PAOC 2 – Historical Operations – Plants 3, 4, and 5

- A petroleum odor and black staining was encountered at soil boring MW32-07 at 15 feet bgs. The PID reading at 15 feet bgs was recorded as 39.3 ppm. Staining was no longer observed at 15.5 feet bgs. No odor was encountered at 19 feet bgs. There was a positive Sudan IV jar test result on the 15 to 17 feet bgs interval. A soil sample was collected from the 15 to 17 feet bgs interval and submitted for laboratory analysis based on the positive jar test result.

- Soil retrieved from soil boring BH48-07 was observed to be black throughout the 4.9 to 13.5 feet bgs interval. PID readings for the interval ranged from 0.2 to 0.8 ppm.
- A petroleum odor was encountered at soil boring MW69-08 at the 14 to 19 feet bgs interval and PID readings from 26 to 163 ppm were recorded. No odor was encountered at 21 feet bgs. There was a positive Sudan IV jar test result on the 18 to 20 feet bgs interval. A soil sample was collected from the 18 to 20 feet bgs interval and submitted for laboratory analysis based on the positive jar test result.

#### PAOC 3 – Historical Adjacent Properties

- A slight petroleum-like odor was encountered at soil boring MW17-07 at the 2.9 to 5.0 feet bgs interval. The PID reading for the interval was 0 ppm. There was a negative Sudan IV jar test result on the 3 to 5 feet bgs interval.

#### PAOC 4 – USTs – Former Plant 1

- Black staining was observed in soil boring BH92-08 at 9.3 feet bgs. The PID reading at 9.3 feet bgs was recorded at 7.3 ppm. A petroleum odor was encountered at the 10 to 11.5 feet bgs interval. The PID reading for the 10 to 11.5 feet bgs interval was recorded at 4.3 ppm. There was a negative Sudan IV jar test result on the 7.5 to 9.5 feet bgs interval.

#### PAOC 5 – USTs – Plant 3

- A petroleum odor was encountered at soil boring MW33-07 at the 14.5 to 20.0 feet bgs interval. PID readings for the 15 to 20 feet bgs interval were recorded between 8.7 and 788 ppm. There was positive Sudan IV jar test result on the 16 to 18 feet bgs interval. A soil sample was collected from the 16 to 18 feet bgs interval and submitted for laboratory analysis based on the positive jar test result.
- Soil retrieved from soil boring BH89-08 was observed to be black throughout the 1.5 to 1.75 feet bgs interval. PID readings for the interval ranged from 3.2 to 3.4 ppm.

#### PAOC 6 – USTs – Plant 4

- Soil retrieved from temporary monitoring well TMW80-08 was observed to be black at a depth of 5.5 to 6.0 feet bgs. The PID reading for the 5.5 to 6.0 feet bgs interval was recorded at 0.6 ppm.

PAOC 10 – Former Powerhouse

- Black staining was observed in soil boring BH91-08 at the 3.5 to 8.0 feet bgs interval. A petroleum odor was encountered at 7 feet bgs. The PID reading at 7 feet bgs was recorded at 5.6 ppm. There was a negative Sudan IV jar test result on the 6 to 8 feet bgs interval.

PAOC 13/PAOC 19 - WMA south of Plant 3/Former Wastewater Treatment

- Black staining was observed in soil from temporary monitoring well TMW71-08 at the 4.6 to 6.0 feet bgs interval. A petroleum odor was encountered at 7 feet bgs. The PID reading for the 4.66 to 6.0 feet bgs interval was recorded at 0 ppm.

PAOC 21 – Wastewater Lift Station and Process Lines

- Soil retrieved from soil boring BH28-07 was observed to be black throughout the 0.5 to 12.0 feet bgs interval. PID readings for the interval ranged from 0 to 0.2 ppm.

PAOC 22 – Former Paint Mix Rooms

- A petroleum-like odor was encountered at soil boring BH72-08 at the 8.5 to 15.0 feet bgs interval. The maximum PID reading for the interval was 61.8 ppm at the 12 to 14 feet bgs interval. There was a positive jar test result on the 12 to 14 feet bgs interval. A soil sample was collected from the 12 to 14 feet bgs interval and submitted for laboratory analysis based on the positive jar test result.

Potential Fill Investigation

- A slight petroleum-like odor was encountered at soil boring BH57-07 at the 0.5 to 5.0 feet bgs interval. The PID reading for the interval was 0 ppm.

## 4.2 SHELBY TUBE SAMPLE RESULTS

Three soil samples were collected for geotechnical analysis using a Shelby tube sampler on December 10, 2007. The samples were collected from the following locations: adjacent to BH5-07, 15 to 20 feet bgs (ST-1); adjacent to BH23-07, 14 to 20 feet bgs (ST-2); and adjacent to MW35-07, 10.5 to 20 feet bgs (ST-3). The intervals were selected to provide representative samples of the overburden Site soils. Each of the three collected Shelby tube samples underwent hydraulic triaxial testing, to determine the hydraulic conductivity of the soils, and a grain size analysis.

According to the results of the hydraulic triaxial testing and grain size analyses, the soil samples were classified as follows:

| <i>Sample ID</i> | <i>Location</i>     | <i>Depth (feet bgs)</i> | <i>Soil Description</i>                | <i>Hydraulic Conductivity (cm/sec)</i> |
|------------------|---------------------|-------------------------|----------------------------------------|----------------------------------------|
| ST-1             | Adjacent to BH5-07  | 15 to 20                | Sand and silt, with clay, trace gravel | $1.9 \times 10^{-8}$                   |
| ST-2             | Adjacent to BH23-07 | 14 to 20                | Silt with clay                         | $1.39 \times 10^{-7}$                  |
| ST-3             | Adjacent to MW35-07 | 10.5 to 20              | Clayey silt, with sand, trace gravel   | $1.49 \times 10^{-8}$                  |

Grain size distribution charts and hydraulic conductivity calculations are presented in Appendix D.

#### 4.3 PHASE II ESA ANALYTICAL DATA EVALUATION/CRITERIA

##### 4.3.1 DATA VALIDATION AND EVALUATION

Qualifiers were applied to the data by the CRA project chemist in accordance with relevant criteria outlined in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA 540/R-99/008, October 1999 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA 540/R-94/013, February 1994. Data validation was performed on 100 percent of the data. The Data Quality Assessment and Validation Memoranda for the soil and groundwater analyses are presented in Appendix E.

##### 4.3.2 RELEVANT SCREENING CRITERIA

A data screening and risk evaluation was completed by ENVIRON for GM based on the existing subsurface data collected at the Site since 1989. The purpose of the data screening and risk evaluation was to identify potentially significant current and future exposures. A copy of the data evaluation report prepared by ENVIRON is presented in Appendix F.

Analytical results were screened against MDEQ Generic Screening Levels as defined in Part 201 of the "Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451" (MDEQ Part 201 Criteria). Soil screening criteria selected by ENVIRON included the Residential and Industrial scenarios of the following:

- Direct Contact Criteria (DCC);
- Soil Volatilization to Indoor Air Inhalation Criteria;
- Infinite Source Volatile Soil Inhalation Criteria (outdoor air) (VSIC); and
- Particulate Soil Inhalation Criteria (PSIC).

Groundwater screening criteria selected by ENVIRON included the Residential and Industrial scenarios of the following:

- Drinking Water Criteria (DWC);
- Groundwater Volatilization to Indoor Air Inhalation Criteria; and
- Groundwater Contact Criteria (GCC).

It should be noted that the data screening completed by ENVIRON did not include screening against the following MDEQ Part 201 criteria/levels for soil and groundwater:

- Drinking Water Protection Criteria;
- Groundwater Surface Water Interface Protection Criteria;
- Groundwater Contact Protection Criteria;
- Soil Saturation Concentration Screening Level;
- Groundwater Surface Water Interface Criteria;
- Water Solubility;
- Flammability and Explosivity Screening Level; and
- Acute Inhalation Screening Level.

The methodology and results of ENVIRON's data screening for all historical and current data collected from the Site are presented as part of a data evaluation report (see Appendix F).

#### **4.4        PHASE II ESA ANALYTICAL RESULTS - PAOCS**

As discussed in Section 4.3.2, ENVIRON completed a data screening of all available data for the Site. The results of the data screening specific to this Phase II ESA are presented in the following sections. A summary of parameters present at concentrations that exceeded the selected MDEQ Part 201 Criteria as identified by ENVIRON is presented on Figures 4.1 and 4.2 for soil on the north and south portions of the Site, respectively, and on Figures 4.3 and 4.4 for groundwater on the north and south portions of the Site, respectively. Summary tables of exceedances pertaining to this Phase II ESA were generated by ENVIRON and are included in Appendix F. A Site-wide summary of detected parameters in soil is presented in Table 4.1, and a Site-wide summary of detected parameters in groundwater is presented in Table 4.2.

The results of the Phase II ESA are summarized in the following sections by PAOC. It should be noted that all soil borings advanced at the Site contributed to the investigation of historical Site operations (PAOC 1 and PAOC 2). Additionally, all soil borings advanced along the perimeter of the Site contributed to the investigation of historical adjacent properties (PAOC 3). The results of soil borings advanced solely to investigate PAOCs 1 through 3 are discussed in Section 4.4.1.

At soil boring BH66-08, refusal was encountered at 3 feet bgs. Multiple off-set attempts were made; however, refusal was encountered at all off-set locations at 3 feet bgs. As such, no soil sample was collected from BH66-08.

##### **4.4.1        PAOCS 1, 2, AND 3 - HISTORICAL SITE OPERATIONS AND ADJACENT PROPERTIES**

Based on the Phase I ESA (CRA, 2006), former Plant 1 was initially developed in 1906 by the Rapid Motor Car Company, with subsequent additions to the facility over the years. The Rapid Motor Car Company, and later GM, utilized former Plant 1 for the manufacture and assembly of vehicles. Former Plants 3, 4, and 5 were developed as early as 1915 as Flander's Electrical Company Inc. (manufacturers of electric automobiles); Pontiac Drop Forge Company; the Wilson Foundry and Machine Company; and/or Detroit Weather Proof Body Company, with subsequent additions/changes to the facilities over the years. Primary operations conducted at former Plants 1, 3, 4, and 5 included metal finishing operations (phosphating, pickling, plating, heat treating, and painting), degreasing, drop forging, casting, incinerating,

stamping, grinding, machining, and polishing. Ancillary operations included hazardous and non-hazardous waste accumulation, handling, and storage, as well as the use and storage of raw petroleum products and solvents in both above and below-ground storage tanks and drums. No information regarding historical use of heating oil underground storage tanks (USTs) or aboveground storage tanks (ASTs), septic systems, or property demolition procedures was available.

Adjacent properties to the Site were historically operated as petroleum filling stations, a plating company, an electric light plant/power plant, and various manufacturing facilities as early as 1909. These types of operations typically utilize petroleum products and solvents. Additionally, a tunnel was identified on a 1954 Factory Insurance Map between the former Consumers Power Company facility (electric light plant) and former Plant 1. No further information regarding the tunnel was available. Potential impacts to the Site from these operations could not be determined.

#### *Soil Analytical Results*

1,1-Dichloroethene (1,1-DCE) was detected at concentrations exceeding the Residential Soil Volatilization to Indoor Air Inhalation Criteria (SVIIC) at the 0 to 2 and 8 to 10 feet bgs intervals at MW74-08. Trichloroethene (TCE) was also detected at a concentration exceeding the Residential SVIIC at the 8 to 10 feet bgs interval at MW74-08. No other constituents were detected at PAOC 1 through 3 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### *Groundwater Analytical Results*

Aluminum was detected at concentrations exceeding the Residential DWC at monitoring wells MW10-07, MW11-07, MW19-07, MW32-07, MW68-08, and MW74-08. Manganese was detected at a concentration exceeding the Residential DWC at monitoring well MW2-07. Iron was detected at a concentration exceeding the Residential and Industrial DWC at monitoring well MW48-07. Lead was detected at concentrations exceeding the Residential and Industrial DWC at monitoring wells MW10-07 and MW63-08. Vanadium was detected at a concentration exceeding the Residential DWC at monitoring well MW10-07.

Total PCBs were detected at a concentration exceeding the Residential and Industrial DWC at monitoring well MW2-07. TCE was detected at concentrations exceeding the Residential and Industrial DWC at monitoring wells MW2-07 and MW74-08.

1,1-DCE, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1,1-trichloroethane (1,1,1-TCA), benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and chrysene were detected at concentrations exceeding the Residential DWC at monitoring well MW74-08. Additionally, 1,1-DCE, cis-1,2-DCE, 1,1,1-TCA, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and chrysene exceeded the Industrial DWC at monitoring well MW74-08. Benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and chrysene concentrations exceeded the GCC at monitoring well MW74-08.

No other constituents were detected at the PAOC 1 through 3 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.4.2 PAOC 4: UNDERGROUND STORAGE TANKS - FORMER PLANT 1**

Based on the Phase I ESA (CRA, 2006), at least 11 historic USTs were present in the vicinity of former Plant 1. No information regarding closure (i.e., removed, abandoned-in-place, etc.) of the USTs at former Plant 1 was available.

Soil borings BH3-07, BH9-07, MW16-07, BH25-07, and BH92-08 were advanced throughout the former Plant 1 to investigate potential impacts associated with historic USTs. A monitoring well was installed at MW16-07 based on the presence of groundwater during soil boring advancement; however, insufficient groundwater was present in the well at the time of sampling.

#### ***Soil Analytical Results***

Arsenic was detected at a concentration exceeding the Residential DCC criteria at BH92-08. No other constituents were detected at the PAOC 4 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.4.3      PAOC 5: UNDERGROUND STORAGE TANKS - PLANT 3**

Based on the Phase I ESA (CRA, 2006), at least 13 historic USTs were present in the vicinity of former Plant 3. No information regarding closure of three of the USTs at former Plant 3 (i.e., removed, abandoned-in-place, etc.) was available. The remaining 10 USTs were removed and at least 5 are listed as closed on the MDEQ database.

Soil borings MW33-07, MW34-07, BH36-07, MW37-07, MW40-07, MW43-07, BH89-08, BH90-08, and BH94-08 through BH96-08 were advanced throughout the former Plant 3 to investigate potential impacts associated with historic USTs. Soil samples were not collected from soil borings BH94-08 and BH95-08 based on negative jar test results and low PID readings, and given that additional subsurface data in the vicinity had already been collected (e.g., MW-43). Monitoring wells were installed at MW33-07, MW34-07, MW37-07, MW40-07, and MW43-07 based on the presence of groundwater during soil boring advancement; however, insufficient groundwater was present in the well at the time of sampling.

##### ***Soil Analytical Results***

Benzo(a)pyrene was detected at a concentration exceeding the Residential DCC criteria at BH36-07. No other constituents were detected at the PAOC 5 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

##### ***Groundwater Analytical Results***

Aluminum was detected at concentrations exceeding the Residential DWC criteria at MW33-07 and MW34-07. Vanadium was also detected at MW33-07 at a concentration exceeding the Residential DWC at MW33-07. No other constituents were detected at the PAOC 5 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.4.4      PAOC 6: UNDERGROUND STORAGE TANKS - PLANT 4**

Based on the Phase I ESA (CRA, 2006), at least 15 USTs were located in the vicinity of former Plant 4. No information regarding closure (i.e., removed, abandoned-in-place, etc.) of the USTs at former Plant 4 was available.

Soil borings MW46-07, BH47-07, BH75-08, TMW80-08, and BH84-08 through BH86-08 were advanced throughout the former Plant 4 to investigate potential impacts associated with historic USTs. A monitoring well was installed at MW46-07 and a temporary monitoring well was installed at TMW80-08 based on the presence of groundwater during soil boring advancement; however, insufficient groundwater was present in the well at the time of sampling.

#### *Soil Analytical Results*

Arsenic was detected at a concentration exceeding the Residential DCC criteria at BH47-07. No other constituents were detected at the PAOC 6 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.4.5 PAOC 7: UNDERGROUND STORAGE TANKS - PLANT 5**

Based on the Phase I ESA (CRA, 2006), at least one UST was located in the vicinity of former Plant 5. No information regarding closure (i.e., removed, abandoned-in-place, etc.) of the UST at former Plant 5 was available.

Soil boring BH22-07 was advanced to the north of the former Plant 5 to investigate potential impacts associated with historic USTs.

#### *Soil Analytical Results*

No constituents were detected at the PAOC 7 investigative location at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.6 PAOC 8: FORMER INCINERATOR**

Based on the Phase I ESA (CRA, 2006), a concrete refuse burner (i.e., incinerator) was present on the southwestern portion of the Site, to the west of the former Wilson Plant 4. No information was available regarding the types of materials incinerated or the historical disposal practices associated with the fly ash generated from incineration.

Soil boring BH88-08 was advanced to investigate potential impacts associated with the former incinerator.

#### *Soil Analytical Results*

No constituents were detected at the PAOC 8 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.7      PAOC 9: TUNNELS**

Based on Phase I ESA (CRA, 2006), a brick tunnel exists between former Plants 3 and 4, and former Plants 3 and 5. This tunnel was reportedly historically used for utility lines; however, at the time of the 2006 Phase I ESA it was abandoned and not available for inspection.

Soil borings BH76-08 and BH77-08 were advanced at the Site to investigate potential impacts associated with tunnels.

#### *Soil Analytical Results*

No constituents were detected at the PAOC 9 investigative location at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.8      PAOC 10: FORMER POWERHOUSE**

Based on the Phase I ESA (CRA, 2006), a powerhouse was located in former Building 13 (Plant 3). Coal was historically stored outside east of the Powerhouse. No information was available regarding if the coal was stored on bare ground or a paved surface.

Soil borings MW35-07 and BH91-08 were advanced at the Site to investigate potential impacts associated with the former powerhouse. A monitoring well was installed at MW35-07.

### *Soil Analytical Results*

No constituents were detected at the PAOC 10 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

### *Groundwater Analytical Results*

Aluminum, arsenic, vanadium, and bis(2-Ethylhexyl-phthalate) were detected at concentrations that exceed the residential DWC at MW35-07. Arsenic and bis(2-ethylhexyl)phthalate also exceeded the industrial DWC. No other constituents were detected at the PAOC 10 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.4.9 PAOC 11: SURFICIAL SCARRING**

Based on the Phase I ESA (CRA, 2006) an area of surficial scarring is present on aerial photographs to the south of former Buildings 12 and 27 (Plant 1). These buildings historically conducted heat-treat and pickling operations. No further information regarding the surficial scarring was available.

Soil borings BH14-07 and MW15-07 were advanced at the Site to investigate potential impacts associated with the area of surficial scarring. A monitoring well was installed at MW15-07.

### *Soil Analytical Results*

No constituents were detected at the PAOC 11 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

### *Groundwater Analytical Results*

No constituents were detected at the PAOC 11 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

**4.4.10 PAOC 12: BARE SOIL AREA**

Based on the Phase I ESA (CRA, 2006), vegetation in the area north/northwest of Building 30 is sparse. Site personnel indicated that this area was historically part of a thermal soil remediation effort by Carlo Environmental Technologies, Inc. No additional information regarding the remediation was available to CRA. It is also just north of the general location of historical USTs.

Soil boring MW13-07 was advanced to investigate potential impacts associated with the bare soil area. A monitoring well was installed at MW13-07. Additionally, four test pits were excavated to investigate PAOC 12 (see Section 4.5).

***Soil Analytical Results***

Lead was detected at a concentration that exceeds the residential DCC at MW13-07. No other constituents were detected at the PAOC 12 investigative location at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

***Groundwater Analytical Results***

No constituents were detected at the PAOC 12 investigative location at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

**4.4.11 PAOC 13: WMA SOUTH OF PLANT 3/ PAOC 19: FORMER  
WASTEWATER TREATMENT**

Based on the Phase I ESA (CRA, 2006), a Tank Waste Management Area [Solid Waste Management Unit (SWMU) No. 1] and Container Waste Management Area (SWMU No. 2) historically located south of Plant 3 were identified as areas of concern during the Preliminary Review/Visual Site Inspection (PR/VSI) and Preliminary Assessment (PA) performed for the United States Environmental Protection Agency (U.S. EPA). Supplemental investigation and closure of the area was completed. MDEQ released GM from further closure requirements, but not from future Resource Conservation and Recovery Act (RCRA) Corrective Action requirements.

Additionally, prior to 1978, wastewater was managed in a tank area south of Plant 3. This area was included in the Resource Conservation and Recovery Act (RCRA) Part A

Waste Permit Application. It is unknown if this area was properly closed or if there were other areas used for wastewater treatment or disposal prior to 1978.

Soil borings BH39-07 and TMW71-08 were advanced to investigate potential impacts associated with the WMA and former wastewater treatment. A temporary monitoring well was installed at TMW71-08.

### ***Soil Analytical Results***

No constituents were detected at the PAOC 13 and PAOC 19 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

### ***Groundwater Analytical Results***

No constituents were detected at the PAOC 13 and PAOC 19 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.12 PAOC 14: AST FARM AT PLANT 1**

Based on the Phase I ESA (CRA, 2006), an AST farm was historically present at Plant 1, and was removed in 1995. The eastern portion of the bermed area had a soil base. The tanks that were removed contained engine oil, glycol, steering fluid, waste oil, glycol, oil, and waste glycol. Confirmatory soil samples were collected and analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), polynuclear aromatic hydrocarbons (PNAs), PCBs, lead, cadmium, and arsenic. Based on the materials stored in the tanks, it is unknown if at the time of the 2006 Phase I ESA there were other VOCs remaining in the soil at concentrations of concern.

Soil borings BH12-07 and MW15-07 were advanced to investigate potential impacts associated with historic AST farm at Plant 1. A monitoring well was installed at MW15-07.

### *Soil Analytical Results*

No constituents were detected at the PAOC 14 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

### *Groundwater Analytical Results*

No constituents were detected at the PAOC 14 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.13      PAOC 15: POTENTIAL FILL PIPES**

Based on the Phase I ESA (CRA, 2006), potential fill pipes are located in Plant 5, near Column G8. No further information regarding these pipes was available.

Soil boring BH26-07 was advanced to investigate potential impacts associated with potential fill pipes.

### *Soil Analytical Results*

No constituents were detected at the PAOC 15 investigative location at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.14      PAOC 16: BULK LOADING/UNLOADING AREAS**

Based on the Phase I ESA (CRA, 2006), the Site currently and formerly utilized several areas for bulk unloading and loading of petroleum, solvents, and acid products and waste. These areas include exterior load/unload fill ports and associated concrete pads, as well as former trainwells. Some of these areas have been replaced in the recent past; however, others have been in place since the facility was developed.

Bulk loading and unloading areas were not specifically investigated during this Phase II ESA as the exact location of all historical loading activities was unknown and could not be easily targeted. Similar to PAOCs 1 through 3, the results from the overall Phase II ESA investigation contribute to the evaluation of bulk loading and unloading areas.

#### **4.4.15      PAOC 17: FORMER FOUNDRY SAND**

Based on the Phase I ESA (CRA, 2006), outdoor storage of foundry sand was historically conducted to the east of the Plant 5. No information was available regarding if the foundry sand was stored on bare ground or a paved surface. No specific information regarding historical dust control practices was available; and current Site personnel had no knowledge of dust control activities. No information was available regarding the historical use of these materials for fill at the Site and information regarding surface sampling underneath piles was unavailable for review.

Soil boring MW27-07 was advanced to investigate potential impacts associated with the former foundry sand. A monitoring well was installed at MW27-07 based on the presence of groundwater during soil boring advancement; however, insufficient groundwater was present in the well at the time of sampling.

##### ***Soil Analytical Results***

No constituents were detected at the PAOC 17 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.16      PAOC 18: WMA AT PLANT 1**

Based on the Phase I ESA (CRA, 2006), a hazardous waste container storage area was historically identified east of Building 12 at Plant 1 in a 1981 Closure Plan. No follow-up information on the closure was available for CRA review.

Soil boring BH8-07 was advanced to investigate potential impacts associated with the WMA at Plant 1.

##### ***Soil Analytical Results***

No constituents were detected at the PAOC 18 investigative location at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### **4.4.17 PAOC 20: FORMER TRANSFORMERS, SUBSTATIONS, AND LARGE CAPACITORS**

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Based on the Phase I ESA (CRA, 2006), numerous transformers and/or substations were historically located throughout the Site and were operated since at least 1909 in some instances. No information was available regarding the historical types of dielectric fluids utilized in the majority of the former transformers at the Site. Historical documentation for the Site indicates that transformers and large capacitors containing Askarel may have been present at the Site. There was evidence of PCBs present in a roof top transformer on Plant 4 in 1978

Former transformers, substations, and large capacitors were not specifically investigated during this Phase II ESA as the exact location of these items could not easily be targeted. Similar to PAOCs 1 through 3, the results from the overall Phase II ESA investigation contribute to the evaluation of historical transformers and/or substations. PCBs were analyzed in all soil samples collected from the Site as part of the investigation of PAOC 20. PCBs were detected in the soil sample collected from BH72-08 (PAOC 22) at a concentration exceeding the Residential and Industrial DCC and in a groundwater sample collected at MW-2-07 (PAOC 1) at a concentration exceeding the industrial and residential DWC.

#### **4.4.18 PAOC 21: WASTEWATER LIFT STATION AND PROCESS LINES**

Based on the Phase I ESA (CRA, 2006), the process wastewater collection system at the Site consisted of a series of gravity and pressure sewers. Process wastewater was historically pumped from a series of collection sumps located in the production buildings, overhead to the main industrial wastewater lift station located north of Plant 5. At the main lift station, wastewater was stored in six large pits, which were most recently used to store general industrial wastewater and acid wastewater, but historically contained general wastewater, acid wastewater, cleaner wastewater, and ELPO wastewater. Based on the review of available documentation, numerous releases have occurred at the wastewater lift station. From the main lift station, process wastewater is conveyed underground to the off-Site PAC WWTP. The underground wastewater lines run approximately 2 to 3 miles along the Grand Trunk Railway.

Soil borings BH23-07 and MW28-07 were advanced to investigate potential impacts associated with the wastewater lift station and process line. A monitoring well was

installed at MW28-07 based on the presence of groundwater during soil boring advancement; however, insufficient groundwater was present in the well at the time of sampling.

### ***Soil Analytical Results***

Manganese was detected at a concentration exceeding the Industrial PSIC at MW28-07. No other constituents were detected at the PAOC 21 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.4.19      PAOC 22: PAINT MIX ROOMS**

Based on Phase I ESA (CRA, 2006), a paint mix room is located in Plant 3. Historically, paint mixing was conducted in the basement of Plant 3. Additional information regarding historical paint mixing areas was not available.

Soil borings BH7-08, BH72-08, and BH73-08 were advanced to investigate potential impacts associated with the paint mix rooms.

### ***Soil Analytical Results***

Total PCBs were detected at a concentration exceeding the Residential DCC in soil boring BH72-08 on the 12 to 14 ft bgs interval. No other constituents were detected at the PAOC 22 investigative locations at concentrations exceeding the selected MDEQ Part 201 Criteria as evaluated by ENVIRON.

#### **4.5              PHASE II ESA RESULTS - TEST PIT INVESTIGATION**

As mentioned in Section 2.3, four test pits (TP1 through TP4) were excavated in the bare soil area (PAOC 12) to depths ranging from 6.5 to 10 feet bgs to investigate potential impacts associated with past thermal soil destruction operations (1995) and the general area where a UST tank farm was historically located. Four soil samples were collected from test pit TP-1 (two floor samples, two wall samples), and two samples were collected from each of test pits TP-2 through TP-4 (one floor sample and one wall sample from each). The highest PID reading was observed in test pit TP-1, where a reading of

6.8 ppm was recorded. Brick, asphalt, and concrete debris was observed in excavated material from each test pit.

No constituents were detected in the fill at concentrations exceeding the selected MDEQ Part 201 Criteria as identified by ENVIRON.

#### 4.6 PHASE II ESA RESULTS - LNAPL AND LIF INVESTIGATION

LNAPL was observed (olive green to gray color) in monitoring well MW69-08 during its construction on March 13, 2008.

A sample of LNAPL was collected from MW-69 and submitted for forensic analysis to determine its primary constituents and to assist in identifying a source area. The sample was submitted to Friedman & Bruya, Inc. for analysis.

According to the characterization results prepared by Friedman & Bruya, Inc. for the LNAPL sample collected from monitoring well MW69-08, the LNAPL is considered to be a middle distillate such as diesel fuel, kerosene, or similar material. Additionally, there is an abundance of isoprenoids and a lack of normal alkanes in the sample, indicating that the fuel has undergone substantial biological degradation over time. The results of the LNAPL characterization are presented in Appendix G. In addition, the viscosity and density of the LNAPL were analyzed. The results indicated that the dynamic viscosity was 0.001784 mpa/s at 49°C and the density was 0.81380 grams per milliliter.

CRA retained Fugro Consultants, Inc. (Fugro) to perform a Laser-Induced Fluorescence (LIF) investigation in the vicinity of monitoring well MW69-08. The LIF investigation was completed to aid in evaluating the extent and mobility/stability of the LNAPL plume.

Fugro utilized Cone Penetration Testing (CPT)/Rapid Optical Screening Tool (ROST™) testing to complete the LIF investigation. CPT was performed simultaneously with each ROST™ test. Soil classification was based on resistance and friction to the CPT probe during penetration through the ground. The CPT probe was advanced at a rate of 2 centimeters per second, per the ASTM Standard D5778-95. The CPT probe was equipped with a laser and a sapphire window, and during the ROST™ testing, laser light was directed through the window and into the subsurface. The laser light was

absorbed by hydrocarbon molecules, causing the molecules to fluoresce. A portion of the fluorescence intensity was reflected through the sapphire window and returned via fiber optic cable to a detection system. The emission data from the pulsed laser light was averaged into one reading per second intervals and was recorded continuously. Intensity of fluorescence was quantified via comparison against a standard hydrocarbon mixture used to calibrate the laser. The intensity of the fluorescence is proportional to the amount of hydrocarbon present (i.e. LNAPL saturation).

The LIF investigation was completed at the Site from April 28 through April 30, 2008. Thirty locations were investigated using the CPT/ROST™ tests. The locations of the LIF investigation are presented on Figure 2.3.

Based on the results of the LIF investigation, the LNAPL plume at the Site was delineated as presented on Figure 4.5. LNAPL was also suspected at monitoring well MW33-07. As such, 5 LIF investigation locations were advanced in the vicinity of monitoring well MW33-07. This smaller area is also presented on Figure 4.5.

Since the discovery of the LNAPL plume, CRA, on behalf of ENCORE, has completed a series of LNAPL recovery events. LNAPL is checked for thickness and any LNAPL present in a monitoring well is recovered using a disposable bailer. Given the nature of the LNAPL (biodegradable, etc.) and the extent shown on Figure 4.5, it is not anticipated that the LNAPL is highly mobile. Furthermore, the fine-grained overburden material at the Site assists in limiting significant migration of the LNAPL plume. The plume is located at the center of the Site at depths ranging from 10 to 14 ft bgs, and is located entirely beneath an existing concrete floor slab remaining from the demolition of Plant 3.

LNAPL thickness has been monitored since the discovery, as presented in Table 2.5. The recovery of LNAPL is presently ongoing. LNAPL is removed from the monitoring well utilizing a disposable bailer. Approximately 7.75 gallons of LNAPL has been removed from monitoring well MW69-08 as of January 28, 2009. LNAPL removed from the monitoring well is stored in a grounded drum contained within an over-pack located in the central portion of the Site.

In order to determine any associated risk with the LNAPL, ENVIRON conducted a risk-based evaluation of the LNAPL sample results (see Section 4.7).

#### 4.7 RISK EVALUATION RESULTS

ENVIRON completed a risk evaluation of the constituents detected at concentrations exceeding the above-noted MDEQ Part 201 Criteria. ENVIRON calculated cumulative cancer risk and non-cancer hazard index (HI) estimates for potential exposure to constituents in soil, groundwater, and LNAPL. The following exposure scenarios were considered for the risk evaluation:

- Routine worker ingestion, dermal contact, and inhalation of constituents in soil during typical activities that occur outdoors;
- Routine worker inhalation of constituents in soil, groundwater, or LNAPL that volatilize and migrate into indoor air assuming a hypothetical commercial/industrial building that has the characteristics the MDEQ assumed in its derivation of the commercial/industrial soil and groundwater volatilization to indoor air criteria;
- Maintenance worker and construction worker ingestion, dermal contact, and inhalation of constituents in soil during excavations into the subsurface;
- Maintenance worker and construction worker ingestion, dermal contact, and inhalation of constituents in groundwater during excavations that extend into groundwater; and
- Maintenance worker and construction worker ingestion, dermal contact, and inhalation of constituents in LNAPL during excavations that extend into LNAPL.

Cumulative cancer risk and HI estimates for potential exposures to soil and groundwater were calculated using the highest concentration of each chemical, in its respective media, from all sample locations across the Site. Cumulative cancer risk and HI estimates for potential exposures to LNAPL were calculated using the highest concentration of each chemical in the LNAPL sample collected from MW69-08.

Based on the risk evaluation, ENVIRON concluded that the soil, groundwater, and LNAPL data used in the evaluation do not indicate a potential for significant worker exposures at the Site, with the exception of historical xylene concentrations in the soil south of former Building 17 and chloromethane concentrations in LNAPL north of former Building 17. The details of the ENVIRON risk evaluation are presented in Appendix F.

## 5.0 SUMMARY

Based on the results of the Phase II ESA the following summary has been made:

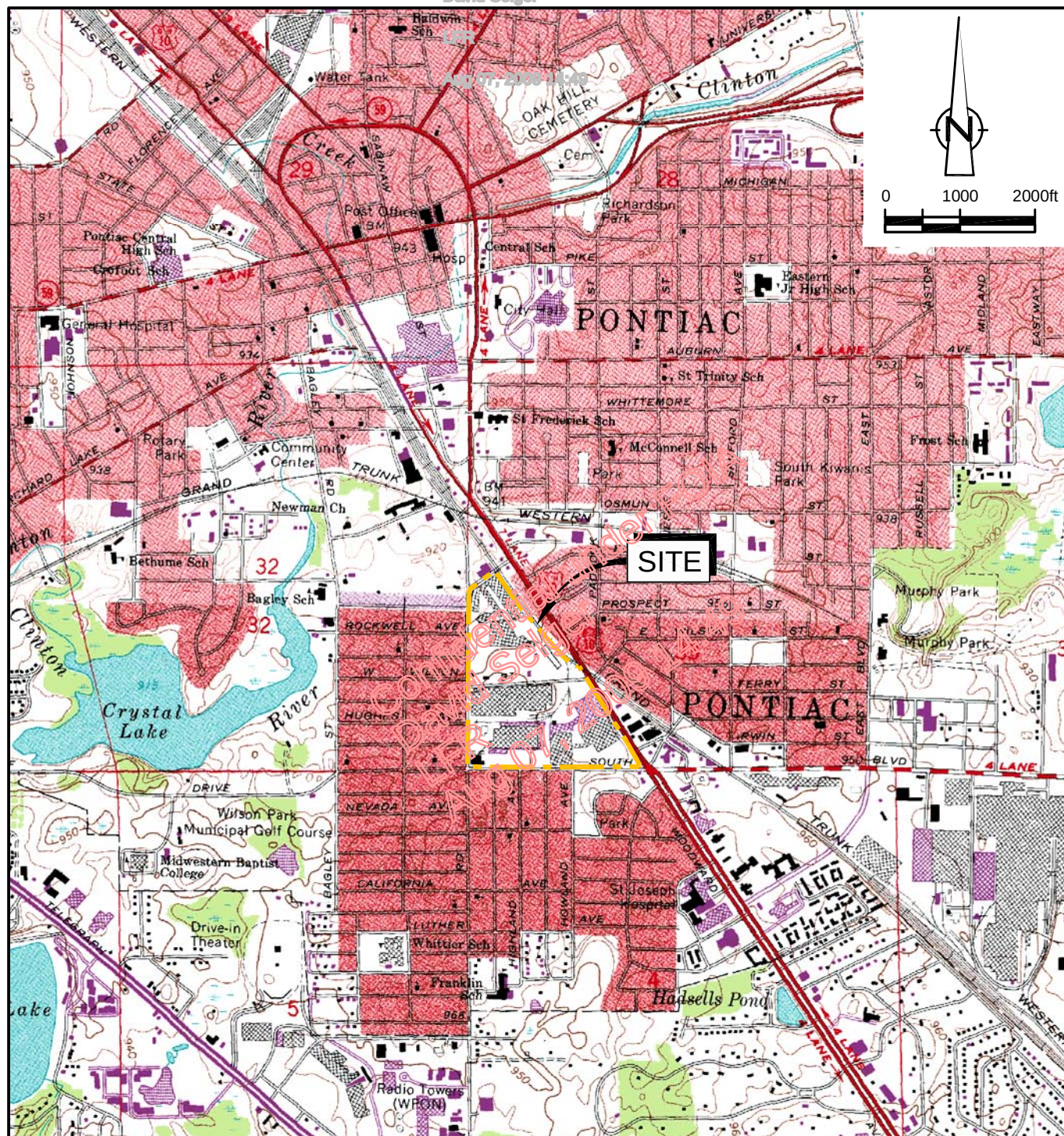
- a total of 92 soil borings (excluding off-set refusal locations) were advanced at the Site. Of the 92 soil borings, 35 were converted into monitoring wells, 5 of which were temporary monitoring wells;
- the Site geologic setting is primarily dominated by a sand and gravel fill layer, underlain by native clay/silt glacial deposits (i.e. aquitard), underlain by bedrock;
- the water table is found at depths from approximately 1.5 to 18.5 feet bgs within the fine-grained material and the sand layers of the clay/silt glacial deposits;
- **PAOCs 1, 2, and 3 - Historical Site Operations and Adjacent Properties:** Based on the ENVIRON screening, VOCs were detected in soil at soil boring MW74-08 at a concentration exceeding the selected MDEQ Part 201 criteria. Metals, VOCs, and SVOCs, were detected in groundwater at monitoring well MW74-08 at concentrations exceeding the selected MDEQ Part 201 criteria. Metals were detected in monitoring wells MW10-07, MW11-07, MW19-07, MW32-07, and MW68-08 at concentrations exceeding the selected MDEQ Part 201 criteria. PCBs were detected in groundwater at monitoring well MW2-07 at a concentration exceeding the selected MDEQ Part 201 criteria. LNAPL was detected in monitoring well MW69-08;
- **PAOC 4 - USTs - Former Plant 1:** Based on the ENVIRON screening, arsenic was detected in soil at soil boring BH92-08 at a concentration exceeding the selected MDEQ Part 201 criteria;
- **PAOC 5 - USTs - (Former) Plant 3:** Based on the ENVIRON screening, benzo(a)pyrene was detected in soil at soil boring BH36-07 at a concentration exceeding the selected MDEQ Part 201 criteria. Metals were detected in groundwater at monitoring wells MW33-07 and MW34-07 at concentrations exceeding the selected MDEQ Part 201 criteria;
- **PAOC 6 - USTs - (Former) Plant 4:** Based on the ENVIRON screening, arsenic was detected in soil at soil boring BH47-07 at a concentration exceeding the selected MDEQ Part 201 criteria;
- **PAOC 10 - Surficial Scarring:** Based on the ENVIRON screening, metals and SVOCs were detected in groundwater at monitoring well MW35-07 at concentrations exceeding the selected MDEQ Part 201 criteria;

- **PAOC 12 -Bare Soil Area:** Based on the ENVIRON screening, lead was detected in soil at soil boring MW13-07 at a concentration exceeding the selected MDEQ Part 201 criteria;
- **PAOC 21 - Wastewater Lift Station and Process Lines:** Based on the ENVIRON screening, manganese was detected in soil at soil boring MW28-07 at a concentration exceeding the selected MDEQ Part 201 criteria;
- **PAOC 22 - Former Paint Mix Rooms:** Based on the ENVIRON screening, PCBs were detected in soil at soil boring BH72-08 at concentrations exceeding the selected MDEQ Part 201 criteria;
- LNAPL sampled from monitoring well MW69-08 was determined to be a biodegradable middle distillate such as diesel fuel or kerosene;
- The LNAPL has been horizontally and vertically delineated via a LIF survey and appears to be located in the central portion of the south area of the Site; and
- The ENVIRON risk evaluation concluded that the soil, groundwater, and LNAPL data used in the evaluation do not indicate a potential for significant worker exposures at the Site, with the exception of historical xylene concentrations in the soil south of former Building 17 and chloromethane concentrations in LNAPL north of former Building 17.

## 6.0 REFERENCES

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SOURCE: USGS QUADRANGLE MAPS;  
PONTIAC NORTH AND SOUTH, MICHIGAN; 1968

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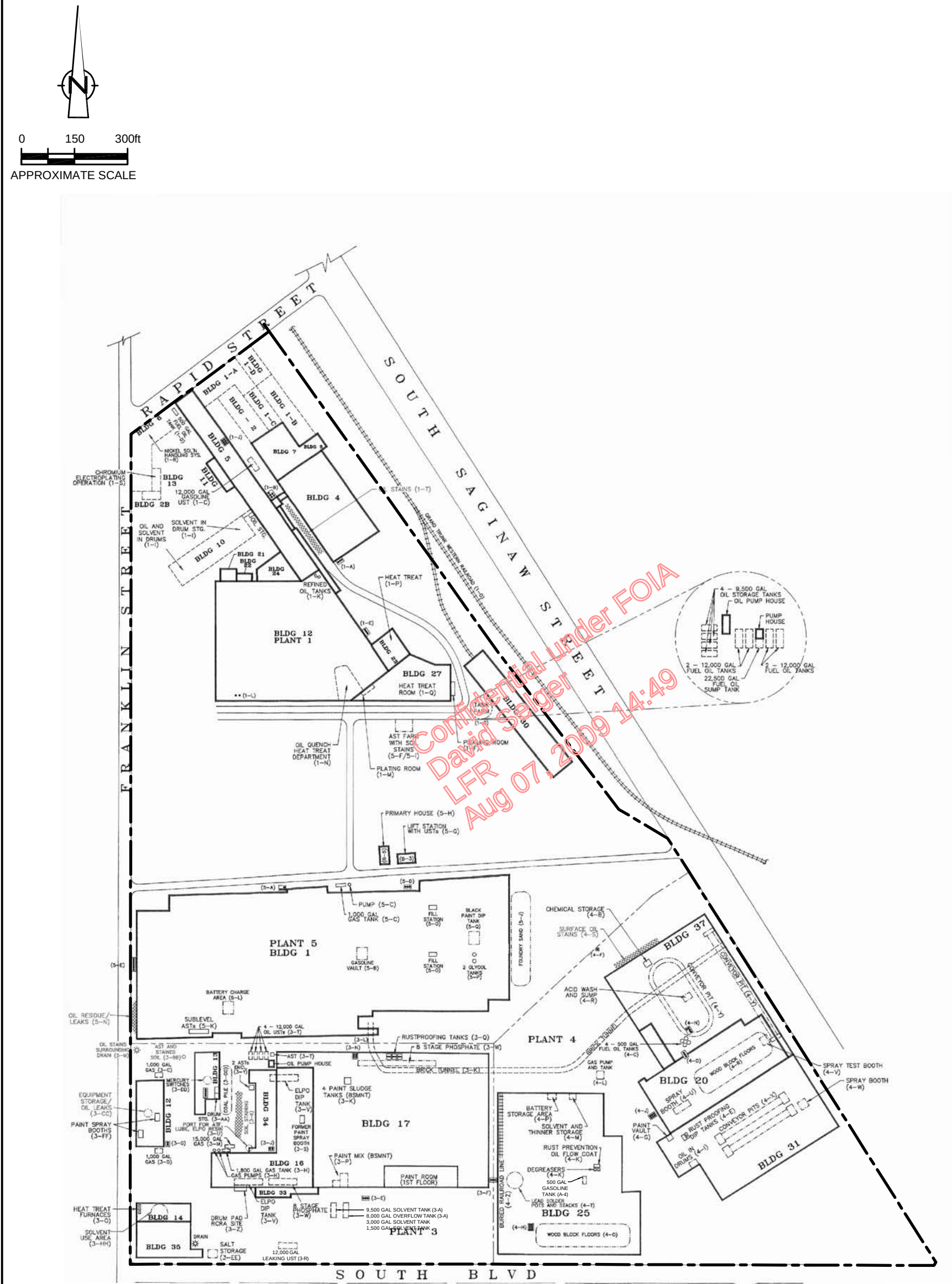
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PREPARED AT THE REQUEST OF COUNSEL

figure 1.1

SITE LOCATION MAP  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
200 South Boulevard West, Pontiac, Michigan

David Selger





SOURCES: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM  
WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT  
PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

LEGEND

--- APPROXIMATE PROPERTY BOUNDARY

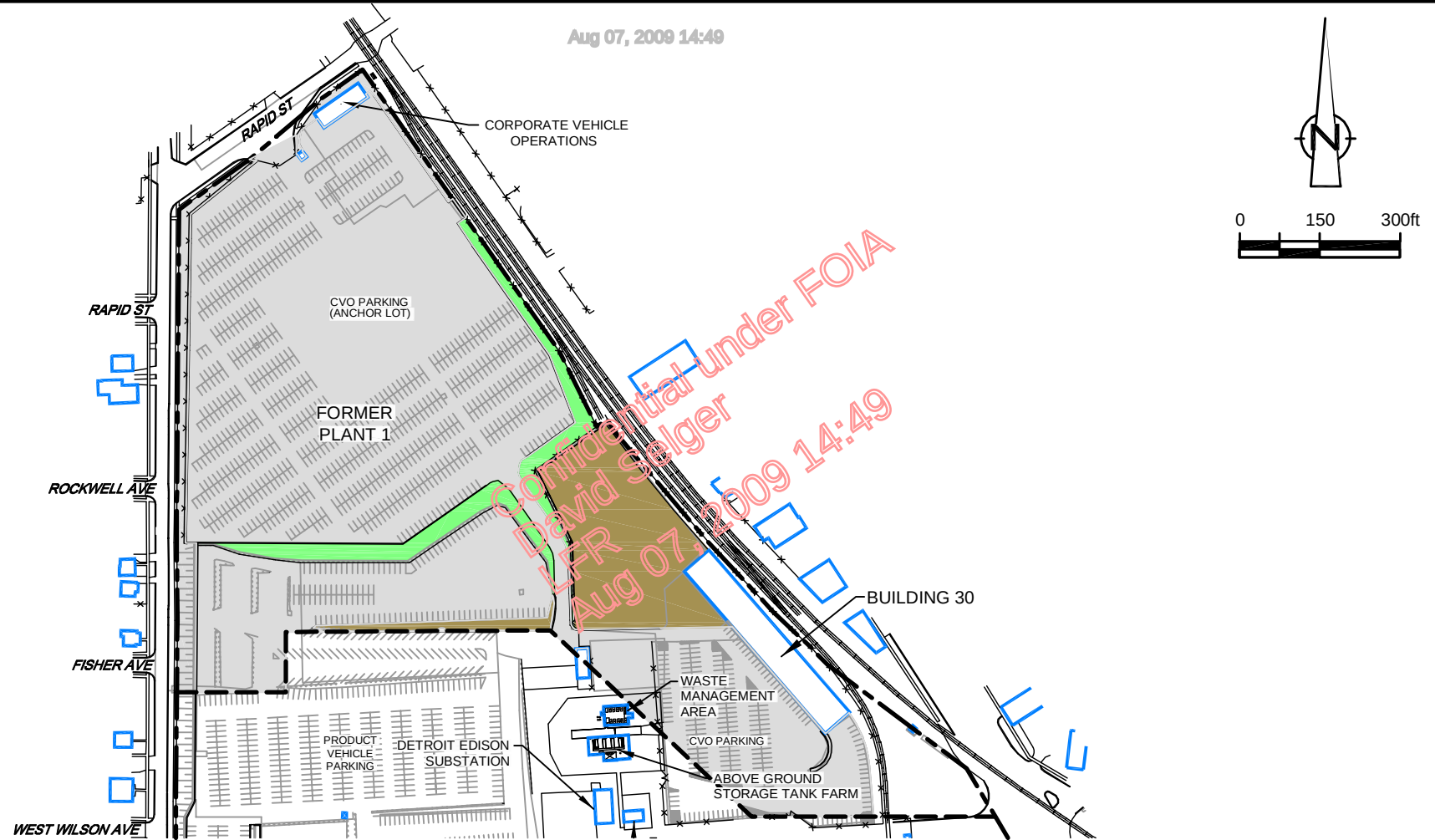
figure 1.2

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HISTORICAL SITE PLAN  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
200 South Boulevard West, Pontiac, Michigan





LEGEND

-  APPROXIMATE PROPERTY BOUNDARY
-  NORTH AND SOUTH PARCEL SEPARATION
-  GRASS
-  SAND/GRAVEL/STONE
-  ASPHALT/CONCRETE

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figure 1.3

SITE PLAN - NORTH PARCEL  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
*200 South Boulevard West, Pontiac, Michigan*



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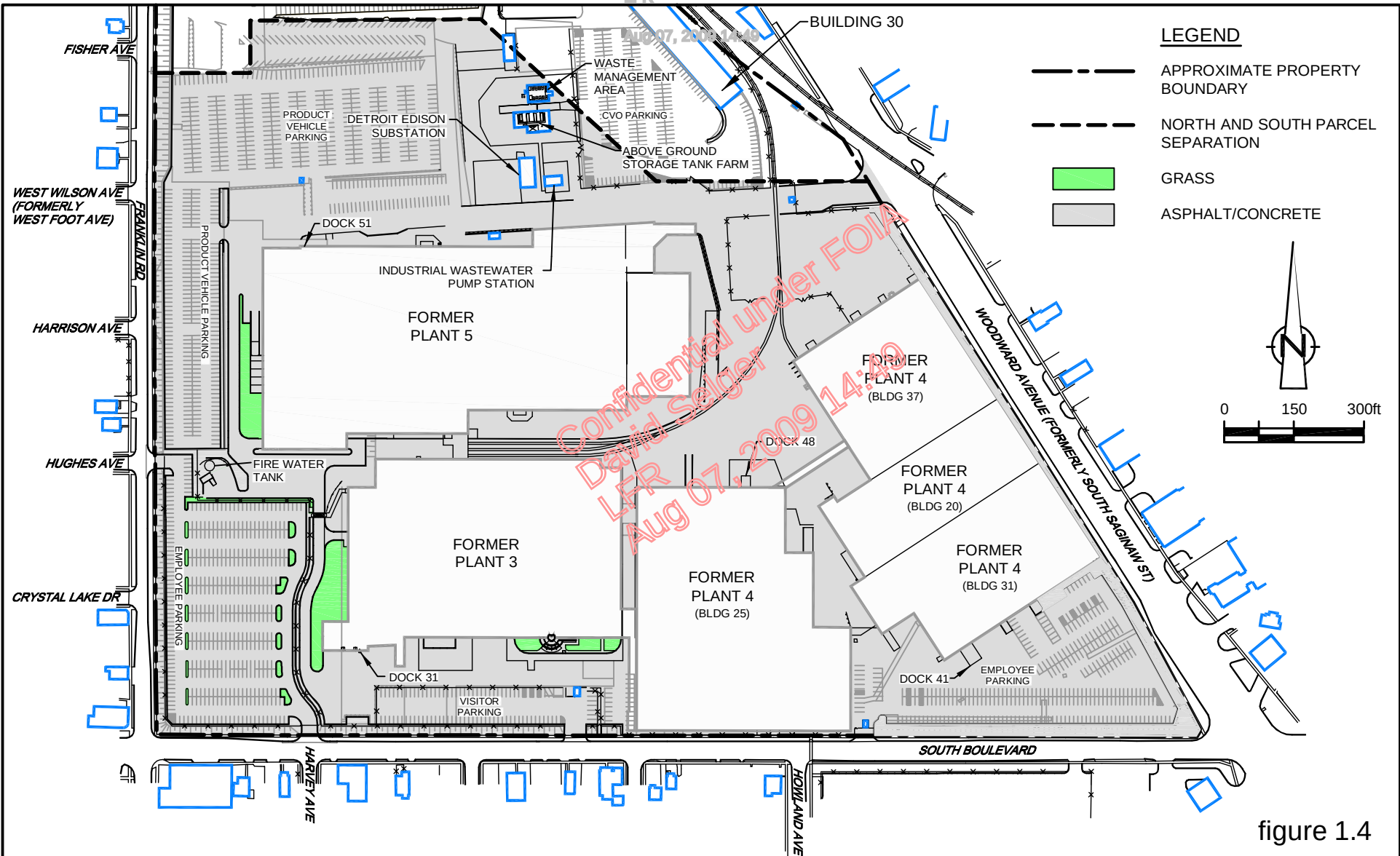


figure 1.4

SITE PLAN - SOUTH PARCEL  
 PHASE II ENVIRONMENTAL SITE ASSESSMENT  
 PONTIAC VALIDATION CENTER  
 200 South Boulevard West, Pontiac, Michigan

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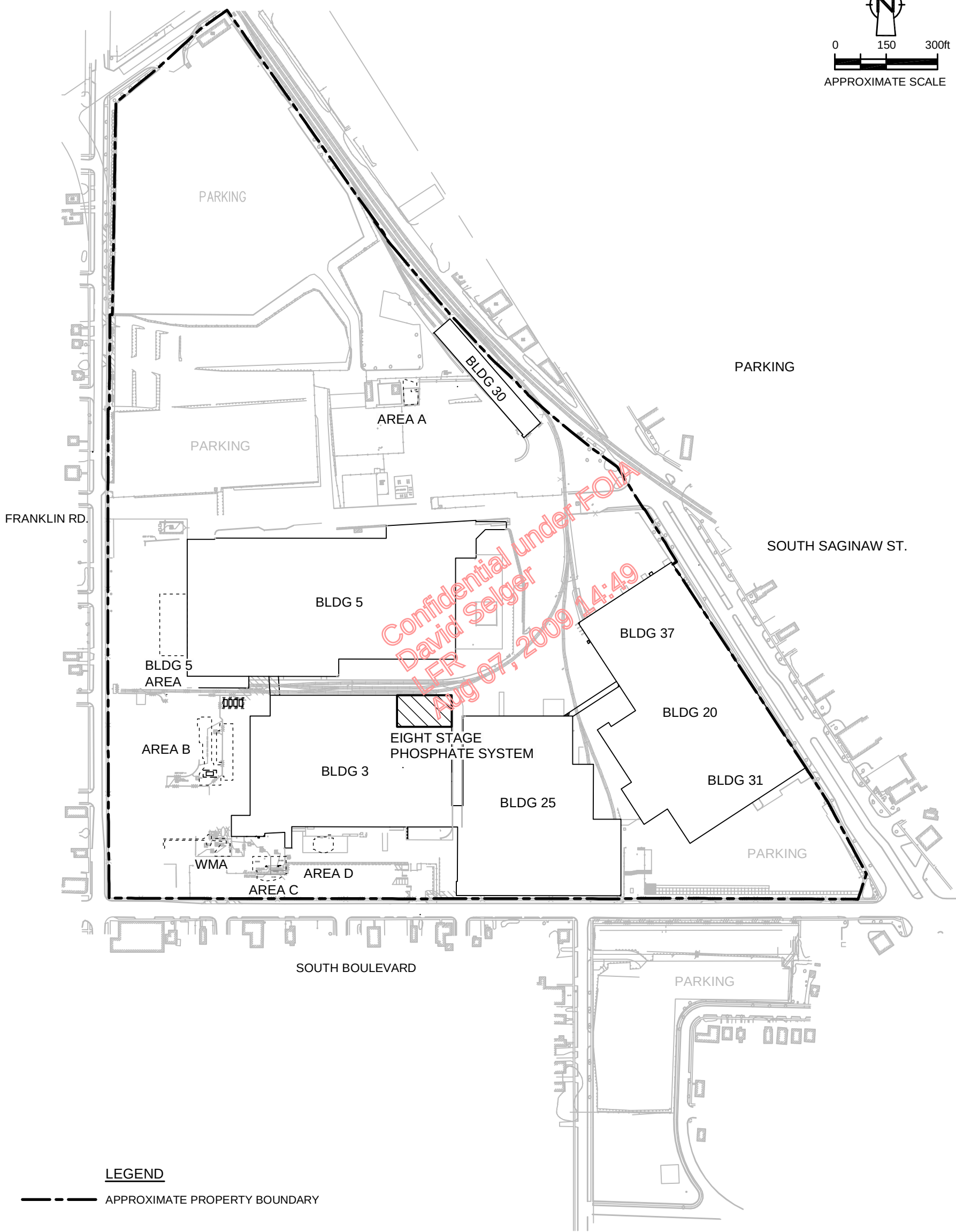
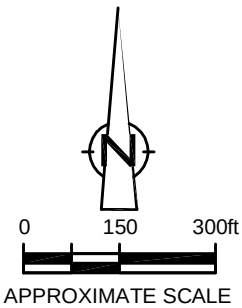
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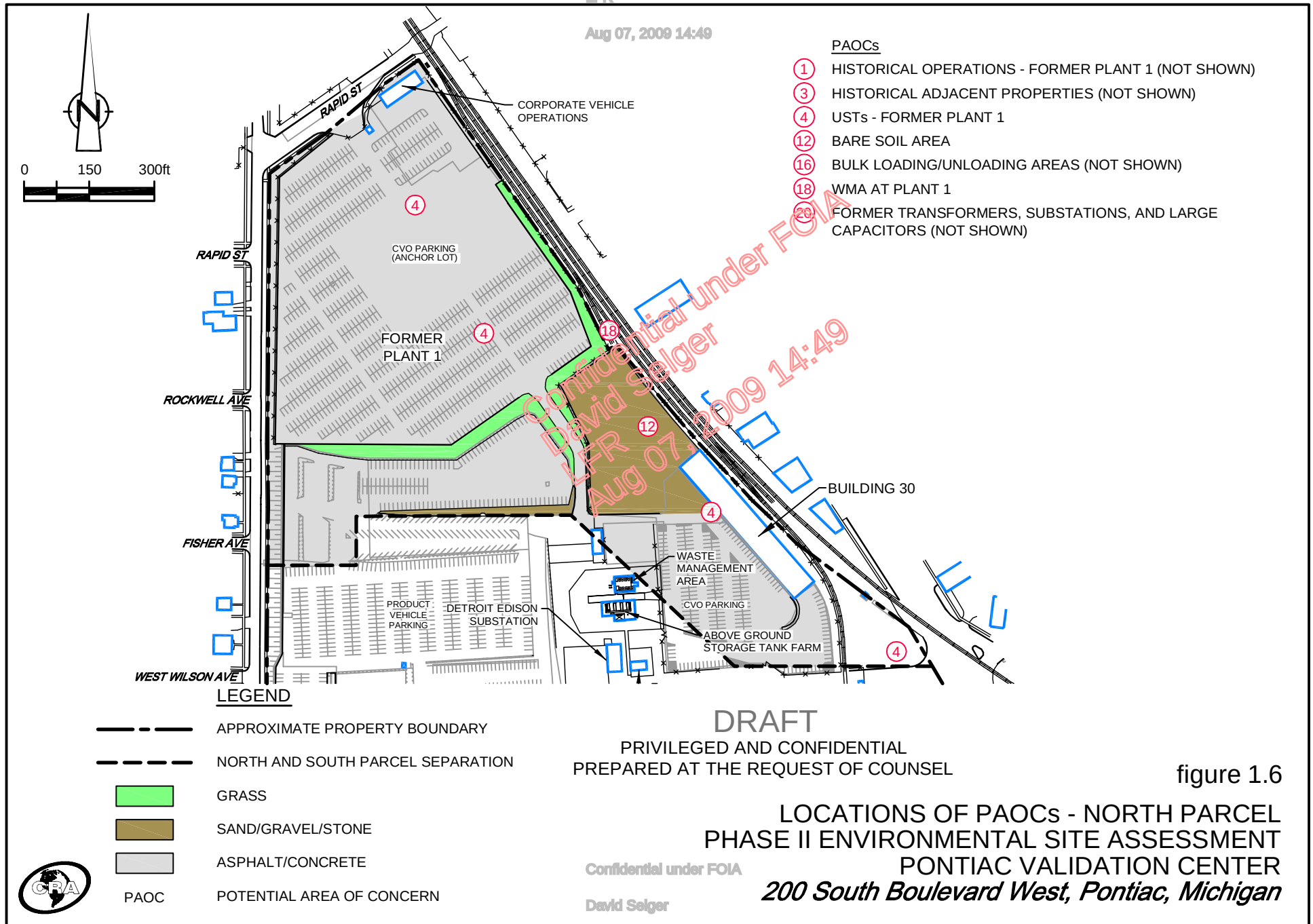
SOURCE: GIFFELS ASSOCIATES, INC., FEBRUARY 27, 1995

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figure 1.5  
PREVIOUS AREAS OF INVESTIGATION  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
*200 South Boulevard West, Pontiac, Michigan*

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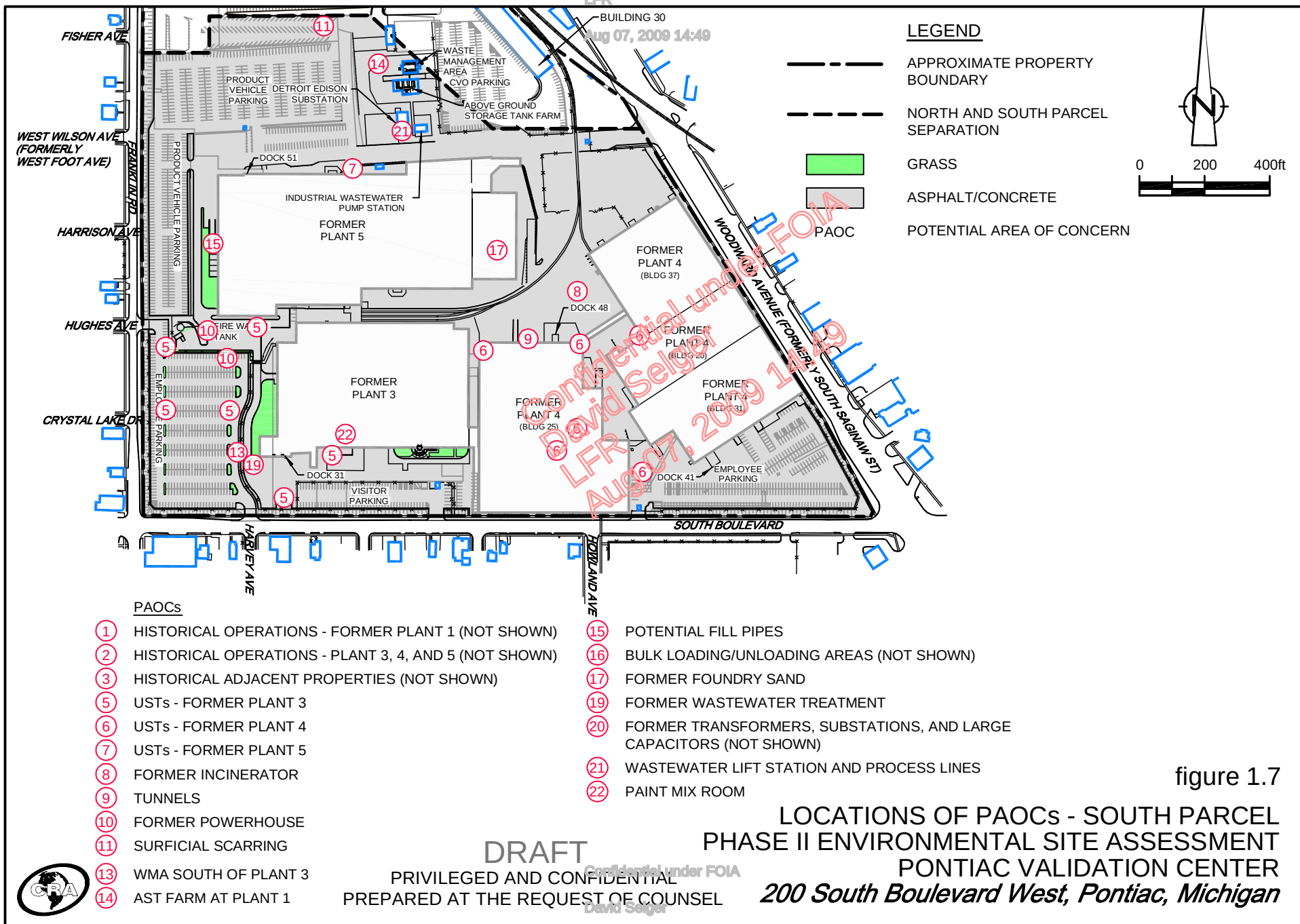


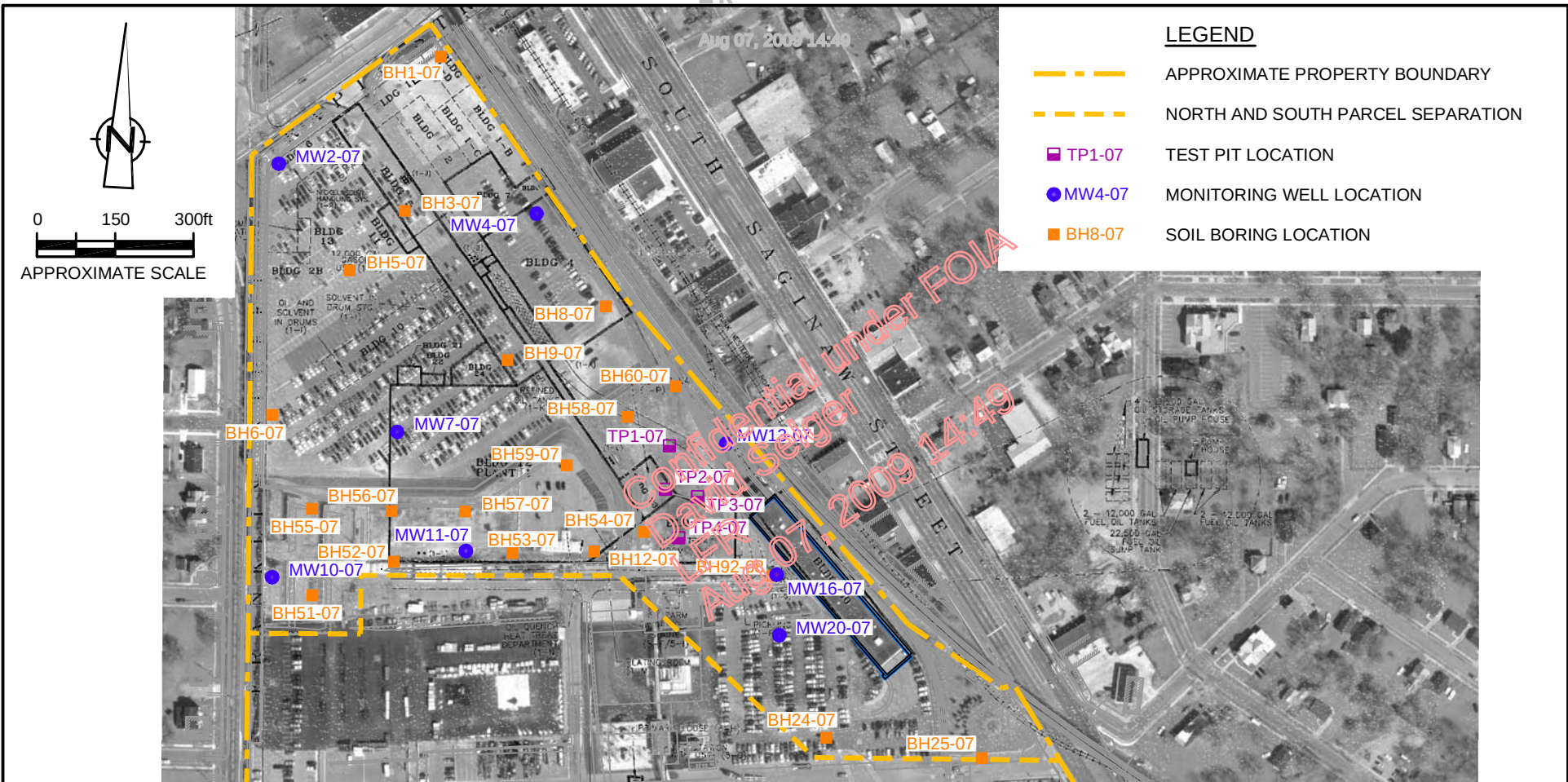
figure 1.7

LOCATIONS OF PAOCs - SOUTH PARCEL  
 PHASE II ENVIRONMENTAL SITE ASSESSMENT  
 PONTIAC VALIDATION CENTER  
 200 South Boulevard West, Pontiac, Michigan

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HISTORICAL SITE PLAN SOURCE: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM  
WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT  
PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE: PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

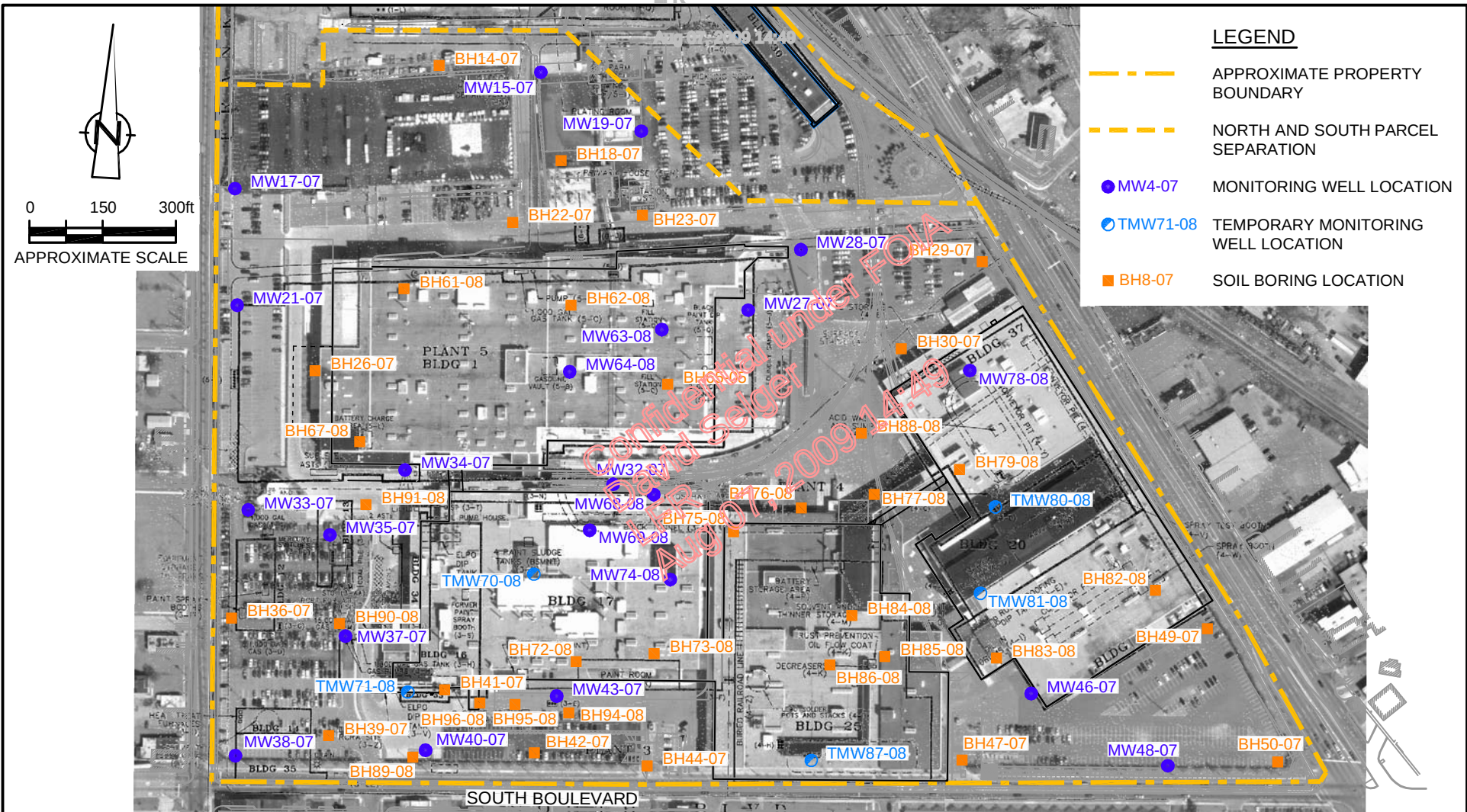
figure 2.1

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COMPLETED INVESTIGATIVE LOCATIONS - NORTH PARCEL  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
200 South Boulevard West, Pontiac, Michigan

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HISTORICAL SITE PLAN SOURCE:  
GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM  
WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT  
PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE:  
PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN



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COMPLETED INVESTIGATIVE LOCATIONS - SOUTH PARCEL  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
200 South Boulevard West, Pontiac, Michigan

figure 2.2

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HISTORICAL SITE PLAN SOURCE: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE: PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

NOTE: SITE PLAN IS HISTORICAL

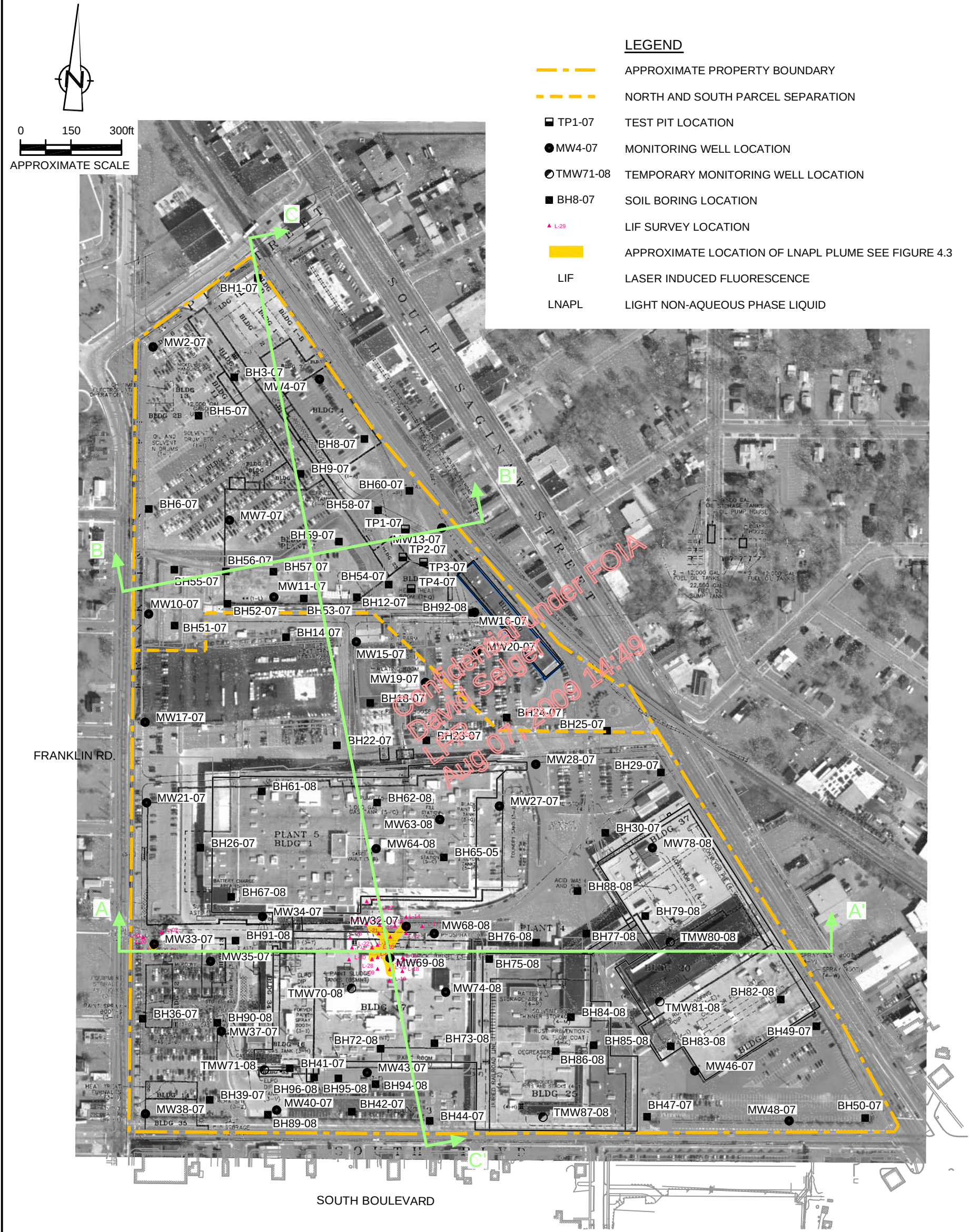


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figure 2.3

LIF INVESTIGATION LOCATIONS  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
*200 South Boulevard West, Pontiac, Michigan*



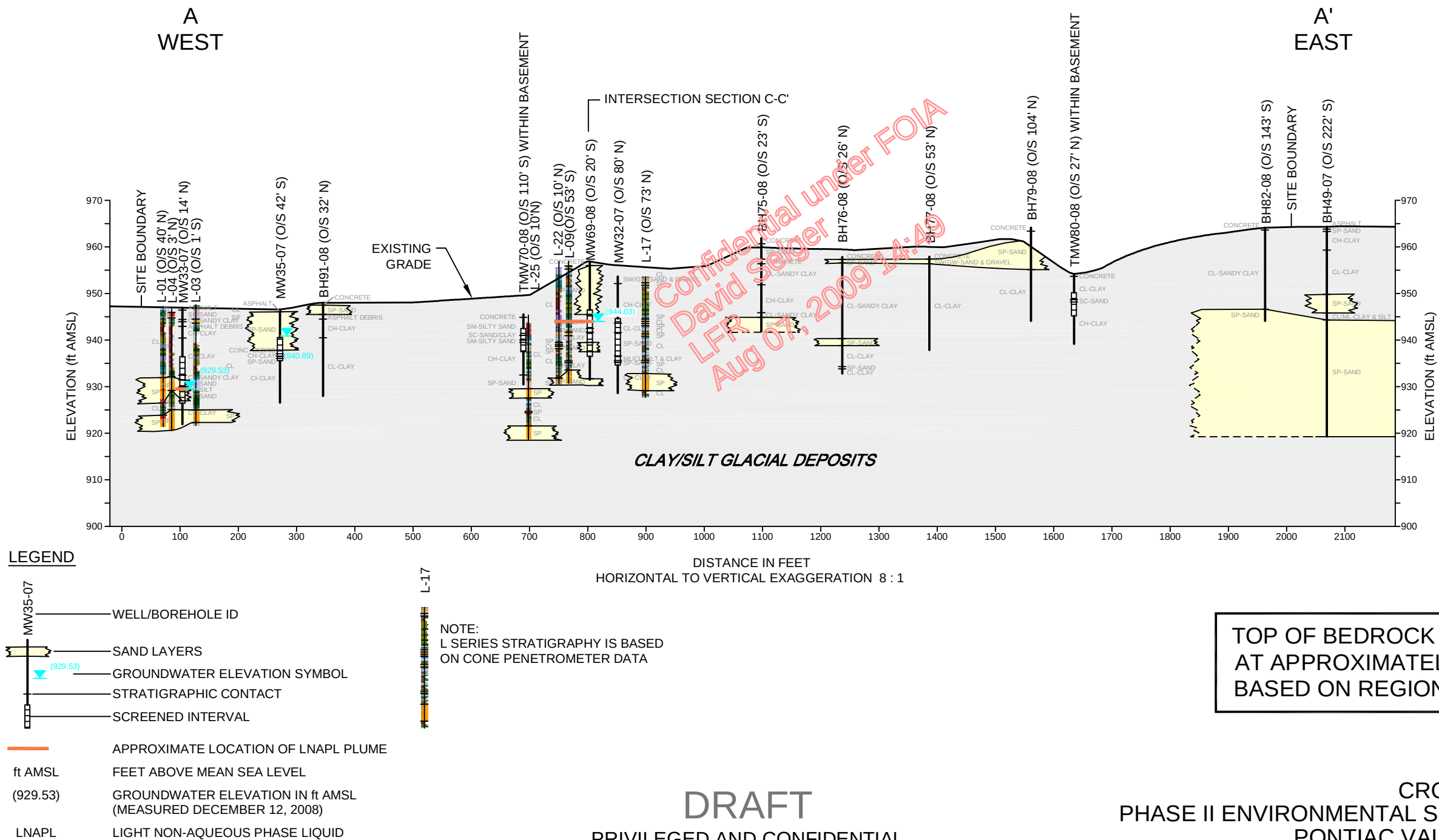
HISTORICAL SITE PLAN SOURCE: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM  
WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT  
PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

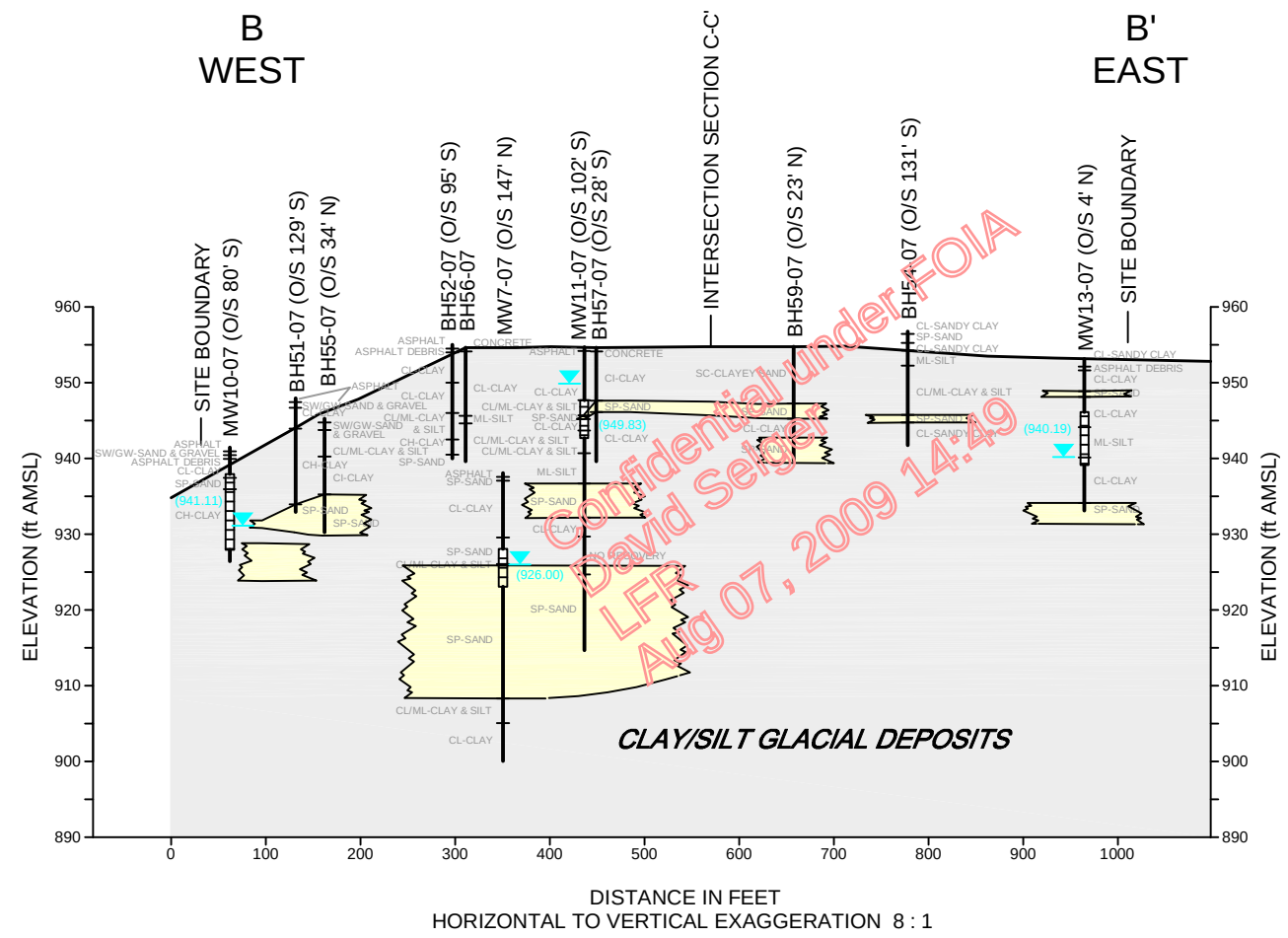
AERIAL PHOTOGRAPH SOURCE: PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

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figure 3.1  
LOCATION OF GEOLOGIC CROSS-SECTIONS  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
*200 South Boulevard West, Pontiac, Michigan*







- LEGEND**
- WELL/BOREHOLE ID
  - SAND LAYERS
  - GROUNDWATER ELEVATION SYMBOL
  - STRATIGRAPHIC CONTACT
  - SCREENED INTERVAL
  - ft AMSL FEET ABOVE MEAN SEA LEVEL
  - (941.11) GROUNDWATER ELEVATION IN ft AMSL (MEASURED DECEMBER 12, 2008)
  - LNAPL LIGHT NON-AQUEOUS PHASE LIQUID

TOP OF BEDROCK ELEVATION IS  
AT APPROXIMATELY 650 ft AMSL  
BASED ON REGIONAL GEOLOGY

figure 3.3  
CROSS-SECTION B-B'  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
200 South Boulevard West, Pontiac, Michigan



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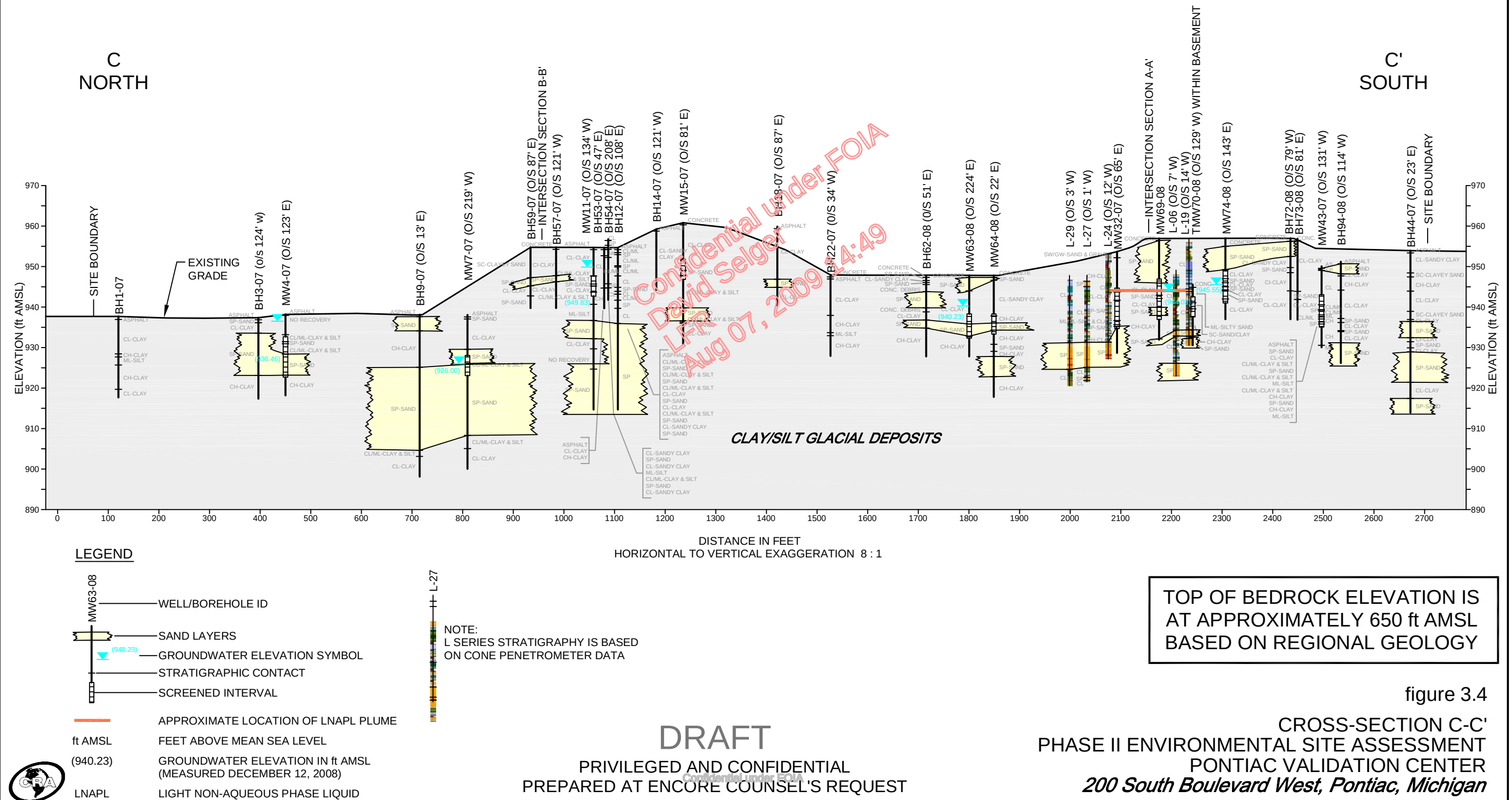
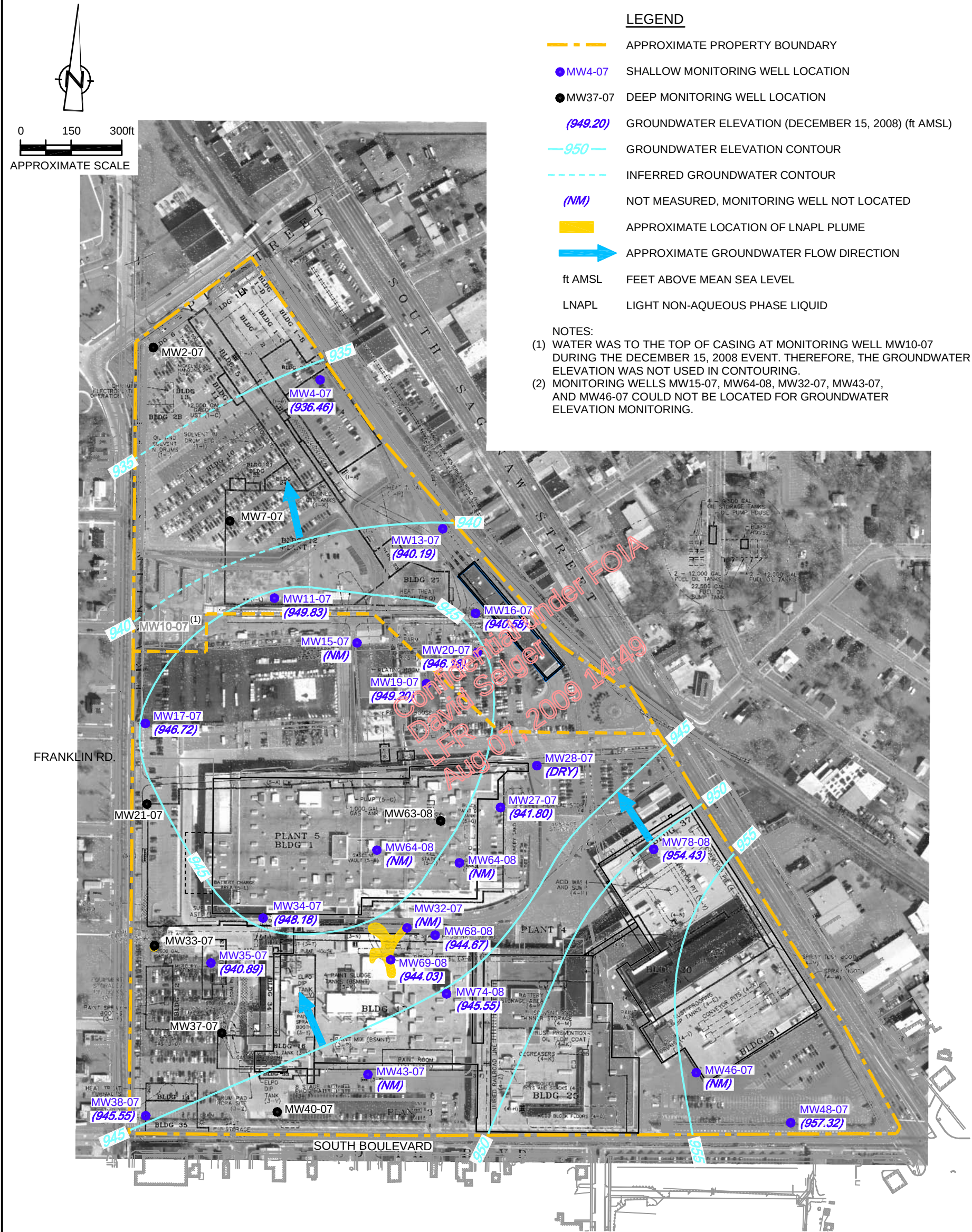


figure 3.4

CROSS-SECTION C-C'  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
*200 South Boulevard West, Pontiac, Michigan*

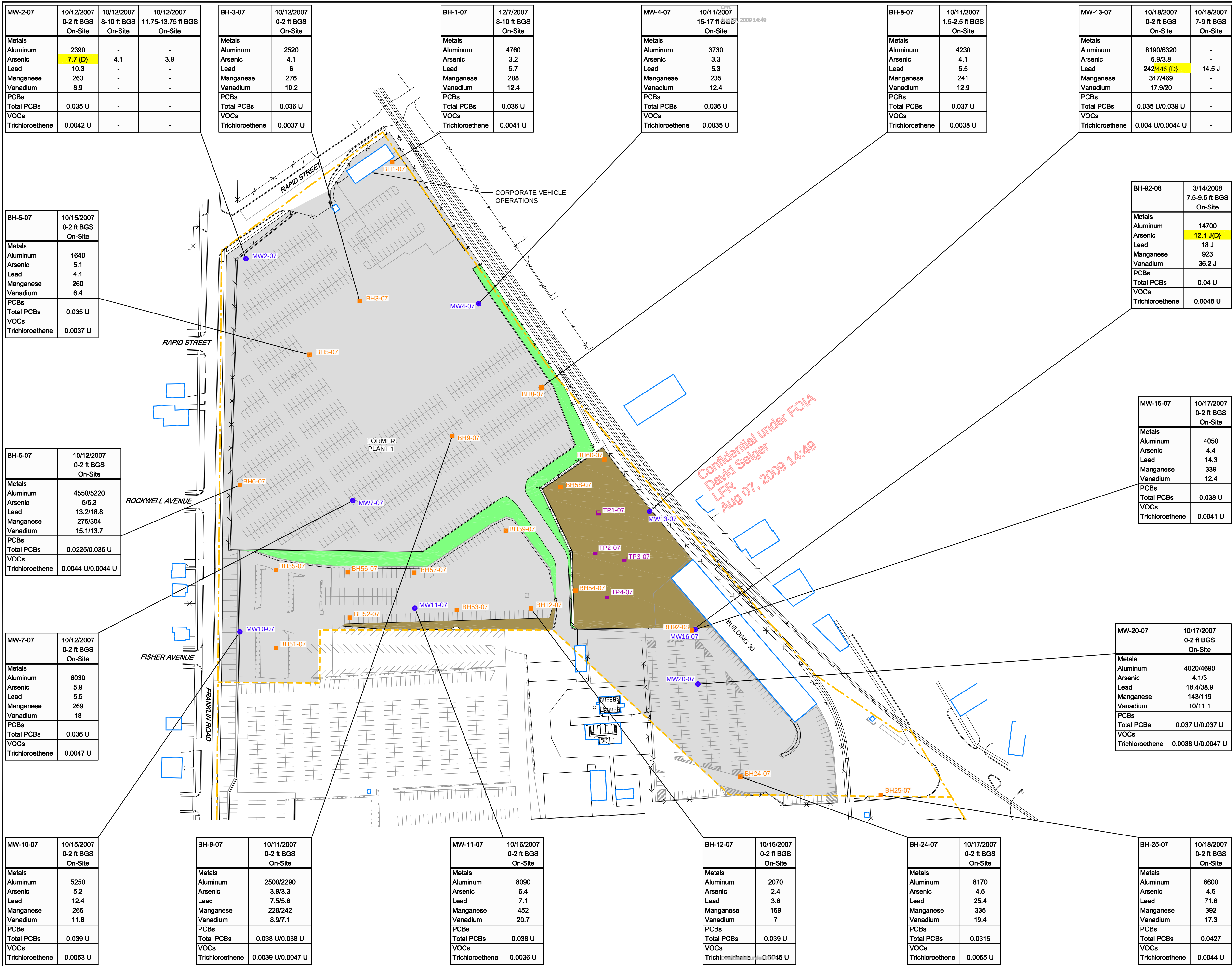


HISTORICAL SITE PLAN SOURCE: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM  
WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT  
PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE: PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

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figure 3.5  
SHALLOW GROUNDWATER CONTOURS - DECEMEBER 15, 2008  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
200 South Boulevard West, Pontiac, Michigan



0 50 100ft  
APPROXIMATE SCALE

**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- NORTH AND SOUTH PARCEL SEPARATION
- MW4-07 MONITORING WELL LOCATION
- BH8-07 SOIL BORING LOCATION
- TP1-07 TEST PIT LOCATION
- (D) EXCEEDS NOTED CRITERIA
- mg/kg MILLIGRAM PER KILOGRAM
- U NOT PRESENT AT OR ABOVE THE ASSOCIATED VALUE
- J ESTIMATED VALUE
- MDEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
- GRASS
- SAND/GRAVEL/STONE
- ASPHALT/CONCRETE

NOTES:

- SUMMARY OF EXCEEDANCES BASED ON ENVIRON'S DATA SCREENING.
- ARSENIC EXCEEDANCE AT MW2-07 WAS NOT PRESENTED ON THE ENVIRON EXCEEDANCE TABLE, BUT IS FLAGGED ON THIS FIGURE.

|                 |                               |                                   |
|-----------------|-------------------------------|-----------------------------------|
| MW-16-07        | 10/17/2007 0-2 ft BGS On-Site | SAMPLE LOCATION                   |
| Metals          |                               | DEPTH (feet BELOW GROUND SURFACE) |
| Aluminum        | 4050                          | ON-SITE/OFF-SITE INDICATOR        |
| Arsenic         | 4.4                           |                                   |
| Lead            | 14.3                          |                                   |
| Manganese       | 339                           |                                   |
| Vanadium        | 12.4                          |                                   |
| PCBs            |                               |                                   |
| Total PCBs      | 0.038 U                       |                                   |
| VOCs            |                               |                                   |
| Trichloroethene | 0.0041 U                      |                                   |

CONCENTRATION (mg/kg)

PARAMETER

**MDEQ PART 201 CRITERIA**

|                 | Units | Soil Volatilization or Indoor Air Inhalation Criteria |               | Particulate Soil Inhalation Criteria   |               | Direct Contact Criteria                |  |
|-----------------|-------|-------------------------------------------------------|---------------|----------------------------------------|---------------|----------------------------------------|--|
|                 |       | Residential A                                         | Residential B | Industrial & Commercial II, III & IV C | Residential D | Industrial & Commercial II, III & IV E |  |
| Metals          |       |                                                       |               |                                        |               |                                        |  |
| Aluminum        | mg/kg | --                                                    | --            | --                                     | 50000         | 370000                                 |  |
| Arsenic         | mg/kg | --                                                    | 730           | 910                                    | 7.6           | 37                                     |  |
| Lead            | mg/kg | --                                                    | 100000        | 48000                                  | 400           | 500                                    |  |
| Manganese       | mg/kg | --                                                    | 3300          | 1500                                   | 25000         | 40000                                  |  |
| Vanadium        | mg/kg | --                                                    | --            | --                                     | 730           | 5500                                   |  |
| PCBs            |       |                                                       |               |                                        |               |                                        |  |
| Total PCBs      | mg/kg | 3000                                                  | 5200          | 6500                                   | 4             | 16                                     |  |
| VOCs            |       |                                                       |               |                                        |               |                                        |  |
| Trichloroethene | mg/kg | 7.1                                                   | 1800000       | 2300000                                | 500           | 800                                    |  |

HISTORICAL SITE PLAN SOURCE:  
GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM  
WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT  
PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPHY SOURCE:  
PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

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SCALE VERIFICATION

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

PONTIAC VALIDATION CENTER  
200 SOUTH BOULEVARD WEST  
PONTIAC, MICHIGAN

PHASE II ENVIRONMENTAL SITE ASSESSMENT

SUMMARY OF EXCEEDANCES IN SOIL  
NORTH PARCEL

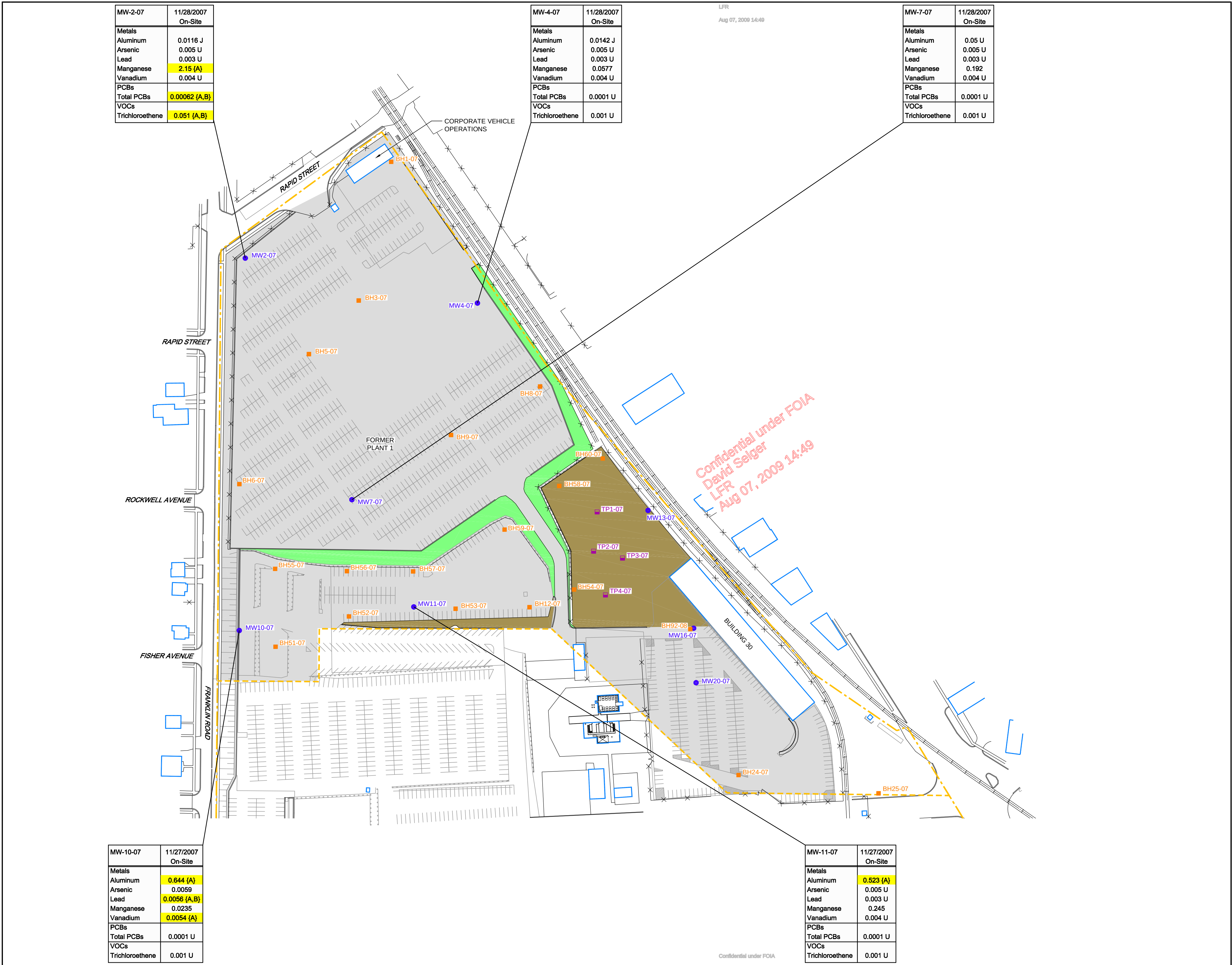
**CONESTOGA-ROVERS & ASSOCIATES**

Source Reference:

|                  |              |             |
|------------------|--------------|-------------|
| Project Manager: | Reviewed By: | Date:       |
| T.G.             | S.R.         | APRIL 2009  |
| Scale:           | Project N°:  | Report N°:  |
| AS SHOWN         | 17322-06     | 005         |
|                  |              | Drawing N°: |
|                  |              | figure 4.1  |

17322-06(005)GN-WA017 APR 07/2009





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0 50 100ft  
APPROXIMATE SCALE

**LEGEND**

- APPROXIMATE PROPERTY BOUNDARY
- NORTH AND SOUTH PARCEL SEPARATION
- MW-07 MONITORING WELL LOCATION
- BH-07 SOIL BORING LOCATION
- TP-07 TEST PIT LOCATION
- (A) EXCEEDS NOTED CRITERIA
- mg/L MILLIGRAM PER LITER
- U NOT PRESENT AT OR ABOVE THE ASSOCIATED VALUE
- J ESTIMATED VALUE
- MDEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
- GRASS
- SAND/GRAVEL/STONE
- ASPHALT/CONCRETE

NOTES:  
1. SUMMARY OF EXCEEDANCES BASED ON ENVIRON'S DATA SCREENING.  
2. MONITORING WELLS MW13-07, MW16-07, AND MW20-07 WERE DRY DURING GROUNDWATER SAMPLING ACTIVITIES.

**MW-4-07** 11/28/2007 On-Site

|                 |          |
|-----------------|----------|
| Metals          |          |
| Aluminum        | 0.0142 J |
| Arsenic         | 0.005 U  |
| Lead            | 0.003 U  |
| Manganese       | 0.0577   |
| Vanadium        | 0.004 U  |
| PCBs            |          |
| Total PCBs      | 0.0001 U |
| VOCs            |          |
| Trichloroethene | 0.001 U  |

**MDEQ PART 201 CRITERIA**

|                 | Units | Drinking Water Criteria |                                      |                             |
|-----------------|-------|-------------------------|--------------------------------------|-----------------------------|
|                 |       | Residential             | Industrial & Commercial II, III & IV | Commercial Contact Criteria |
| Aluminum        | mg/L  | 0.3                     | 4.1                                  | 6800                        |
| Arsenic         | mg/L  | 0.01                    | 0.01                                 | 4.5                         |
| Lead            | mg/L  | 0.004                   | 0.004                                | —                           |
| Manganese       | mg/L  | 0.36                    | 2.5                                  | 500                         |
| Vanadium        | mg/L  | 0.0045                  | 0.002                                | 90                          |
| PCBs            |       |                         |                                      |                             |
| Total PCBs      | mg/L  | 0.0005                  | 0.0005                               | 0.0033                      |
| VOCs            |       |                         |                                      |                             |
| Trichloroethene | mg/L  | 0.005                   | 0.005                                | 22                          |

HISTORICAL SITE PLAN SOURCE:  
GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE:  
PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

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

PONTIAC VALIDATION CENTER  
200 SOUTH BOULEVARD WEST  
PONTIAC, MICHIGAN

PHASE II ENVIRONMENTAL SITE ASSESSMENT

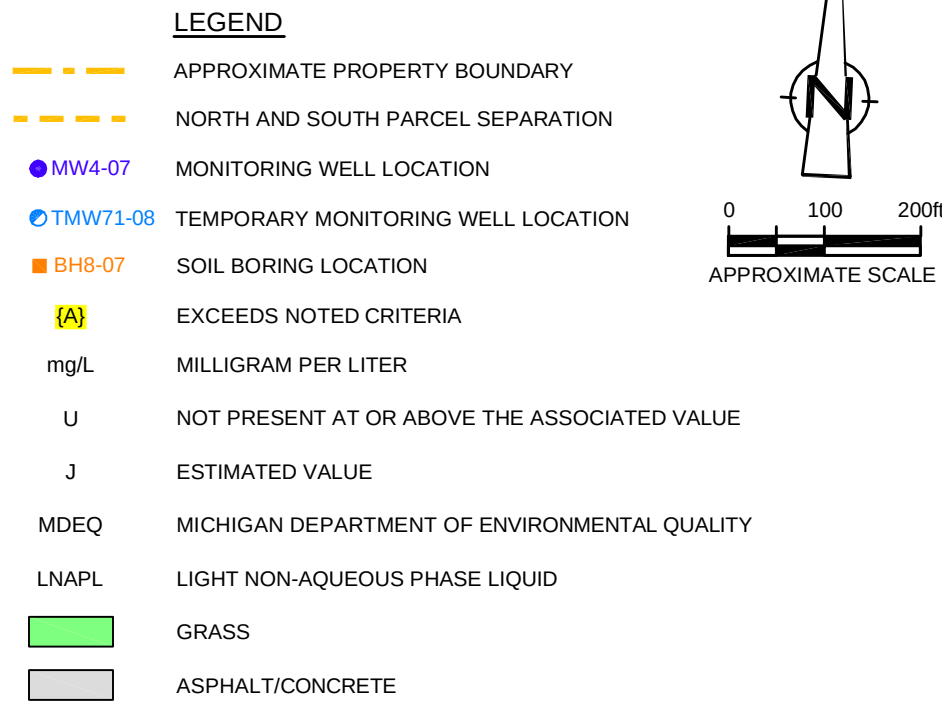
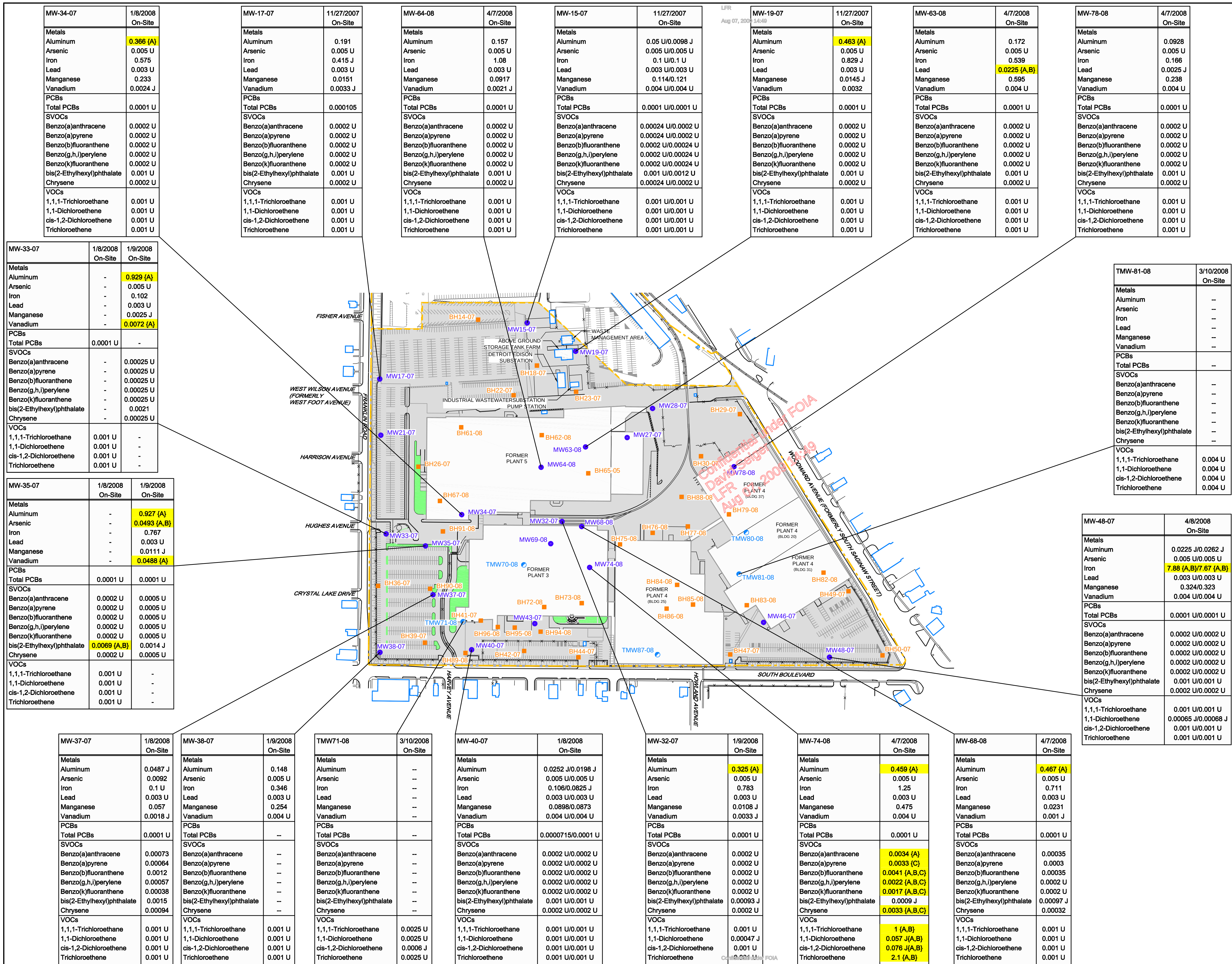
SUMMARY OF EXCEEDANCES IN  
GROUNDWATER - NORTH PARCEL

**CONESTOGA-ROVERS & ASSOCIATES**

Source Reference:

|                          |                         |                           |
|--------------------------|-------------------------|---------------------------|
| Project Manager:<br>T.G. | Reviewed By:<br>S.R.    | Date:<br>APRIL 2009       |
| Scale:<br>AS SHOWN       | Project N°:<br>17322-06 | Report N°:<br>005         |
|                          |                         | Drawing N°:<br>figure 4.3 |

17322-06(005)GN-WA019 APR 07/2009



| SAMPLE LOCATION            |          |
|----------------------------|----------|
| MW-19-08                   | 4/7/2008 |
| On-Site                    | On-Site  |
| Metals                     |          |
| Aluminum                   | 0.0928   |
| Arsenic                    | 0.005 U  |
| Iron                       | 0.166    |
| Lead                       | 0.0025 J |
| Manganese                  | 0.238    |
| Vanadium                   | 0.004 U  |
| PCBs                       |          |
| Total PCBs                 | 0.0001 U |
| SVOCs                      |          |
| Benzo(a)anthracene         | 0.0002 U |
| Benzo(a)pyrene             | 0.0002 U |
| Benzo(b)fluoranthene       | 0.0002 U |
| Benzo(g,h,i)perylene       | 0.0002 U |
| Benzo(k)fluoranthene       | 0.0002 U |
| bis(2-Ethylhexyl)phthalate | 0.001 U  |
| Chrysene                   | 0.0002 U |
| VOCs                       |          |
| 1,1,1-Trichloroethane      | 0.001 U  |
| 1,1-Dichloroethane         | 0.001 U  |
| cis-1,2-Dichloroethane     | 0.001 U  |
| Trichloroethane            | 0.001 U  |

| MDEQ PART 201 CRITERIA    |                         |                                         |        |                                  |
|---------------------------|-------------------------|-----------------------------------------|--------|----------------------------------|
|                           | Drinking Water Criteria |                                         |        | Groundwater<br>Critical Criteria |
|                           | Residential             | Industrial & Commercial<br>II, III & IV |        |                                  |
|                           |                         | A                                       | B      |                                  |
| Metals                    |                         |                                         |        |                                  |
| Aluminum                  | mg/L                    | 0.5                                     | 4.1    | 68000                            |
| Arsenic                   | mg/L                    | 0.01                                    | 0.01   | 4.3                              |
| Iron                      | mg/L                    | 0.03                                    | 5.6    | 5800                             |
| Lead                      | mg/L                    | 0.001                                   | 0.001  | 0.001                            |
| Manganese                 | mg/L                    | 0.86                                    | 2.5    | 9100                             |
| Vanadium                  | mg/L                    | 0.0045                                  | 0.062  | 970                              |
| PCBs                      |                         |                                         |        |                                  |
| Total PCBs                | mg/L                    | 0.0005                                  | 0.0005 | 0.0003                           |
| SLODs                     |                         |                                         |        |                                  |
| Benzo(a)pyrene            | mg/L                    | 0.0001                                  | 0.0005 | 0.0004                           |
| Benzo(a)anthracene        | mg/L                    | 0.0001                                  | 0.0005 | 0.0004                           |
| Benzo(b)fluoranthene      | mg/L                    | 0.0001                                  | 0.0005 | 0.0004                           |
| Benzo(k)fluoranthene      | mg/L                    | 0.0001                                  | 0.0005 | 0.0004                           |
| Benzo(g,h,i)perylene      | mg/L                    | 0.0001                                  | 0.001  | 0.0001                           |
| Benzo(a)fluoranthene      | mg/L                    | 0.0001                                  | 0.001  | 0.0001                           |
| Benzo(a,h)anthracene      | mg/L                    | 0.0006                                  | 0.006  | 0.32                             |
| Benzo(a,i)fluoranthene    | mg/L                    | 0.0001                                  | 0.0016 | 0.0016                           |
| Chlorine                  |                         |                                         |        |                                  |
| 1,1,1,2-Tetrachloroethane | mg/L                    | 0.2                                     | 0.2    | 1300                             |
| 1,1,1-Dichloroethane      | mg/L                    | 0.007                                   | 0.007  | 11                               |
| 1,1,2-Dichloroethane      | mg/L                    | 0.07                                    | 0.07   | 200                              |
| Trichloroethylene         | mg/L                    | 0.07                                    | 0.005  | 22                               |



HISTORICAL SITE PLAN SOURCE: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE: PONTIAC 2002 AERIAL SUPPLIED BY OAKLAND COUNTY MICHIGAN

NOTES: - SITE PLAN IS HISTORICAL.  
- LNAPL DELINEATED BY LIF.  
- LNAPL SURROUNDING MW33-07 WAS DETECTED AT LOW LEVELS BY LIF. THE PRESENCE OF LNAPL WAS NOT CONFIRMED IN THE MONITORING WELL.



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PREPARED AT ENCORE COUNSEL'S REQUEST

figure 4.5  
LOCATION OF LNAPL PLUME  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
PONTIAC VALIDATION CENTER  
*200 South Boulevard West, Pontiac, Michigan*

SOIL BORING AND TEST PIT SAMPLE SUMMARY

Aug 07, 2009 14:49

PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location <sup>(1)</sup> | Date Installed | Sample Identification  | PAOC            | Depth (ft bgs) | Hold (Y/N)? | Off Hold (Y/N)? | Analysis                                                  | Sudan IV Jar Test (pos. or neg.) | Jar Test Depth (ft bgs) |
|--------------------------------|----------------|------------------------|-----------------|----------------|-------------|-----------------|-----------------------------------------------------------|----------------------------------|-------------------------|
| BH1-07                         | 12/7/2007      | SO-17322-120707-CB-140 | PAOC 1          | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH1-07                         | 12/7/2007      | SO-17322-120707-CB-141 | PAOC 1          | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 8 - 10                  |
| MW2-07                         | 10/12/2007     | SO-17322-101207-CB-042 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW2-07                         | 10/12/2007     | SO-17322-101207-CB-043 | PAOC 1          | 8 - 10         | Y           | Y               | Arsenic                                                   | -                                | -                       |
| MW2-07                         | 10/12/2007     | SO-17322-101207-CB-044 | PAOC 1          | 11.75 - 13.75  | Y           | Y               | Arsenic                                                   | -                                | -                       |
| BH3-07                         | 10/12/2007     | SO-17322-101207-CB-040 | PAOC 4          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH3-07                         | 10/12/2007     | SO-17322-101207-CB-041 | PAOC 4          | 5 - 7          | Y           | N               | -                                                         | Neg.                             | 5 - 7                   |
| MW4-07                         | 10/11/2007     | SO-17322-101107-CB-028 | PAOC 1          | 15 - 17        | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH5-07 <sup>(4)</sup>          | 10/15/2007     | SO-17322-101507-CB-045 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH5-07 <sup>(4)</sup>          | 10/15/2007     | SO-17322-101507-CB-046 | PAOC 1          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH5-07 <sup>(4)</sup>          | 10/15/2007     | SO-17322-101507-CB-047 | PAOC 1          | 17.4 - 19.4    | Y           | N               | -                                                         | Neg.                             | 17.4 - 19.4             |
| BH6-07                         | 10/12/2007     | SO-17322-101207-CB-036 | PAOC 3          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH6-07 (dup)                   | 10/12/2007     | SO-17322-101207-CB-037 | PAOC 3          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH6-07                         | 10/12/2007     | SO-17322-101207-CB-038 | PAOC 3          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH6-07                         | 10/12/2007     | SO-17322-101207-CB-039 | PAOC 3          | 13 - 15        | Y           | N               | -                                                         | Neg.                             | 13 - 15                 |
| MW7-07                         | 10/12/2007     | SO-17322-101207-CB-033 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW7-07                         | 10/12/2007     | SO-17322-101207-CB-034 | PAOC 1          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW7-07                         | 10/12/2007     | SO-17322-101207-CB-035 | PAOC 1          | 10 - 12        | Y           | N               | -                                                         | Neg.                             | 10 - 12                 |
| BH8-07                         | 10/11/2007     | SO-17322-101107-CB-025 | PAOC 18         | 1.5 - 2.5      | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH8-07                         | 10/11/2007     | SO-17322-101107-CB-026 | PAOC 18         | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH8-07                         | 10/11/2007     | SO-17322-101107-CB-027 | PAOC 18         | 12.5 - 14.5    | Y           | N               | -                                                         | Neg.                             | 12.5 - 14.5             |
| BH9-07                         | 10/11/2007     | SO-17322-101107-CB-030 | PAOC 4          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH9-07 (dup)                   | 10/11/2007     | SO-17322-101107-CB-031 | PAOC 4          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH9-07                         | 10/11/2007     | SO-17322-101107-CB-029 | PAOC 4          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH9-07                         | 10/11/2007     | SO-17322-101107-CB-032 | PAOC 4          | 11 - 13        | Y           | N               | -                                                         | Neg.                             | 11 - 13                 |
| MW10-07                        | 10/15/2007     | SO-17322-101507-CB-048 | PAOC 3          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW10-07                        | 10/15/2007     | SO-17322-101507-CB-049 | PAOC 3          | 3 - 5          | Y           | N               | -                                                         | Neg.                             | 3 - 5                   |
| MW10-07                        | 10/15/2007     | SO-17322-101507-CB-050 | PAOC 3          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW11-07                        | 10/16/2007     | SO-17322-101607-CB-056 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW11-07                        | 10/16/2007     | SO-17322-101607-CB-057 | PAOC 1          | 7 - 9          | Y           | N               | -                                                         | Neg.                             | 7 - 9                   |
| BH12-07                        | 10/16/2007     | SO-17322-101607-CB-058 | PAOC 14         | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH12-07                        | 10/16/2007     | SO-17322-101607-CB-059 | PAOC 14         | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH12-07                        | 10/16/2007     | SO-17322-101607-CB-060 | PAOC 14         | 10 - 10.5      | Y           | N               | -                                                         | -                                | -                       |
| MW13-07                        | 10/18/2007     | SO-17322-101807-CB-085 | PAOC 12         | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW13-07 (dup)                  | 10/18/2007     | SO-17322-101807-CB-086 | PAOC 12         | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW13-07                        | 10/18/2007     | SO-17322-101807-CB-087 | PAOC 12         | 7 - 9          | Y           | Y               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | Neg.                             | 7 - 9                   |
| BH14-07                        | 10/16/2007     | SO-17322-101607-CB-051 | PAOC 11         | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | Neg.                             | 5                       |
| BH14-07                        | 10/16/2007     | SO-17322-101607-CB-052 | PAOC 11         | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW15-07                        | 10/16/2007     | SO-17322-101607-CB-053 | PAOC 11/PAOC 14 | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW15-07                        | 10/16/2007     | SO-17322-101607-CB-054 | PAOC 11/PAOC 14 | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW15-07                        | 10/16/2007     | SO-17322-101607-CB-055 | PAOC 11/PAOC 14 | 9.75 - 11.75   | Y           | N               | -                                                         | Neg.                             | 9.75 - 11.75            |
| MW16-07                        | 10/17/2007     | SO-17322-101707-CB-083 | PAOC 4          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW16-07                        | 10/17/2007     | SO-17322-101707-CB-084 | PAOC 4          | 6.75 - 8.75    | Y           | N               | -                                                         | Neg.                             | 6.75 - 8.75             |
| BH17A-07                       | 10/16/2007     | SO-17322-101607-CB-061 | PAOC 3          | 0.5 - 2.5      | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | Neg.                             | 1.75 - 2.25             |
| BH17B-07                       | 10/16/2007     | -                      | PAOC 3          | -              | -           | -               | -                                                         | -                                | -                       |
| MW17-07                        | 10/16/2007     | SO-17322-101607-CB-062 | PAOC 3          | 1.5 - 3.5      | Y           | N               | -                                                         | Neg.                             | 3 - 5                   |
| MW17-07                        | 10/16/2007     | SO-17322-101607-CB-063 | PAOC 3          | 10 - 12        | Y           | N               | -                                                         | -                                | -                       |
| BH18-07                        | 10/16/2007     | SO-17322-101607-CB-064 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH18-07                        | 10/16/2007     | SO-17322-101607-CB-065 | PAOC 1          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH18-07                        | 10/16/2007     | SO-17322-101607-CB-066 | PAOC 1          | 11.5 - 13.5    | Y           | N               | -                                                         | Neg.                             | 11.5 - 13.5             |
| MW19-07                        | 10/17/2007     | SO-17322-101707-CB-067 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW19-07                        | 10/17/2007     | SO-17322-101707-CB-068 | PAOC 1          | 8 - 10         | Y           | N               | -                                                         | Neg.                             | 8 - 10                  |
| MW20-07                        | 10/17/2007     | SO-17322-101707-CB-069 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW20-07 (dup)                  | 10/17/2007     | SO-17322-101707-CB-070 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| MW20-07                        | 10/17/2007     | SO-17322-101707-CB-071 | PAOC 1          | 6.5 - 8.5      | Y           | N               | -                                                         | Neg.                             | 6.5 - 8.5               |
| MW21-07                        | 12/3/2007      | SO-17322-120307-CB-091 | PAOC 3          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| MW21-07                        | 12/3/2007      | SO-17322-120307-CB-092 | PAOC 3          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW21-07                        | 12/3/2007      | SO-17322-120307-CB-093 | PAOC 3          | 10.5 - 12.5    | Y           | N               | -                                                         | Neg.                             | 10.5 - 12.5             |
| BH22-07                        | 12/7/2007      | SO-17322-120707-CB-131 | PAOC 7          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| BH22-07                        | 12/7/2007      | SO-17322-120707-CB-132 | PAOC 7          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH22-07                        | 12/7/2007      | SO-17322-120707-CB-133 | PAOC 7          | 12.25 - 14.25  | Y           | N               | -                                                         | Neg.                             | 12.25 - 14.25           |
| BH23-07 <sup>(4)</sup>         | 10/17/2007     | SO-17322-101707-CB-072 | PAOC 21         | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH23-07 <sup>(4)</sup>         | 10/17/2007     | SO-17322-101707-CB-075 | PAOC 21         | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH23-07 <sup>(4)</sup>         | 10/17/2007     | SO-17322-101707-CB-076 | PAOC 21         | 10.75 - 12.75  | Y           | N               | -                                                         | Neg.                             | 10.75 - 12.75           |
| BH24-07                        | 10/17/2007     | SO-17322-101707-CB-073 | PAOC 1          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | -                                | -                       |
| BH24-07                        | 10/17/2007     | SO-17322-101707-CB-074 | PAOC 1          | 8 - 10         | Y           | N               | -                                                         | Neg.                             | 8 - 10                  |
| BH25-07                        | 10/18/2007     | SO-17322-101807-CB-089 | PAOC 4          | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI)                | Neg.                             | 18 - 19                 |
| BH25-07                        | 10/18/2007     | SO-17322-101807-CB-090 | PAOC 4          | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH26-07                        | 12/3/2007      | SO-17322-120307-CB-105 | PAOC 15         | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr                    |                                  |                         |

SOIL BORING AND TEST PIT SAMPLE SUMMARY

PH 1322-101007-EST-49

PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location <sup>(1)</sup> | Date Installed | Sample Identification      | PAOC               | Depth (ft bgs) | Hold (Y/N)? | Off Hold (Y/N)? | Analysis                                                  | Sudan IV Jar Test (pos. or neg.) | Jar Test Depth (ft bgs) |
|--------------------------------|----------------|----------------------------|--------------------|----------------|-------------|-----------------|-----------------------------------------------------------|----------------------------------|-------------------------|
| MW43-07                        | 12/6/2007      | SO-17322-120607-CB-127     | PAOC 5             | 8 - 10         | Y           | N               | -                                                         | Neg.                             | 8 - 10                  |
| BH44-07                        | 12/6/2007      | SO-17322-120607-CB-128     | PAOC 2             | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| BH44-07                        | 12/6/2007      | SO-17322-120607-CB-129     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH44-07                        | 12/6/2007      | SO-17322-120607-CB-130     | PAOC 2             | 13 - 15        | Y           | N               | -                                                         | Neg.                             | 13 - 15                 |
| MW46-07                        | 10/9/2007      | SO-17322-100907-CB-012     | PAOC 6             | 0 - 2          | Y           | N               | -                                                         | Neg.                             | 7.5 - 10                |
| MW46-07                        | 10/9/2007      | SO-17322-100907-CB-013     | PAOC 6             | 9 - 10         | N           | -               | VOCs, Metals, SVOCs, Cyanide, PCBs, Cr(VI)                | -                                | -                       |
| MW46-07 (dup)                  | 10/9/2007      | SO-17322-100907-CB-014     | PAOC 6             | 9 - 10         | N           | -               | VOCs, Metals, SVOCs, Cyanide, PCBs, Cr(VI)                | -                                | -                       |
|                                | 10/9/2007      | SO-17322-100907-CB-009     | PAOC 6             | 0 - 2          | Y           | Y               | Arsenic                                                   | -                                | -                       |
| BH47-07                        | 10/9/2007      | SO-17322-100907-CB-010     | PAOC 6             | 8 - 10         | Y           | Y               | Arsenic                                                   | -                                | -                       |
| BH47-07                        | 10/9/2007      | SO-17322-100907-CB-011     | PAOC 6             | 17.5 - 20      | N           | -               | VOCs, Metals, SVOCs, Cyanide, PCBs, Cr(VI)                | Neg.                             | 17.5 - 20               |
| MW48-07                        | 10/9/2007      | SO-17322-100907-CB-007     | PAOC 2             | 5 - 7          | N           | -               | VOCs, Metals, SVOCs, Cyanide, PCBs, Cr(VI)                | Neg.                             | 0 - 2                   |
| MW48-07                        | 10/9/2007      | SO-17322-100907-CB-008     | PAOC 2             | 13.5 - 15.5    | Y           | N               | -                                                         | -                                | -                       |
| BH49-07                        | 10/9/2007      | SO-17322-100907-CB-004     | PAOC 3             | 0 - 2          | N           | -               | VOCs, Metals, SVOCs, Cyanide, PCBs, Cr(VI)                | -                                | -                       |
| BH49-07                        | 10/9/2007      | SO-17322-100907-CB-005     | PAOC 3             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH49-07                        | 10/9/2007      | SO-17322-100907-CB-006     | PAOC 3             | 33 - 35        | Y           | N               | -                                                         | Neg.                             | 33 - 35                 |
| BH50-07                        | 10/9/2007      | SO-17322-100907-CB-001     | PAOC 3             | 0 - 2          | N           | -               | VOCs, Metals, SVOCs, Cyanide, PCBs, Cr(VI)                | -                                | -                       |
| BH50-07                        | 10/9/2007      | SO-17322-100907-CB-002     | PAOC 3             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH50-07                        | 10/9/2007      | SO-17322-100907-CB-003     | PAOC 3             | 11 - 13        | Y           | N               | -                                                         | Neg.                             | 11 - 13                 |
| BH51-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH52-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH53-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH54-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH55-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH56-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH57-07                        | 10/18/2007     | SO-17322-101807-CB-088     | Fill Investigation | 0 - 2          | Y           | Y               | Lead <sup>(5)</sup>                                       | -                                | -                       |
| BH58-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH59-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH60-07                        | 10/18/2007     | -                          | Fill Investigation | -              | -           | -               | -                                                         | -                                | -                       |
| BH61-08                        | 3/10/2008      | SO-17322-031008-CB-006     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH61-08                        | 3/10/2008      | SO-17322-031008-CB-007     | PAOC 2             | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 8 - 10                  |
| BH62-08                        | 3/10/2008      | SO-17322-031008-CB-004     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH62-08                        | 3/10/2008      | SO-17322-031008-CB-005     | PAOC 2             | 9 - 11         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 9 - 11                  |
| MW63-08                        | 3/10/2008      | SO-17322-031008-CB-001     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| MW63-08                        | 3/10/2008      | SO-17322-031008-CB-002     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW63-08                        | 3/10/2008      | SO-17322-031008-CB-003     | PAOC 2             | 10 - 12        | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 10 - 12                 |
| MW64-08                        | 3/10/2008      | SO-17322-031008-CB-010     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| MW64-08                        | 3/10/2008      | SO-17322-031008-CB-011     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW64-08                        | 3/10/2008      | SO-17322-031008-CB-012     | PAOC 2             | 10 - 11.75     | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 10 - 11.75              |
| BH65-08                        | 3/11/2008      | SO-17322-031108-CB-013     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH65-08                        | 3/11/2008      | SO-17322-031108-CB-014     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH65-08                        | 3/11/2008      | SO-17322-031108-CB-015     | PAOC 2             | 10 - 12        | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 10 - 12                 |
| BH67-08                        | 3/10/2008      | SO-17322-031008-CB-008     | PAOC 2             | 0.35 - 1.5     | Y           | N               | -                                                         | -                                | -                       |
| BH67-08                        | 3/10/2008      | SO-17322-031008-CB-009     | PAOC 2             | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 8 - 10                  |
| MW68-08                        | 3/12/2008      | SO-17322-031208-CB-038     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| MW68-08                        | 3/12/2008      | SO-17322-031208-CB-039     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW68-08                        | 3/12/2008      | SO-17322-031208-CB-040     | PAOC 2             | 10 - 12        | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 10 - 12                 |
| MW69-08                        | 3/12/2008      | SO-17322-031208-CB-041     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| MW69-08                        | 3/12/2008      | SO-17322-031208-CB-042     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| MW69-08                        | 3/12/2008      | SO-17322-031208-CB-043     | PAOC 2             | 12 - 14        | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| MW69-08                        | 3/12/2008      | SO-17322-031208-CB-044     | PAOC 2             | 18 - 20        | Y           | Y               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Pos.                             | 18 - 20                 |
| TMW70-08                       | 3/5/2008       | SO-17322-030508-MC-BH-7008 | PAOC 2             | 4 - 6          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| TMW71-08                       | 3/6/2008       | SO-17322-030608-MC-BH-7108 | PAOC 13/PAOC 19    | 4 - 6          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| BH72-08                        | 3/13/2008      | SO-17322-031308-CB-051     | PAOC 22            | 0 - 2          | Y           | Y               | PCBs                                                      | -                                | -                       |
| BH72-08                        | 3/13/2008      | SO-17322-031308-CB-052     | PAOC 22            | 8 - 10         | Y           | Y               | PCBs                                                      | -                                | -                       |
| BH72-08                        | 3/13/2008      | SO-17322-031308-CB-053     | PAOC 22            | 12 - 14        | Y           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Pos.                             | 12 - 14                 |
| BH73-08                        | 3/14/2008      | SO-17322-031408-CB-066     | PAOC 22            | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH73-08                        | 3/14/2008      | SO-17322-031408-CB-067     | PAOC 22            | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| BH73-08                        | 3/14/2008      | SO-17322-031408-CB-068     | PAOC 22            | 11 - 13        | Y           | N               | -                                                         | Neg.                             | 11 - 13                 |
| MW74-08                        | 3/14/2008      | SO-17322-031408-CB-063     | PAOC 2             | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| MW74-08                        | 3/14/2008      | SO-17322-031408-CB-065     | PAOC 2             | 8 - 10         | Y           | Y               | VOCs                                                      | Neg.                             | 8 - 10                  |
| BH75-08                        | 3/12/2008      | SO-17322-031208-CB-036     | PAOC 6             | 0 - 2          | Y           | N               | -                                                         | Neg.                             | 8 - 10                  |
| BH75-08                        | 3/12/2008      | SO-17322-031208-CB-037     | PAOC 6             | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| BH76-08                        | 3/11/2008      | SO-17322-031108-CB-016     | PAOC 9             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH76-08                        | 3/11/2008      | SO-17322-031108-CB-017     | PAOC 9             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH76-08                        | 3/11/2008      | SO-17322-031108-CB-018     | PAOC 9             | 15.5 - 17.5    | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 15.5 - 17.5             |
| BH77-08                        | 3/11/2008      | SO-17322-031108-CB-019     | PAOC 9             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH77-08                        | 3/11/2008      | SO-17322-031108-CB-020     | PAOC 9             | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| BH77-08 (dup)                  | 3/11/2008      | SO-17322-031108-CB-021     | PAOC 9             | 8 - 10         | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | Neg.                             | 8 - 10                  |
| MW78-08                        | 3/11/2008      | SO-17322-031108-CB-024     | PAOC 2             | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
| MW78-08 (dup)                  | 3/11/2008      | SO-17322-031108-CB-025     | PAOC 2             | 0 - 2          | N           | -               | VOCs, SVOCs, Metals, PCBs, Cyanide, Cr(VI), Lead, Cr(III) | -                                | -                       |
|                                | 3/11/2008      | SO-17322-031108-CB-026     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | Neg.                             | 8 - 10                  |
| BH79-08                        | 3/11/2008      | SO-17322-031108-CB-027     | PAOC 2             | 0 - 2          | Y           | N               | -                                                         | -                                | -                       |
| BH79-08                        | 3/11/2008      | SO-17322-031108-CB-028     | PAOC 2             | 8 - 10         | Y           | N               | -                                                         | -                                | -                       |
| BH79-08                        | 3/11/2008      | SO-17322-031108-CB-029     | PAOC 2             | 12 -           |             |                 |                                                           |                                  |                         |

SOIL BORING AND TEST PIT SAMPLE SUMMARY  
PHASE I ES  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location <sup>(1)</sup> | Date Installed                                                                                                  | Sample Identification | PAOC | Depth (ft bgs) | Hold (Y/N)? | Off Hold (Y/N)? | Analysis | Sudan IV Jar Test (pos.<br>or neg.) | Jar Test Depth<br>(ft bgs) |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------|------|----------------|-------------|-----------------|----------|-------------------------------------|----------------------------|
| Notes:                         |                                                                                                                 |                       |      |                |             |                 |          |                                     |                            |
| (1)                            | Soil borings BH31-07, BH45-07, BH66-08, and BH93-08 were not completed due to refusal or demolition activities. |                       |      |                |             |                 |          |                                     |                            |
| (2)                            | Sample was collected from under the water table and analyzed at the request of ENCORE.                          |                       |      |                |             |                 |          |                                     |                            |
| (3)                            | Analyzed at the request of ENCORE based on field observations (petroleum odor).                                 |                       |      |                |             |                 |          |                                     |                            |
| (4)                            | Shelby tube sample collected adjacent to soil boring.                                                           |                       |      |                |             |                 |          |                                     |                            |
| -                              | Letters prior to test pit locations correspond to orientation within excavation (i.e. SE is southeast).         |                       |      |                |             |                 |          |                                     |                            |
|                                | No sample collected due to poor recovery, refusal, or investigation of fill.                                    |                       |      |                |             |                 |          |                                     |                            |
| BH                             | Soil boring.                                                                                                    |                       |      |                |             |                 |          |                                     |                            |
| MW                             | Monitoring well.                                                                                                |                       |      |                |             |                 |          |                                     |                            |
| TMW                            | Temporary monitoring well.                                                                                      |                       |      |                |             |                 |          |                                     |                            |
| TP                             | Test pit.                                                                                                       |                       |      |                |             |                 |          |                                     |                            |
| dup                            | Field duplicate sample.                                                                                         |                       |      |                |             |                 |          |                                     |                            |
| ft bgs                         | Feet below ground surface.                                                                                      |                       |      |                |             |                 |          |                                     |                            |
| Metals                         | Target Analyte List Metals.                                                                                     |                       |      |                |             |                 |          |                                     |                            |
| PAOC                           | Potential Area of Concern.                                                                                      |                       |      |                |             |                 |          |                                     |                            |
| PCBs                           | Polychlorinated Biphenyls.                                                                                      |                       |      |                |             |                 |          |                                     |                            |
| VOCs                           | Target Compound List Volatile Organic Compounds.                                                                |                       |      |                |             |                 |          |                                     |                            |
| Cr                             | Chromium.                                                                                                       |                       |      |                |             |                 |          |                                     |                            |
| pos.                           | Positive jar test result.                                                                                       |                       |      |                |             |                 |          |                                     |                            |
| neg.                           | Negative jar test result.                                                                                       |                       |      |                |             |                 |          |                                     |                            |

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TABLE 2.2

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## MONITORING WELL CONSTRUCTION DETAILS

PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Well ID                | Date Installed | Installed By | Ground Surface Elevation<br>(ft AMSL) | Top of Riser Elevation<br>(ft AMSL) | Total Depth of Soil Boring<br>(ft bgs) | Screened Interval |                    | Screened Interval |                     |
|------------------------|----------------|--------------|---------------------------------------|-------------------------------------|----------------------------------------|-------------------|--------------------|-------------------|---------------------|
|                        |                |              |                                       |                                     |                                        | Top<br>(ft bgs)   | Bottom<br>(ft bgs) | Top<br>(ft AMSL)  | Bottom<br>(ft AMSL) |
| MW2-07                 | 10/12/2007     | C. Bondy     | 936.97                                | 936.95                              | 30                                     | 12                | 25                 | 924.97            | 911.97              |
| MW4-07                 | 10/11/2007     | C. Bondy     | 938.13                                | 937.77                              | 20                                     | 5.5               | 15.5               | 932.63            | 922.63              |
| MW7-07                 | 10/12/2007     | C. Bondy     | 938.04                                | 937.67                              | 38                                     | 10                | 15                 | 928.04            | 923.04              |
| MW10-07                | 10/15/2007     | C. Bondy     | 941.44                                | 941.11                              | 15                                     | 3.5               | 13.5               | 937.94            | 927.94              |
| MW11-07                | 10/16/2007     | C. Bondy     | 954.67                                | 954.27                              | 40                                     | 7                 | 12                 | 947.67            | 942.67              |
| MW13-07                | 10/18/2007     | C. Bondy     | 953.13                                | 956.11                              | 20                                     | 7                 | 14                 | 946.13            | 939.13              |
| MW15-07                | 10/16/2007     | C. Bondy     | 960.77                                | 960.42                              | 30                                     | 9                 | 14                 | 951.77            | 946.77              |
| MW16-07                | 10/18/2007     | C. Bondy     | 956.08                                | 955.89                              | 60                                     | 6                 | 16                 | 950.08            | 940.08              |
| MW17-07                | 10/16/2007     | C. Bondy     | 952.61                                | 952.18                              | 15                                     | 3                 | 10                 | 949.61            | 942.61              |
| MW19-07                | 10/17/2007     | C. Bondy     | 959.94                                | 959.68                              | 30                                     | 8                 | 13                 | 951.94            | 946.94              |
| MW20-07                | 10/17/2007     | C. Bondy     | 960.26                                | 960.06                              | 20                                     | 6.5               | 13                 | 953.76            | 947.26              |
| MW21-07                | 12/4/2007      | C. Bondy     | 952.35                                | 952.14                              | 25                                     | 10.5              | 20.5               | 941.85            | 931.85              |
| MW27-07                | 12/7/2007      | C. Bondy     | 946.92                                | 946.51                              | 25                                     | 3                 | 13                 | 943.92            | 933.92              |
| MW28-07                | 10/18/2007     | C. Bondy     | 960.13                                | 960.02                              | 60                                     | 10                | 20                 | 950.13            | 940.13              |
| MW32-07                | 12/7/2007      | C. Bondy     | 953.64                                | 953.40                              | 25                                     | 9                 | 19                 | 944.64            | 934.64              |
| MW33-07                | 12/4/2007      | C. Bondy     | 946.96                                | 946.51                              | 25                                     | 10.5              | 20.5               | 936.46            | 926.46              |
| MW34-07                | 12/4/2007      | C. Bondy     | 951.24                                | 950.88                              | 20                                     | 11                | 16                 | 940.24            | 935.24              |
| MW35-07                | 12/4/2007      | C. Bondy     | 946.57                                | 946.43                              | 20                                     | 6                 | 11                 | 940.57            | 935.57              |
| MW37-07                | 12/4/2007      | C. Bondy     | 947.16                                | 946.85                              | 20                                     | 12.5              | 25.5               | 934.66            | 921.66              |
| MW38-07                | 12/4/2007      | C. Bondy     | 949.46                                | 949.21                              | 20                                     | 9.5               | 14.5               | 939.96            | 934.96              |
| MW40-07                | 12/6/2007      | C. Bondy     | 948.73                                | 948.42                              | 20                                     | 11                | 16                 | 937.73            | 932.73              |
| MW43-07                | 12/6/2007      | C. Bondy     | 950.05                                | 949.74                              | 20                                     | 15                | 15                 | 943.05            | 935.05              |
| MW46-07 <sup>(1)</sup> | 10/9/2007      | C. Bondy     | --                                    | --                                  | 15.5                                   | 5                 | 15                 | --                | --                  |
| MW48-07                | 10/9/2007      | C. Bondy     | 960.99                                | 960.69                              | 20                                     | 5                 | 15                 | 955.99            | 945.99              |
| MW63-07                | 3/10/2008      | C. Bondy     | 947.78                                | 947.39                              | 20                                     | 9.5               | 15.5               | 938.28            | 932.28              |
| MW64-07                | 3/10/2008      | C. Bondy     | 947.78                                | 947.52                              | 30                                     | 9.5               | 14.5               | 938.28            | 933.28              |
| MW68-07                | 3/12/2008      | C. Bondy     | 956.94                                | 956.58                              | 25                                     | 9                 | 19                 | 947.94            | 937.94              |
| MW69-07                | 3/13/2008      | C. Bondy     | 956.91                                | 956.49                              | 25                                     | 10                | 20                 | 946.91            | 936.91              |
| TMW70-07               | 3/5/2008       | M. Coram     | 945.52                                | 947.55                              | 15                                     | 3                 | 8                  | 942.52            | 937.52              |
| TMW71-07               | 3/6/2008       | M. Coram     | 947.00                                | 949.06                              | 15                                     | 3                 | 8                  | 944.00            | 939.00              |
| MW74-07                | 3/14/2008      | C. Bondy     | 956.96                                | 956.76                              | 20                                     | 8                 | 16                 | 948.96            | 940.96              |
| MW78-07                | 3/11/2008      | C. Bondy     | 964.11                                | 964.00                              | 20                                     | 8                 | 13                 | 956.11            | 951.11              |
| TMW80-07               | 3/5/2008       | M. Coram     | 954.17                                | 955.51                              | 15                                     | 4                 | 9                  | 950.17            | 945.17              |
| TMW81-07               | 3/5/2008       | M. Coram     | 954.18                                | 957.17                              | 15                                     | 2                 | 7                  | 952.18            | 947.18              |
| TMW87-07               | 3/6/2008       | M. Coram     | 949.66                                | 951.96                              | 15                                     | 6                 | 11                 | 943.66            | 938.66              |

## Notes:

(1) Monitoring well MW46-07 could not be located for surveying due to demolition debris over the well.

ft AMSL - Feet Above Mean Sea Level.

ft bgs - Feet below ground surface.

MW = Monitoring well.

TMW - Temporary monitoring well.

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## GROUNDWATER AND LNAPL SAMPLE SUMMARY

PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location | Sample Identification     | PAOC            | Date Collected | Analysis                                                                                                                      |
|-----------------|---------------------------|-----------------|----------------|-------------------------------------------------------------------------------------------------------------------------------|
| MW2-07          | GW-17322-112807-CB-008    | PAOC 1          | 11/28/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW4-07          | GW-17322-112807-CB-009    | PAOC 1          | 11/28/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW7-07          | GW-17322-112807-CB-007    | PAOC 1          | 11/28/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW10-07         | GW-17322-112707-CB-004    | PAOC 3          | 11/27/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW11-07         | GW-17322-112707-CB-002    | PAOC 1          | 11/27/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW13-07         | -                         | PAOC 12         | Dry            | -                                                                                                                             |
| MW15-07         | GW-17322-112707-CB-005    | PAOC 11/PAOC 14 | 11/27/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW15-07 (dup)   | GW-17322-112707-CB-006    | PAOC 11/PAOC 14 | 11/27/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW16-07         | -                         | PAOC 4          | Dry            | -                                                                                                                             |
| MW17-07         | GW-17322-112707-CB-001    | PAOC 3          | 11/27/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW19-07         | GW-17322-112707-CB-003    | PAOC 1          | 11/27/2007     | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW20-07         | -                         | PAOC 1          | Dry            | -                                                                                                                             |
| MW21-07         | -                         | PAOC 3          | Dry            | -                                                                                                                             |
| MW27-07         | -                         | PAOC 17         | Dry            | -                                                                                                                             |
| MW28-07         | -                         | PAOC 21         | Dry            | -                                                                                                                             |
| MW32-07         | GW-17322-010908-CB-016    | PAOC 2          | 1/9/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW33-07         | GW-17322-010808-CB-011    | PAOC 5          | 1/8/2008       | VOCs, PCBs                                                                                                                    |
| MW33-07         | GW-17322-010908-CB-011    | PAOC 5          | 1/9/2008       | SVOCs, Metals, Amenable Cyanide, Cr(VI), Cr(III)                                                                              |
| MW34-07         | GW-17322-010808-CB-013    | PAOC 5          | 1/8/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW35-07         | GW-17322-010808-CB-012    | PAOC 10         | 1/8/2008       | VOCs, SVOCs, PCBs                                                                                                             |
| MW35-07         | GW-17322-010908-CB-012    | PAOC 10         | 1/9/2008       | SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                        |
| MW37-07         | GW-17322-010808-CB-010    | PAOC 5          | 1/8/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW38-07         | GW-17322-010908-CB-017    | PAOC 3          | 1/9/2008       | VOCs, Metals                                                                                                                  |
| MW40-07         | GW-17322-010808-CB-014    | PAOC 5          | 1/8/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW40-07 (dup)   | GW-17322-010808-CB-015    | PAOC 5          | 1/8/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW43-07         | -                         | PAOC 5          | Dry            | -                                                                                                                             |
| MW46-07         | -                         | PAOC 6          | Covered        | -                                                                                                                             |
| MW48-07         | GW-17322-040808-CB-006    | PAOC 2          | 4/8/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW48-07 (dup)   | GW-17322-040808-CB-007    | PAOC 2          | 4/8/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW63-08         | GW-17322-040708-CB-002    | PAOC 2          | 4/7/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW64-08         | GW-17322-040708-CB-001    | PAOC 2          | 4/7/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW68-08         | GW-17322-040708-CB-005    | PAOC 2          | 4/7/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW69-08         | LNAPL-17322-040308-CB-001 | PAOC 2          | 4/3/2008       | VOCs, Reactive Sulfide, SVOCs, Metals, PCBs, Amenable Cyanide, Ignitibility, Corrosivity, Specific Gravity, Dynamic Viscosity |
| TMW70-08        | -                         | PAOC 2          | Dry            | -                                                                                                                             |
| TMW71-08        | WG-17322-031008-MC-002    | PAOC 13/PAOC 19 | 3/10/2008      | VOCs                                                                                                                          |
| MW74-08         | GW-17322-040708-CB-004    | PAOC 2          | 4/7/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| MW78-08         | GW-17322-040708-CB-003    | PAOC 2          | 4/7/2008       | VOCs, SVOCs, Metals, PCBs, Amenable Cyanide, Cr(VI), Cr(III)                                                                  |
| TMW80-08        | -                         | PAOC 2          | Dry            | -                                                                                                                             |
| TMW81-08        | WG-17322-031008-MC-001    | PAOC 2          | 3/10/2008      | VOCs                                                                                                                          |
| TMW87-08        | -                         | PAOC 2          | Dry            | -                                                                                                                             |

## Notes:

|                |                                                      |
|----------------|------------------------------------------------------|
| Cr(VI)/Cr(III) | Speciated Chromium.                                  |
| BTEX           | Benzene, Toluene, Ethylbenzene, Xylenes.             |
| LNAPL          | Light Non-Aqueous Phase Liquid.                      |
| Metals         | Target Analyte List Metals.                          |
| MW             | Monitoring Well.                                     |
| PAOC           | Potential Area of Concern.                           |
| PCBs           | Polychlorinated Biphenyls.                           |
| SVOCs          | Target Compound List Semivolatile Organic Compounds. |
| VOCs           | Target Compound List Volatile Organic Compounds.     |

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**SUMMARY OF GROUNDWATER ELEVATION MONITORING  
PHASE II ESA  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN**

| <i>Monitoring Well ID:</i>               | <i>MW02-07</i> | <i>MW04-07</i> | <i>MW07-07</i> | <i>MW10-07</i> | <i>MW11-07</i> | <i>MW13-07</i> | <i>MW15-07</i> | <i>MW16-07</i> | <i>MW17-07</i> | <i>MW19-07</i> | <i>MW20-07</i> | <i>MW21-07</i> | <i>MW27-07</i> |
|------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <i>Ground Elevation (ft AMSL)</i>        | 936.97         | 938.13         | 938.04         | 941.44         | 954.67         | 953.13         | 960.77         | 956.08         | 952.61         | 959.94         | 960.26         | 952.35         | 946.92         |
| <i>Top of Casing Elevation (ft AMSL)</i> | 936.95         | 937.77         | 937.67         | 941.11         | 954.27         | 956.11         | 960.42         | 955.89         | 952.18         | 959.68         | 960.06         | 952.14         | 946.51         |

**December 15, 2008**

|                                        |        |        |        |                     |        |        |                   |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|---------------------|--------|--------|-------------------|--------|--------|--------|--------|--------|--------|
| <b>Depth to Water (ft BTOC)</b>        | 12.10  | 1.31   | 11.67  | 0.00 <sup>(1)</sup> | 4.44   | 15.92  | -- <sup>(2)</sup> | 15.32  | 5.46   | 10.48  | 13.88  | 16.66  | 4.71   |
| <b>Groundwater Elevation (ft AMSL)</b> | 924.85 | 936.46 | 926.00 | 941.11              | 949.83 | 940.19 | --                | 940.57 | 946.72 | 949.20 | 946.18 | 935.48 | 941.80 |
| <b>Depth to Water (ft BGS)</b>         | 12.11  | 1.67   | 12.05  | 0.33                | 4.84   | 12.94  | --                | 15.51  | 5.89   | 10.75  | 14.08  | 16.87  | 5.12   |

**December 20, 2007**

|                                        |        |        |        |        |        |        |        |     |        |        |     |        |     |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|-----|--------|--------|-----|--------|-----|
| <b>Depth to Water (ft BTOC)</b>        | 12.51  | 4.90   | 12.12  | 0.84   | 5.85   | 16.10  | 10.93  | DRY | 8.17   | 10.40  | DRY | 18.12  | DRY |
| <b>Groundwater Elevation (ft AMSL)</b> | 924.44 | 932.87 | 925.55 | 940.27 | 948.42 | 940.01 | 949.49 | --  | 941.78 | 941.56 | --  | 934.02 | --  |
| <b>Depth to Water (ft BGS)</b>         | 12.52  | 5.26   | 12.50  | 1.17   | 6.25   | 13.12  | 11.28  | --  | 10.83  | 18.39  | --  | 18.33  | --  |

Notes:

(1) Water was to the top of casing at monitoring well MW10-07 during the December 15, 2008 event.

(2) Monitoring well MW15-07 was covered by a roll-off box during the December 15, 2008 event.

(3) Monitoring wells MW32-07, MW43-07, and MW64-08 could not be found during the December 15, 2008 event due to the present of snow and ice on-Site.

(4) Monitoring wells MW28-07 and MW48-07 could not be found during the December 20, 2007 event due to the presence of miscellaneous debris piles covering the wells.

Monitoring well MW46-07 could not be located for surveying or monitoring.

ft AMSL: feet Above Mean Sea Level.

ft BTOC: feet Below Top Of Casing.

ft BGS: feet Below Ground Surface.

SUMMARY OF GROUNDWATER ELEVATION MONITORING  
PHASE II ESA  
PONTIAC WASTEWATER TREATMENT CENTER  
PONTIAC, MICHIGAN

| Monitoring Well ID:               | MW28-07 | MW32-07 | MW33-07 | MW34-07 | MW35-07 | MW37-07 | MW38-07 | MW40-07 | MW43-07 | MW48-07 | MW63-08 | MW64-08 | MW68-08 | MW69-08 | MW74-08 | MW78-08 |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Ground Elevation (ft AMSL)        | 960.13  | 953.64  | 946.96  | 951.24  | 946.57  | 947.16  | 949.46  | 948.73  | 950.05  | 960.99  | 947.78  | 947.78  | 956.94  | 956.91  | 956.96  | 956.96  |
| Top of Casing Elevation (ft AMSL) | 960.02  | 953.40  | 946.51  | 950.88  | 946.43  | 946.85  | 949.21  | 948.42  | 949.74  | 960.69  | 947.39  | 947.52  | 956.58  | 956.49  | 956.76  | 964.00  |

## December 15, 2008

|                                 |     |                   |        |        |        |        |        |        |                   |        |        |                   |        |        |        |        |
|---------------------------------|-----|-------------------|--------|--------|--------|--------|--------|--------|-------------------|--------|--------|-------------------|--------|--------|--------|--------|
| Depth to Water (ft BTOC)        | DRY | -- <sup>(3)</sup> | 16.98  | 2.7    | 5.54   | 17.48  | 3.66   | 7.29   | -- <sup>(3)</sup> | 3.37   | 7.16   | -- <sup>(3)</sup> | 11.91  | 12.46  | 11.21  | 9.57   |
| Groundwater Elevation (ft AMSL) | --  | --                | 929.53 | 948.18 | 940.89 | 929.37 | 945.55 | 941.13 | --                | 957.32 | 940.23 | --                | 944.67 | 944.03 | 945.55 | 954.43 |
| Depth to Water (ft BGS)         | --  | --                | 17.43  | 3.05   | 5.69   | 17.78  | 3.91   | 7.61   | --                | 3.67   | 7.55   | --                | 12.27  | 12.88  | 11.41  | 2.53   |

## December 20, 2007

|                                 |                   |        |        |        |        |        |        |        |     |                   |  |  |  |  |  |  |
|---------------------------------|-------------------|--------|--------|--------|--------|--------|--------|--------|-----|-------------------|--|--|--|--|--|--|
| Depth to Water (ft BTOC)        | -- <sup>(4)</sup> | 10.81  | 17.6   | 7.61   | 6.25   | 18.17  | 10.32  | 8.81   | DRY | -- <sup>(4)</sup> |  |  |  |  |  |  |
| Groundwater Elevation (ft AMSL) | --                | 942.59 | 928.91 | 943.27 | 940.18 | 928.68 | 938.89 | 939.61 | --  | --                |  |  |  |  |  |  |
| Depth to Water (ft BGS)         | --                | 11.05  | 18.05  | 7.96   | 6.40   | 18.47  | 10.57  | 9.13   | --  | --                |  |  |  |  |  |  |

## Notes:

- (1) Water was to the top of casing at monitoring well MW10-07 during the December 15, 2008 event.
- (2) Monitoring well MW15-07 was covered by a roll-off box during the December 15, 2008 event.
- (3) Monitoring wells MW32-07, MW43-07, and MW64-08 could not be found during the December 15, 2008 event due to the present of snow and ice on-Site.
- (4) Monitoring wells MW28-07 and MW48-07 could not be found during the December 20, 2007 event due to the presence of miscellaneous debris piles covering the wells. Monitoring well MW46-07 could not be located for surveying or monitoring.
- ft AMSL: feet Above Mean Sea Level.
- ft BTOC: feet Below Top Of Casing.
- ft BGS: feet Below Ground Surface.

David Selger

LFR

TABLE 2.5

Aug 07, 2009 14:49

**SUMMARY OF LNAPL MONITORING AT MW69-08  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN**

Draft for Review  
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Prepared at the Request of Counsel  
Page 1 of 1

| <i>Date of Monitoring</i> <sup>(1)</sup> | <i>Initial Depth to<br/>LNAPL<br/>(ft BTOR)</i> | <i>Initial Depth to<br/>Water<br/>(ft BTOR)</i> | <i>Initial LNAPL<br/>Thickness<br/>(ft)</i> | <i>Volume LNAPL<br/>Removed <sup>(2)</sup><br/>(gal)</i> | <i>Final Depth to<br/>LNAPL<br/>(ft BTOR)</i> | <i>Final Depth to<br/>Water<br/>(ft BTOR)</i> | <i>Final LNAPL<br/>Thickness<br/>(ft)</i> |
|------------------------------------------|-------------------------------------------------|-------------------------------------------------|---------------------------------------------|----------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------------------|
| January 28, 2009                         | 11.04                                           | 11.94                                           | 0.90                                        | 0.50                                                     | 11.86                                         | 11.96                                         | 0.10                                      |
| December 15, 2008                        | 11.21                                           | 12.46                                           | 1.25                                        | 0.50                                                     | 12.30                                         | 12.55                                         | 0.25                                      |
| December 12, 2008                        | 10.92                                           | 13.58                                           | 2.66                                        | 1.50                                                     | 12.81                                         | 13.02                                         | 0.21                                      |
| July 3, 2008                             | 9.43                                            | 16.39                                           | 6.96                                        | 2.75                                                     | 12.73                                         | 12.98                                         | 0.25                                      |
| April 3, 2008                            | 12.10                                           | 16.44                                           | 4.34                                        | 2.50                                                     | 14.50                                         | 14.80                                         | 0.30                                      |

## Notes:

LNAPL: Light Non-Aqueous Phase Liquid.

ft: Feet.

BTOR: Below Top of Riser.

Gal: Gallons.

N/A: Not Available.

(1) : LNAPL was detected in monitoring well MW69-08 in March 2008.

(2) : Volume removed is approximate. LNAPL removed with a bailer and stored on-Site in a grounded drum with an overpack.

David Selger

LFR

Aug 07, 2009 14:49

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | BH-1-07<br>(8-10)      | MW-2-07<br>(0-2)       | MW-2-07<br>(8-10)      | MW-2-07<br>(11.75-13.75) | BH-3-07<br>(0-2)       | MW-4-07<br>(15-17)     | BH-5-07<br>(0-2)       | BH-6-07<br>(0-2)       | BH-6-07<br>(0-2)       | MW-7-07<br>(0-2)       | BH-8-07<br>(1.5-2.5)   | BH-9-07<br>(0-2)       |
|--------------------------------------------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|--------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                                                                                                        |       | SO-17322-120707-CB-141 | SO-17322-101207-CB-042 | SO-17322-101207-CB-043 | SO-17322-101207-CB-044   | SO-17322-101207-CB-040 | SO-17322-101107-CB-028 | SO-17322-101507-CB-045 | SO-17322-101207-CB-036 | SO-17322-101207-CB-037 | SO-17322-101207-CB-033 | SO-17322-101107-CB-025 | SO-17322-101107-CB-030 |
|                                                                                                        |       | 12/07/2007             | 10/12/2007             | 10/12/2007             | 10/12/2007               | 10/12/2007             | 10/11/2007             | 10/15/2007             | 10/12/2007             | 10/12/2007             | 10/12/2007             | 10/11/2007             | 10/11/2007             |
|                                                                                                        | Units |                        |                        |                        |                          |                        |                        |                        |                        | Duplicate              |                        |                        |                        |
| Volatile Organic Compounds                                                                             |       |                        |                        |                        |                          |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                                                                                  | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,1-Dichloroethane                                                                                     | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,1-Dichloroethene                                                                                     | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,2,4-Trimethylbenzene                                                                                 | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,2-Dichlorobenzene                                                                                    | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,3,5-Trimethylbenzene                                                                                 | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,3-Dichlorobenzene                                                                                    | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 1,4-Dichlorobenzene                                                                                    | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| 2-Butanone (Methyl Ethyl Ketone)                                                                       | ug/kg | 16 U                   | 17 U                   | --                     | --                       | 15 U                   | 14 U                   | 15 U                   | 3.1 J                  | 18 U                   | 19 U                   | 15 U                   | 16 U                   |
| 2-Hexanone                                                                                             | ug/kg | 16 UJ                  | 17 U                   | --                     | --                       | 15 U                   | 14 UJ                  | 15 U                   | 18 U                   | 18 U                   | 19 U                   | 15 U                   | 16 U                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)                                                          | ug/kg | 16 U                   | 17 U                   | --                     | --                       | 15 U                   | 14 U                   | 15 U                   | 18 U                   | 18 U                   | 19 U                   | 15 U                   | 16 U                   |
| Acetone                                                                                                | ug/kg | 16 U                   | 17 U                   | --                     | --                       | 15 U                   | 14 U                   | 15 U                   | 17 J                   | 15 J                   | 19 U                   | 15 U                   | 16 U                   |
| Benzene                                                                                                | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Carbon disulfide                                                                                       | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Chloroethane                                                                                           | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Chloroform (Trichloromethane)                                                                          | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| cis-1,2-Dichloroethene                                                                                 | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Cyclohexane                                                                                            | ug/kg | 8.1 U                  | 8.5 U                  | --                     | --                       | 7.3 U                  | 7.0 U                  | 7.4 U                  | 8.9 U                  | 8.8 U                  | 9.5 U                  | 7.6 U                  | 7.9 U                  |
| Ethylbenzene                                                                                           | ug/kg | 4.1 UJ                 | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Isopropylbenzene                                                                                       | ug/kg | 4.1 UJ                 | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Methyl acetate                                                                                         | R     |                        | 8.5 U                  | --                     | --                       | 7.3 U                  | 7.0 U                  | 7.4 U                  | 8.9 U                  | 8.8 U                  | 9.5 U                  | 7.6 U                  | 7.9 U                  |
| Methyl cyclohexane                                                                                     | ug/kg | 8.1 U                  | 8.5 U                  | --                     | --                       | 7.3 U                  | 7.0 U                  | 7.4 U                  | 8.9 U                  | 8.8 U                  | 9.5 U                  | 7.6 U                  | 7.9 U                  |
| Methyl Tert Butyl Ether                                                                                | ug/kg | 16 U                   | 17 U                   | --                     | --                       | 15 U                   | 14 U                   | 15 U                   | 18 U                   | 18 U                   | 19 U                   | 15 U                   | 16 U                   |
| Methylene chloride                                                                                     | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 1.2 J                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.0 J                  |
| Tetrachloroethene                                                                                      | ug/kg | 4.1 UJ                 | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Toluene                                                                                                | ug/kg | 4.1 UJ                 | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 UJ                 | 0.21 J                 | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| trans-1,2-Dichloroethene                                                                               | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Trichloroethene                                                                                        | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Trichlorofluoromethane (CFC-11)                                                                        | ug/kg | 4.1 UJ                 | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Vinyl chloride                                                                                         | ug/kg | 4.1 U                  | 4.2 U                  | --                     | --                       | 3.7 U                  | 3.5 U                  | 3.7 U                  | 4.4 U                  | 4.4 U                  | 4.7 U                  | 3.8 U                  | 3.9 U                  |
| Xylene (total)                                                                                         | ug/kg | 8.1 UJ                 | 8.5 U                  | --                     | --                       | 7.3 U                  | 7.0 UJ                 | 7.4 U                  | 8.9 U                  | 8.8 U                  | 9.5 U                  | 7.6 U                  | 7.9 U                  |
| Semi-Volatile Organic Compounds                                                                        |       |                        |                        |                        |                          |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                                                                                     | ug/kg | 220 U                  | 210 U                  | --                     | --                       | 220 U                  | 220 U                  | 210 U                  | 220 U                  | 220 U                  | 220 U                  | 230 U                  | 230 U                  |
| 2-Methylnaphthalene                                                                                    | ug/kg | 7.3 U                  | 12                     | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 20                     | 41                     | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Acenaphthene                                                                                           | ug/kg | 7.3 U                  | 7.1 U                  | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 7.3 U                  | 7.3 U                  | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Acenaphthylene                                                                                         | ug/kg | 7.3 U                  | 7.1 U                  | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 7.3 U                  | 7.3 U                  | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Acetophenone                                                                                           | ug/kg | 110 U                  | 110 U                  | --                     | --                       | 110 U                  | 110 U                  | 110 U                  | 110 U                  | 110 U                  | 110 U                  | 110 U                  | 110 U                  |
| Anthracene                                                                                             | ug/kg | 7.3 U                  | 7.1 U                  | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 15                     | 17                     | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Benzo(a)anthracene                                                                                     | ug/kg | 7.3 U                  | 16                     | --                     | --                       | 23                     | 7.3 U                  | 7.0 U                  | 83                     | 150                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Benzo(a)pyrene                                                                                         | ug/kg | 7.3 U                  | 18                     | --                     | --                       | 19                     | 7.3 U                  | 7.0 U                  | 110                    | 180                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Benzo(b)fluoranthene                                                                                   | ug/kg | 7.3 U                  | 26                     | --                     | --                       | 23                     | 7.3 U                  | 7.0 U                  | 210                    | 180                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Benzo(g,h,i)perylene                                                                                   | ug/kg | 7.3 U                  | 16                     | --                     | --                       | 15                     | 7.3 U                  | 7.0 U                  | 120                    | 140                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Benzo(k)fluoranthene                                                                                   | ug/kg | 7.3 U                  | 8.3                    | --                     | --                       | 10                     | 7.3 U                  | 7.0 U                  | 68                     | 200                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Biphenyl                                                                                               | ug/kg | 55 U                   | 53 U                   | --                     | --                       | 54 U                   | 55 U                   | 53 U                   | 55 U                   | 55 U                   | 55 U                   | 57 U                   | 57 U                   |
| bis(2-Ethylhexyl)phthalate                                                                             | ug/kg | 30 J                   | 53 U                   | --                     | --                       | 54 U                   | 55 U                   | 53 U                   | 55 U                   | 55 U                   | 55 U                   | 63                     | 57 U                   |
| Caprolactam                                                                                            | ug/kg | 360 U                  | 350 U                  | --                     | --                       | 360 U                  | 360 U                  | 350 U                  | 360 U                  | 360 U                  | 360 U                  | 370 U                  | 380 U                  |
| Carbazole                                                                                              | ug/kg | 55 U                   | 53 U                   | --                     | --                       | 54 U                   | 55 U                   | 53 U                   | 55 U                   | 55 U                   | 55 U                   | 57 U                   | 57 U                   |
| Chrysene                                                                                               | ug/kg | 7.3 U                  | 20                     | --                     | --                       | 29                     | 7.3 U                  | 7.0 U                  | 120                    | 210                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Dibenz(a,h)anthracene                                                                                  | ug/kg | 7.3 U                  | 7.1 U                  | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 33                     | 7.3 U                  | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Dibenzofuran                                                                                           | ug/kg | 55 U                   | 53 U                   | --                     | --                       | 54 U                   | 55 U                   | 53 U                   | 55 U                   | 55 U                   | 55 U                   | 57 U                   | 57 U                   |
| Di-n-butylphthalate                                                                                    | ug/kg | 55 U                   | 53 U                   | --                     | --                       | 54 U                   | 55 U                   | 53 U                   | 55 U                   | 55 U                   | 55 U                   | 57 U                   | 57 U                   |
| Fluoranthene                                                                                           | ug/kg | 7.3 U                  | 27                     | --                     | --                       | 40                     | 7.3 U                  | 7.0 U                  | 130                    | 260                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Fluorene                                                                                               | ug/kg | 7.3 U                  | 7.1 U                  | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 7.3 U                  | 7.6                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Indeno(1,2,3-cd)pyrene                                                                                 | ug/kg | 7.3 U                  | 13                     | --                     | --                       | 12                     | 7.3 U                  | 7.0 U                  | 82                     | 100                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Naphthalene                                                                                            | ug/kg | 7.3 U                  | 8.9                    | --                     | --                       | 7.2 U                  | 7.3 U                  | 7.0 U                  | 90                     | 74                     | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Phenanthrene                                                                                           | ug/kg | 33                     | 14                     | --                     | --                       | 15                     | 7.3 U                  | 7.0 U                  | 49                     | 72                     | 7.4 U                  | 7.6 U                  | 7.6 U                  |
| Pyrene                                                                                                 | ug/kg | 7.3 U                  | 25                     | --                     | --                       | 33                     | 7.3 U                  | 7.0 U                  | 120                    | 200                    | 7.4 U                  | 7.6 U                  | 7.6 U                  |

TABLE 4.1

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                                                 |       | BH-1-07                | MW-2-07                | MW-2-07                | MW-2-07                | BH-3-07                | MW-4-07                | BH-5-07                | BH-6-07                | BH-6-07                | MW-7-07                | BH-8-07                | BH-9-07                |
|------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample Depth (ft BGS):                                           |       | (8-10)                 | (0-2)                  | (8-10)                 | (11.75-13.75)          | (0-2)                  | (15-17)                | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (1.5-2.5)              | (0-2)                  |
| Sample ID:                                                       |       | SO-17322-120707-CB-141 | SO-17322-101207-CB-042 | SO-17322-101207-CB-043 | SO-17322-101207-CB-044 | SO-17322-101207-CB-040 | SO-17322-101107-CB-028 | SO-17322-101507-CB-045 | SO-17322-101207-CB-036 | SO-17322-101207-CB-037 | SO-17322-101207-CB-033 | SO-17322-101107-CB-025 | SO-17322-101107-CB-030 |
| Sample Date:                                                     |       | 12/07/2007             | 10/12/2007             | 10/12/2007             | 10/12/2007             | 10/12/2007             | 10/11/2007             | 10/15/2007             | 10/12/2007             | 10/12/2007             | 10/12/2007             | 10/11/2007             | 10/11/2007             |
| Sample Type:                                                     |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Parameter:                                                       | Units |                        |                        |                        |                        |                        |                        |                        |                        | Duplicate              |                        |                        |                        |
| <b>Metals</b>                                                    |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aluminum                                                         | mg/kg | 4760                   | 2390                   | --                     | --                     | 2520                   | 3730                   | 1640                   | 5220                   | 4550                   | 6030                   | 4230                   | 2290                   |
| Antimony                                                         | mg/kg | 0.18 UJ                | 0.12 J                 | --                     | --                     | 0.10 J                 | 0.18 UJ                | 0.17 UJ                | 0.16 J                 | 0.13 J                 | 0.095 J                | 0.10 J                 | 0.18 UJ                |
| Arsenic                                                          | mg/kg | 3.2                    | 7.7                    | 4.1                    | 3.8                    | 4.1                    | 3.3                    | 5.1                    | 5.0                    | 5.3                    | 5.9                    | 4.1                    | 3.3                    |
| Barium                                                           | mg/kg | 24.9 J                 | 15.0                   | --                     | --                     | 12.6                   | 23.5                   | 8.9                    | 26.4                   | 24.6                   | 34.5                   | 23.6                   | 10.8                   |
| Beryllium                                                        | mg/kg | 0.18 UJ                | 0.17 U                 | --                     | --                     | 0.17 U                 | 0.18 U                 | 0.13 J                 | 0.18 U                 | 0.17 U                 | 0.18 U                 | 0.18 U                 | 0.18 U                 |
| Cadmium                                                          | mg/kg | 0.098                  | 0.063 J                | --                     | --                     | 0.086 U                | 0.088 U                | 0.15                   | 0.088 U                | 0.087 U                | 0.088 U                | 0.091 U                | 0.091 U                |
| Calcium                                                          | mg/kg | 87800                  | 98800                  | --                     | --                     | 124000                 | 83600                  | 91400                  | 54700                  | 74400                  | 65000                  | 52600                  | 78200                  |
| Chromium III (Trivalent)                                         | mg/kg | 8.6 J                  | 5.1                    | --                     | --                     | 5.4                    | 8.0                    | 3.1                    | 7.5                    | 9.1                    | 9.8                    | 8.3                    | 6.5                    |
| Chromium VI (Hexavalent)                                         | mg/kg | 0.88 UJ                | 1.2                    | --                     | --                     | 2.6                    | 0.88 U                 | 1.2                    | 2.3                    | 0.76 J                 | 1.8                    | 1.2                    | 1.1                    |
| Chromium Total                                                   | mg/kg | 8.6 J                  | 6.3                    | --                     | --                     | 8.1                    | 8.0                    | 4.3                    | 9.7                    | 9.9                    | 11.6                   | 9.5                    | 7.5                    |
| Cobalt                                                           | mg/kg | 5.3 J                  | 3.3                    | --                     | --                     | 3.6                    | 4.3                    | 2.7                    | 5.2                    | 4.6                    | 5.9                    | 4.1                    | 3.5                    |
| Copper                                                           | mg/kg | 14.3                   | 10.2                   | --                     | --                     | 11.4                   | 9.4                    | 9.0                    | 15.5                   | 14.0                   | 12.0                   | 10.8                   | 11.2                   |
| Iron                                                             | mg/kg | 10700                  | 7140                   | --                     | --                     | 7690                   | 3960                   | 5450                   | 11100                  | 10100                  | 13400                  | 10600                  | 7320                   |
| Lead                                                             | mg/kg | 5.7                    | 10.3                   | --                     | --                     | 6.0                    | 5.3                    | 4.1                    | 13.2                   | 18.8                   | 5.5                    | 5.5                    | 5.8                    |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |
| Magnesium                                                        | mg/kg | 12900 J                | 27000                  | --                     | --                     | 22300                  | 23200                  | 19400 J                | 15600                  | 11000                  | 22300                  | 14900                  | 10200                  |
| Manganese                                                        | mg/kg | 288                    | 263                    | --                     | --                     | 276                    | 235                    | 260                    | 304                    | 275                    | 269                    | 241                    | 242                    |
| Mercury                                                          | mg/kg | 0.019 J                | 0.023 J                | --                     | --                     | 0.021 J                | 0.014                  | 0.042 U                | 0.032 J                | 0.027 J                | 0.015 J                | 0.015 J                | 0.046 U                |
| Nickel                                                           | mg/kg | 13.7                   | 8.4                    | --                     | --                     | 9.4                    | 1.3                    | 7.2                    | 13.8                   | 13.8                   | 14.3                   | 10.8                   | 8.3                    |
| Potassium                                                        | mg/kg | 1210                   | 458                    | --                     | --                     | 305                    | 919                    | 313 J                  | 889                    | 773                    | 1120                   | 789                    | 580                    |
| Selenium                                                         | mg/kg | 0.54                   | 0.18 U                 | --                     | --                     | 0.16 J                 | 0.34                   | 0.11 J                 | 0.19 U                 | 0.17 J                 | 0.19 U                 | 0.20                   | 0.22                   |
| Silver                                                           | mg/kg | 0.056 J                | 0.043 J                | --                     | --                     | 0.044 J                | 0.059 J                | 0.084 U                | 0.062 J                | 0.063 J                | 0.067 J                | 0.061 J                | 0.042 J                |
| Sodium                                                           | mg/kg | 118                    | 164                    | --                     | --                     | 267                    | 115                    | 151                    | 569                    | 494                    | 521                    | 443                    | 378                    |
| Thallium                                                         | mg/kg | 0.18                   | 0.16                   | --                     | --                     | 0.11                   | 0.14                   | 0.10                   | 0.18                   | 0.15                   | 0.11                   | 0.11                   | 0.15                   |
| Vanadium                                                         | mg/kg | 12.4                   | 8.9                    | --                     | --                     | 10.2                   | 12.4                   | 6.4                    | 15.1                   | 13.7                   | 18.0                   | 12.9                   | 7.1                    |
| Zinc                                                             | mg/kg | 23.8                   | 33.1 J                 | --                     | --                     | 23.9 J                 | 8.6 J                  | 24.3 J                 | 33.7 J                 | 34.4 J                 | 28.7 J                 | 28.2 J                 | 25.8 J                 |
| <b>Polychlorinated Biphenyls</b>                                 |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)                                          | ug/kg | 36 U                   | 35 U                   | --                     | --                     | 36 U                   | 36 U                   | 35 U                   | 36 U                   | 36 U                   | 36 U                   | 37 U                   | 38 U                   |
| Aroclor-1254 (PCB-1254)                                          | ug/kg | 36 U                   | 35 U                   | --                     | --                     | 36 U                   | 36 U                   | 35 U                   | 17 J                   | 36 U                   | 36 U                   | 37 U                   | 38 U                   |
| Aroclor-1260 (PCB-1260)                                          | ug/kg | 36 U                   | 35 U                   | --                     | --                     | 36 U                   | 36 U                   | 35 U                   | 36 U                   | 36 U                   | 36 U                   | 37 U                   | 38 U                   |
| Total PCBs                                                       | ug/kg | 36 U                   | 35 U                   | --                     | --                     | 36 U                   | 36 U                   | 35 U                   | 22.5                   | 36 U                   | 36 U                   | 37 U                   | 38 U                   |
| <b>General Chemistry</b>                                         |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Cyanide (total)                                                  | mg/kg | 0.22 UJ                | 0.21 U                 | --                     | --                     | 0.22 U                 | 0.68                   | 0.21 U                 | 0.22 U                 | 0.22 U                 | 0.22 U                 | 0.23 U                 | 0.23 U                 |
| Total Solids                                                     | %     | 91.0                   | 94.3                   | 84.7                   | 84.8                   | 92.6                   | 90.9                   | 94.8                   | 91.1                   | 91.6                   | 90.5                   | 88.3                   | 87.7                   |

Notes:

<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

TABLE 4.1

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | BH-9-07<br>(0-2)       | MW-10-07<br>(0-2)      | MW-11-07<br>(0-2)      | BH-12-07<br>(0-2)      | MW-13-07<br>(0-2)      | MW-13-07<br>(0-2)      | MW-13-07<br>(7-9)      | BH-14-07<br>(0-2)      | MW-15-07<br>(0-2)      | MW-16-07<br>(0-2)      | MW-17-07<br>(0.5-2.5)  | BH-18-07<br>(0-2)      |
|--------------------------------------------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                                                                                                        |       | SO-17322-101107-CB-031 | SO-17322-101507-CB-048 | SO-17322-101607-CB-056 | SO-17322-101607-CB-058 | SO-17322-101807-CB-085 | SO-17322-101807-CB-086 | SO-17322-101807-CB-087 | SO-17322-101607-CB-051 | SO-17322-101607-CB-053 | SO-17322-101707-CB-083 | SO-17322-101607-CB-061 | SO-17322-101607-CB-064 |
|                                                                                                        |       | 10/11/2007             | 10/15/2007             | 10/16/2007             | 10/16/2007             | 10/18/2007             | 10/18/2007             | 10/18/2007             | 10/16/2007             | 10/16/2007             | 10/17/2007             | 10/16/2007             | 10/16/2007             |
|                                                                                                        |       | Duplicate              |                        |                        |                        |                        | Duplicate              |                        |                        |                        |                        |                        |                        |
|                                                                                                        | Units |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Volatile Organic Compounds                                                                             |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                                                                                  | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| 1,1-Dichloroethane                                                                                     | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| 1,1-Dichloroethene                                                                                     | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| 1,2,4-Trimethylbenzene                                                                                 | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 UJ                 | --                     | 3.7 U                  | 4.6 U                  | 4.1 UJ                 | 1.0 J                  | 3.6 U                  |
| 1,2-Dichlorobenzene                                                                                    | ug/kg | 4.7 U                  | 5.3 U                  | 0.34 J                 | 4.5 U                  | 4.0 U                  | 4.4 UJ                 | --                     | 3.7 U                  | 4.6 U                  | 4.1 UJ                 | 3.8 U                  | 3.6 U                  |
| 1,3,5-Trimethylbenzene                                                                                 | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 UJ                 | --                     | 3.7 U                  | 4.6 U                  | 4.1 UJ                 | 0.87 J                 | 3.6 U                  |
| 1,3-Dichlorobenzene                                                                                    | ug/kg | 4.7 U                  | 5.3 U                  | 0.32 J                 | 4.5 U                  | 4.0 U                  | 4.4 UJ                 | --                     | 3.7 U                  | 4.6 U                  | 4.1 UJ                 | 3.8 U                  | 3.6 U                  |
| 1,4-Dichlorobenzene                                                                                    | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 UJ                 | --                     | 3.7 U                  | 4.6 U                  | 4.1 UJ                 | 3.8 U                  | 3.6 U                  |
| 2-Butanone (Methyl Ethyl Ketone)                                                                       | ug/kg | 19 U                   | 21 U                   | 14 U                   | 18 U                   | 16 U                   | 18 U                   | --                     | 15                     | 18 U                   | 6.3 J                  | 6.3 J                  | 2.7 J                  |
| 2-Hexanone                                                                                             | ug/kg | 19 U                   | 21 U                   | 14 U                   | 18 U                   | 16 U                   | 18 U                   | --                     | 15 U                   | 18 U                   | 16 U                   | 15 U                   | 15 U                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)                                                          | ug/kg | 19 U                   | 21 U                   | 14 U                   | 18 U                   | 16 U                   | 18 U                   | --                     | 15 U                   | 18 U                   | 16 U                   | 15 U                   | 15 U                   |
| Acetone                                                                                                | ug/kg | 19 U                   | 21 U                   | 14 U                   | 18 U                   | 16 UJ                  | 18 UJ                  | --                     | 60                     | 18 U                   | 29 J                   | 35                     | 25                     |
| Benzene                                                                                                | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 0.43 J                 | 3.8 U                  | 3.6 U                  |
| Carbon disulfide                                                                                       | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 0.57 J                 | 3.8 U                  | 3.6 U                  |
| Chloroethane                                                                                           | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Chloroform (Trichloromethane)                                                                          | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| cis-1,2-Dichloroethene                                                                                 | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Cyclohexane                                                                                            | ug/kg | 9.4 U                  | 11 U                   | 7.2 U                  | 9.0 U                  | 8.0 U                  | 8.8 U                  | --                     | 7.4 U                  | 9.2 U                  | 0.52 J                 | 7.7 U                  | 7.3 U                  |
| Ethylbenzene                                                                                           | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 0.25 J                 | 3.8 U                  | 3.6 U                  |
| Isopropylbenzene                                                                                       | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Methyl acetate                                                                                         | ug/kg | 9.4 U                  | 11 U                   | 7.2 U                  | 9.0 U                  | 8.0 U                  | 8.8 U                  | --                     | 7.4 U                  | 9.2 U                  | 8.2 U                  | 7.7 U                  | 7.3 U                  |
| Methyl cyclohexane                                                                                     | ug/kg | 9.4 U                  | 11 U                   | 7.2 U                  | 9.0 U                  | 8.0 U                  | 8.8 U                  | --                     | 7.4 U                  | 9.2 U                  | 0.30 J                 | 7.7 U                  | 7.3 U                  |
| Methyl Tert Butyl Ether                                                                                | ug/kg | 19 U                   | 21 U                   | 14 U                   | 18 U                   | 16 U                   | 18 U                   | --                     | 15 U                   | 18 U                   | 16 U                   | 15 U                   | 15 U                   |
| Methylene chloride                                                                                     | ug/kg | 0.66 J                 | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Tetrachloroethene                                                                                      | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Toluene                                                                                                | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 0.24 J                 | --                     | 3.7 U                  | 4.6 U                  | 1.0 J                  | 3.8 U                  | 3.6 U                  |
| trans-1,2-Dichloroethene                                                                               | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Trichloroethene                                                                                        | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Trichlorofluoromethane (CFC-11)                                                                        | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 UJ                 | 4.5 UJ                 | 4.0 U                  | 4.4 UJ                 | --                     | 3.7 UJ                 | 4.6 UJ                 | 4.1 UJ                 | 3.8 UJ                 | 3.6 UJ                 |
| Vinyl chloride                                                                                         | ug/kg | 4.7 U                  | 5.3 U                  | 3.6 U                  | 4.5 U                  | 4.0 U                  | 4.4 U                  | --                     | 3.7 U                  | 4.6 U                  | 4.1 U                  | 3.8 U                  | 3.6 U                  |
| Xylene (total)                                                                                         | ug/kg | 9.4 U                  | 11 U                   | 7.2 U                  | 9.0 U                  | 8.0 U                  | 8.8 U                  | --                     | 7.4 U                  | 9.2 U                  | 1.4 J                  | 7.7 U                  | 7.3 U                  |
| Semi-Volatile Organic Compounds                                                                        |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                                                                                     | ug/kg | 230 U                  | 230 U                  | 230 U                  | 240 U                  | 950 U                  | 1100 U                 | --                     | 230 U                  | 230 U                  | 4600 U                 | 1100 U                 | 220 U                  |
| 2-Methylnaphthalene                                                                                    | ug/kg | 8.6                    | 7.8 U                  | 7.7 U                  | 7.9 U                  | 86                     | 53                     | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 42                     | 9.7                    |
| Acenaphthene                                                                                           | ug/kg | 7.6 U                  | 7.8 U                  | 7.7 U                  | 7.9 U                  | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 7.9                    |
| Acenaphthylene                                                                                         | ug/kg | 7.6 U                  | 7.8 U                  | 7.7 U                  | 7.9 U                  | 41                     | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 7.5 U                  |
| Acetophenone                                                                                           | ug/kg | 110 U                  | 120 U                  | 120 U                  | 120 U                  | 480 U                  | 530 U                  | --                     | 120 U                  | 110 U                  | 2300 U                 | 550 U                  | 110 U                  |
| Anthracene                                                                                             | ug/kg | 7.6 U                  | 7.8 U                  | 7.7 U                  | 7.9 U                  | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 14                     |
| Benzo(a)anthracene                                                                                     | ug/kg | 7.6 U                  | 12                     | 15                     | 9.4                    | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 20                     |
| Benzo(a)pyrene                                                                                         | ug/kg | 7.6 U                  | 15                     | 7.7 U                  | 7.9 U                  | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 17                     |
| Benzo(b)fluoranthene                                                                                   | ug/kg | 7.6 U                  | 22                     | 22                     | 10                     | 32 U                   | 35 U                   | --                     | 8.1                    | 7.6 U                  | 150 U                  | 37 U                   | 20                     |
| Benzo(g,h,i)perylene                                                                                   | ug/kg | 7.6 U                  | 15                     | 8.8                    | 7.9 U                  | 110                    | 59                     | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 11                     |
| Benzo(k)fluoranthene                                                                                   | ug/kg | 7.6 U                  | 8.6                    | 8.5                    | 7.9 U                  | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 9.7                    |
| Biphenyl                                                                                               | ug/kg | 57 U                   | 59 U                   | 58 U                   | 59 U                   | 240 U                  | 260 U                  | --                     | 58 U                   | 57 U                   | 1200 U                 | 270 U                  | 56 U                   |
| bis(2-Ethylhexyl)phthalate                                                                             | ug/kg | 57 U                   | 59 U                   | 58 U                   | 59 U                   | 240 U                  | 260 U                  | --                     | 58 U                   | 57 U                   | 1200 U                 | 270 U                  | 56 U                   |
| Caprolactam                                                                                            | ug/kg | 380 U                  | 390 U                  | 380 U                  | 390 U                  | 1600 U                 | 1700 U                 | --                     | 390 U                  | 370 U                  | 7600 U                 | 1800 U                 | 370 U                  |
| Carbazole                                                                                              | ug/kg | 57 U                   | 59 U                   | 58 U                   | 59 U                   | 240 U                  | 260 U                  | --                     | 58 U                   | 57 U                   | 1200 U                 | 270 U                  | 56 U                   |
| Chrysene                                                                                               | ug/kg | 7.6 U                  | 16                     | 23                     | 9.3                    | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 58                     | 21                     |
| Dibenz(a,h)anthracene                                                                                  | ug/kg | 7.6 U                  | 7.8 U                  | 7.7 U                  | 7.9 U                  | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 7.5 U                  |
| Dibenzofuran                                                                                           | ug/kg | 57 U                   | 59 U                   | 58 U                   | 59 U                   | 240 U                  | 260 U                  | --                     | 58 U                   | 57 U                   | 1200 U                 | 270 U                  | 56 U                   |
| Di-n-butylphthalate                                                                                    | ug/kg | 57 U                   | 59 U                   | 58 U                   | 59 U                   | 240 U                  | 260 U                  | --                     | 58 U                   | 57 U                   | 1200 U                 | 270 U                  | 56 U                   |
| Fluoranthene                                                                                           | ug/kg | 7.6 U                  | 20                     | 52                     | 23                     | 150                    | 120                    | --                     | 11                     | 7.6 U                  | 150 U                  | 70                     | 55                     |
| Fluorene                                                                                               | ug/kg | 7.6 U                  | 7.8 U                  | 7.7 U                  | 7.9 U                  | 32 U                   | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 7.5 U                  |
| Indeno(1,2,3-cd)pyrene                                                                                 | ug/kg | 7.6 U                  | 11                     | 7.7 U                  | 7.9 U                  | 95                     | 35 U                   | --                     | 7.8 U                  | 7.6 U                  | 150 U                  | 37 U                   | 9.3                    |
| Naphthalene                                                                                            | ug/kg | 7.6 U                  | 7.8 U                  | 7.7 U                  | 7.9 U                  | 32 U                   | 35 U                   | --                     | 8.5                    | 7.6 U                  | 150 U                  | 37 U                   | 30                     |
| Phenanthrene                                                                                           | ug/kg | 8.6                    | 11                     | 27                     | 21                     | 100                    | 61                     | --                     | 9.1                    | 7.6 U                  | 150 U                  | 37 U                   | 62                     |
| Pyrene                                                                                                 | ug/kg | 7.6 U                  | 20                     | 65                     | 19                     | 150 J                  | 75 J                   | --                     | 10                     | 7.6 U                  | 150 U                  | 77                     | 44                     |

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | BH-9-07<br>(0-2)       | MW-10-07<br>(0-2)      | MW-11-07<br>(0-2)      | BH-12-07<br>(0-2)      | MW-13-07<br>(0-2)      | MW-13-07<br>(0-2)      | MW-13-07<br>(7-9)      | BH-14-07<br>(0-2)      | MW-15-07<br>(0-2)      | MW-16-07<br>(0-2)      | MW-17-07<br>(0.5-2.5)  | BH-18-07<br>(0-2)      |
|--------------------------------------------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                                                                                                        |       | SO-17322-101107-CB-031 | SO-17322-101507-CB-048 | SO-17322-101607-CB-056 | SO-17322-101607-CB-058 | SO-17322-101807-CB-085 | SO-17322-101807-CB-086 | SO-17322-101807-CB-087 | SO-17322-101607-CB-051 | SO-17322-101607-CB-053 | SO-17322-101707-CB-083 | SO-17322-101607-CB-061 | SO-17322-101607-CB-064 |
|                                                                                                        |       | 10/11/2007             | 10/15/2007             | 10/16/2007             | 10/16/2007             | 10/18/2007             | 10/18/2007             | 10/18/2007             | 10/16/2007             | 10/16/2007             | 10/17/2007             | 10/16/2007             | 10/16/2007             |
|                                                                                                        |       | Duplicate              |                        |                        |                        |                        | Duplicate              |                        |                        |                        |                        |                        |                        |
|                                                                                                        | Units |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Metals                                                                                                 |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aluminum                                                                                               | mg/kg | 2500                   | 5250                   | 8090                   | 2070                   | 6320                   | 8190                   | --                     | 4120                   | 7460                   | 4050                   | 1490                   | 9220                   |
| Antimony                                                                                               | mg/kg | 0.091 J                | 0.19 UJ                | 0.18 UJ                | 0.19 UJ                | 1.5 J                  | 2.5 J                  | --                     | 5.5 J                  | 0.18 UJ                | 0.18 UJ                | 0.18 UJ                | 0.18 UJ                |
| Arsenic                                                                                                | mg/kg | 3.9                    | 5.2                    | 6.4                    | 2.4                    | 6.9                    | 3.8                    | --                     | 5.5                    | 1.5                    | 4.4                    | 5.8                    | 6.1                    |
| Barium                                                                                                 | mg/kg | 14.5                   | 46.1                   | 61.7                   | 8.5                    | 84.6 J                 | 114 J                  | --                     | 71.6                   | 38.0                   | 34.9                   | 11.3                   | 38.8                   |
| Beryllium                                                                                              | mg/kg | 0.18 U                 | 0.36                   | 0.51                   | 0.16 J                 | 0.10 J                 | 0.14 J                 | --                     | 0.41                   | 0.44                   | 0.11 J                 | 0.14 J                 | 0.46                   |
| Cadmium                                                                                                | mg/kg | 0.091 U                | 0.19                   | 0.30                   | 0.12                   | 1.5 J                  | 7.8 J                  | --                     | 0.28                   | 0.25                   | 0.062 J                | 0.22                   | 0.26                   |
| Calcium                                                                                                | mg/kg | 77000                  | 108000                 | 82600                  | 40900                  | 39200                  | 27100                  | --                     | 1590                   | 45600                  | 56000                  | 61300                  | 7610                   |
| Chromium III (Trivalent)                                                                               | mg/kg | 9.4                    | 7.1                    | 14.7                   | 3.6                    | 16.6                   | 21.8                   | --                     | 10.3                   | 12.7                   | 7.8                    | 4.1                    | 14.3                   |
| Chromium VI (Hexavalent)                                                                               | mg/kg | 0.61 J                 | 1.5                    | 0.92 U                 | 1.4                    | 1.7                    | 1.2                    | --                     | 0.57 J                 | 0.36 J                 | 0.92 U                 | 0.88 U                 | 0.90 U                 |
| Chromium Total                                                                                         | mg/kg | 10.0                   | 8.5                    | 14.7                   | 5.0                    | 18.3                   | 22.9                   | --                     | 10.9                   | 13.1                   | 8.5                    | 4.6                    | 14.8                   |
| Cobalt                                                                                                 | mg/kg | 3.7                    | 3.8                    | 12.4                   | 2.8                    | 8.2                    | 7.2                    | --                     | 5.2                    | 7.0                    | 6.1                    | 2.0                    | 8.0                    |
| Copper                                                                                                 | mg/kg | 13.2                   | 16.0                   | 18.0                   | 9.0                    | 67.1 J                 | 13 J                   | --                     | 284                    | 14.7                   | 27.5                   | 7.0                    | 13.4                   |
| Iron                                                                                                   | mg/kg | 8210                   | 7400                   | 16200                  | 5620                   | 38700                  | 7100                   | --                     | 7280                   | 14500                  | 12300                  | 4540                   | 14800                  |
| Lead                                                                                                   | mg/kg | 7.5                    | 12.4                   | 7.1                    | 3.6                    | 242                    | 446                    | 14.5 J                 | 301                    | 6.6                    | 14.3                   | 10.7                   | 10.3                   |
| Lead - Coarse Fraction <sup>(1)</sup>                                                                  | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |
| Lead - Fine Fraction <sup>(1)</sup>                                                                    | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup>                                       | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     |
| Magnesium                                                                                              | mg/kg | 7100                   | 19800 J                | 14200 J                | 7270 J                 | 13300 J                | 6070 J                 | --                     | 830 J                  | 11700 J                | 10800 J                | 17700 J                | 3040 J                 |
| Manganese                                                                                              | mg/kg | 228                    | 266                    | 452                    | 169                    | 369                    | 317                    | --                     | 441                    | 344                    | 339                    | 221                    | 194                    |
| Mercury                                                                                                | mg/kg | 0.015 J                | 0.017 J                | 0.046 U                | 0.047 U                | 0.46 J                 | 0.39                   | --                     | 0.034 J                | 0.023 J                | 0.046 U                | 0.023 J                | 0.026 J                |
| Nickel                                                                                                 | mg/kg | 8.9                    | 10.3                   | 21.5                   | 6.9                    | 20.0                   | 3.8                    | --                     | 7.0                    | 16.6                   | 13.0                   | 5.9                    | 14.6                   |
| Potassium                                                                                              | mg/kg | 600                    | 497 J                  | 1520                   | 444 J                  | 3100                   | 1400                   | --                     | 473                    | 1080                   | 1000                   | 329 J                  | 914                    |
| Selenium                                                                                               | mg/kg | 0.13 J                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.33                   | 0.15 J                 | --                     | 0.37                   | 0.19 U                 | 0.12 J                 | 0.19 U                 | 0.19 U                 |
| Silver                                                                                                 | mg/kg | 0.050 J                | 0.094 U                | 0.092 U                | 0.094 U                | 0.13                   | 0.15                   | --                     | 0.094 U                | 0.091 U                | 0.086 J                | 0.088 U                | 0.090 U                |
| Sodium                                                                                                 | mg/kg | 357                    | 757                    | 400                    | 105                    | 182                    | 192                    | --                     | 431                    | 231                    | 129                    | 216                    | 876                    |
| Thallium                                                                                               | mg/kg | 0.15                   | 0.11                   | 0.19                   | 0.11 U                 | 0.22                   | 0.17                   | --                     | 0.11 U                 | 0.091 U                | 0.14 J                 | 0.20                   | 0.19                   |
| Vanadium                                                                                               | mg/kg | 8.9                    | 11.8                   | 20.7                   | 7.0                    | 17.3                   | 20.0                   | --                     | 23.7                   | 19.7                   | 12.4                   | 7.4                    | 22.2                   |
| Zinc                                                                                                   | mg/kg | 27.5 J                 | 31.9 J                 | 40.2 J                 | 21.7 J                 | 122                    | 79.0                   | --                     | 25.4 J                 | 9.9 J                  | 44.1 J                 | 44.1 J                 | 43.8 J                 |
| Polychlorinated Biphenyls                                                                              |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)                                                                                | ug/kg | 38 U                   | 39 U                   | 38 U                   | 39 U                   | 39 U                   | 35 U                   | --                     | 39 U                   | 37 U                   | 38 U                   | 36 U                   | 37 U                   |
| Aroclor-1254 (PCB-1254)                                                                                | ug/kg | 38 U                   | 39 U                   | 38 U                   | 39 U                   | 39 U                   | 35 U                   | --                     | 39 U                   | 37 U                   | 38 U                   | 920                    | 37 U                   |
| Aroclor-1260 (PCB-1260)                                                                                | ug/kg | 38 U                   | 39 U                   | 38 U                   | 39 U                   | 39 U                   | 35 U                   | --                     | 39 U                   | 37 U                   | 38 U                   | 36 U                   | 37 U                   |
| Total PCBs                                                                                             | ug/kg | 38 U                   | 39 U                   | 38 U                   | 39 U                   | 39 U                   | 35 U                   | --                     | 39 U                   | 37 U                   | 38 U                   | 933.5                  | 37 U                   |
| General Chemistry                                                                                      |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Cyanide (total)                                                                                        | mg/kg | 0.23 U                 | 0.44                   | 0.23 U                 | 0.24 U                 | 0.24 U                 | 0.21 U                 | --                     | 0.23 U                 | 0.23 U                 | 0.23 U                 | 0.13 J                 | 0.22 U                 |
| Total Solids                                                                                           | %     | 87.5                   | 85.5                   | 86.5                   | 84.7                   | 84.0                   | 94.3                   | 82.2                   | 85.5                   | 88.1                   | 86.8                   | 91.4                   | 89.3                   |

Notes:  
<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.  
U Not present at or above the associated value.  
J Estimated concentration.  
UJ Estimated reporting limit.  
R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.  
-- Not analyzed.  
BH Soil boring.  
MW Monitoring well (samples taken from soil boring prior to well installation).  
ft BGS Feet below ground surface.  
mg/kg Milligrams per kilogram.  
ug/kg Micrograms per kilogram.  
% Percent.

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                              |       | MW-19-07               | MW-20-07               | MW-20-07               | MW-21-07               | BH-22-07               | BH-23-07               | BH-24-07               | BH-25-07               | BH-26-07               | BH-26-07               | MW-27-07               | MW-28-07               |
|-----------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample Depth (ft BGS):                        |       | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  |
| Sample ID:                                    |       | SO-17322-101707-CB-067 | SO-17322-101707-CB-069 | SO-17322-101707-CB-070 | SO-17322-120307-CB-091 | SO-17322-120707-CB-131 | SO-17322-101707-CB-072 | SO-17322-101707-CB-073 | SO-17322-101807-CB-089 | SO-17322-120307-CB-105 | SO-17322-120307-CB-106 | SO-17322-120707-CB-134 | SO-17322-101707-CB-077 |
| Sample Date:                                  |       | 10/17/2007             | 10/17/2007             | 10/17/2007             | 12/03/2007             | 12/07/2007             | 10/17/2007             | 10/17/2007             | 10/18/2007             | 12/03/2007             | 12/03/2007             | 12/07/2007             | 10/17/2007             |
| Sample Type:                                  |       |                        |                        | Duplicate              |                        |                        |                        |                        |                        |                        | Duplicate              |                        |                        |
| Parameter:                                    | Units |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Volatile Organic Compounds                    |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                         | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,1-Dichloroethane                            | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,1-Dichloroethene                            | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,2,4-Trimethylbenzene                        | ug/kg | 3.8 U                  | 2.5 J                  | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 UJ                 | 4.4 UJ                 | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,2-Dichlorobenzene                           | ug/kg | 3.8 U                  | 3.8 UJ                 | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 UJ                 | 4.4 UJ                 | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,3,5-Trimethylbenzene                        | ug/kg | 3.8 U                  | 2.2 J                  | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 UJ                 | 4.4 UJ                 | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,3-Dichlorobenzene                           | ug/kg | 3.8 U                  | 3.8 UJ                 | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 UJ                 | 4.4 UJ                 | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 1,4-Dichlorobenzene                           | ug/kg | 3.8 U                  | 3.8 UJ                 | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 UJ                 | 4.4 UJ                 | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/kg | 1.3 J                  | 8.8 J                  | 3.9 J                  | 17 U                   | 2.6 J                  | 16 U                   | 22 U                   | 18 U                   | 17 U                   | 18 U                   | 20 U                   | 15 U                   |
| 2-Hexanone                                    | ug/kg | 15 U                   | 15 U                   | 19 UJ                  | 17 U                   | 16 U                   | 16 UJ                  | 22 U                   | 18 U                   | 17 U                   | 18 U                   | 20 U                   | 15 U                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/kg | 15 U                   | 15 U                   | 19 U                   | 17 U                   | 16 U                   | 16 UJ                  | 22 U                   | 18 U                   | 17 U                   | 18 U                   | 20 U                   | 15 U                   |
| Acetone                                       | ug/kg | 5.8 J                  | 43 J                   | 14 J                   | 17 U                   | 12 J                   | 16 UJ                  | 22 UJ                  | 18 UJ                  | 17 U                   | 18 U                   | 20 U                   | 15 UJ                  |
| Benzene                                       | ug/kg | 3.8 U                  | 0.23 J                 | 0.24 J                 | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Carbon disulfide                              | ug/kg | 3.8 U                  | 1.0 J                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Chloroethane                                  | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 UJ                 | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Chloroform (Trichloromethane)                 | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| cis-1,2-Dichloroethene                        | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Cyclohexane                                   | ug/kg | 7.5 U                  | 7.5 U                  | 9.4 U                  | 8.5 U                  | 7.9 U                  | 8.0 U                  | 11 U                   | 8.8 U                  | 8.7 U                  | 9.0 U                  | 10 U                   | 0.26 J                 |
| Ethylbenzene                                  | ug/kg | 3.8 U                  | 0.26 J                 | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Isopropylbenzene                              | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Methyl acetate                                | ug/kg | 7.5 U                  | 7.5 U                  | 9.4 U                  | R                      | R                      | 8.0 U                  | 11 U                   | 8.8 U                  | R                      | R                      | 7.7 U                  | 7.7 U                  |
| Methyl cyclohexane                            | ug/kg | 7.5 U                  | 7.5 U                  | 9.4 U                  | 8.5 U                  | 7.9 U                  | 8.0 U                  | 11 U                   | 8.8 U                  | 8.7 U                  | 9.0 U                  | 10 U                   | 7.7 U                  |
| Methyl Tert Butyl Ether                       | ug/kg | 15 U                   | 15 U                   | 19 U                   | 17 U                   | 16 U                   | 16 U                   | 22 U                   | 18 U                   | 17 U                   | 18 U                   | 20 U                   | 15 U                   |
| Methylene chloride                            | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Tetrachloroethene                             | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 UJ                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Toluene                                       | ug/kg | 3.8 U                  | 0.26 J                 | 0.56 J                 | 4.2 U                  | 4.0 U                  | 4.0 UJ                 | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| trans-1,2-Dichloroethene                      | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Trichloroethene                               | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Trichlorofluoromethane (CFC-11)               | ug/kg | 3.8 U                  | 3.8 UJ                 | 4.7 U                  | 4.2 U                  | 4.0 UJ                 | 4.0 UJ                 | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 UJ                 | 3.8 U                  |
| Vinyl chloride                                | ug/kg | 3.8 U                  | 3.8 U                  | 4.7 U                  | 4.2 U                  | 4.0 U                  | 4.0 U                  | 5.5 U                  | 4.4 U                  | 4.4 U                  | 4.5 U                  | 5.0 U                  | 3.8 U                  |
| Xylene (total)                                | ug/kg | 7.5 U                  | 3.1 J                  | 0.87 J                 | 8.5 U                  | 7.9 U                  | 8.0 UJ                 | 11 U                   | 8.8 U                  | 8.7 U                  | 9.0 U                  | 10 U                   | 7.7 U                  |
| Semi-Volatile Organic Compounds               |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                            | ug/kg | 210 U                  | 4400 U                 | 4400 U                 | 230 U                  | 230 U                  | 220 U                  | 230 U                  | 850 U                  | 2300 U                 | 220 U                  | 220 U                  | 860 U                  |
| 2-Methylnaphthalene                           | ug/kg | 31                     | 150 U                  | 150 U                  | 7.5 U                  | 7.8 U                  | 7.3 U                  | 7.7 U                  | 170                    | 77 U                   | 7.3 U                  | 14                     | 140                    |
| Acenaphthene                                  | ug/kg | 51                     | 150 U                  | 150 U                  | 7.5 U                  | 7.8 U                  | 7.3 U                  | 7.7 U                  | 29 U                   | 77 U                   | 7.3 U                  | 23                     | 29 U                   |
| Acenaphthylene                                | ug/kg | 26                     | 150 U                  | 150 U                  | 7.5 U                  | 7.8 U                  | 7.3 U                  | 7.7 U                  | 29                     | 77 U                   | 7.3 U                  | 7.3 U                  | 29 U                   |
| Acetophenone                                  | ug/kg | 110 U                  | 2200 U                 | 2200 U                 | 110 U                  | 120 U                  | 110 U                  | 120 U                  | 430 U                  | 1200 U                 | 110 U                  | 110 U                  | 430 U                  |
| Anthracene                                    | ug/kg | 140                    | 150 U                  | 350                    | 7.9                    | 7.8 U                  | 21                     | 7.7 U                  | 61                     | 77 U                   | 13                     | 38                     | 29 U                   |
| Benzo(a)anthracene                            | ug/kg | 400                    | 150 U                  | 850                    | 25                     | 7.8 U                  | 73                     | 30                     | 290                    | 77 U                   | 56                     | 130                    | 180                    |
| Benzo(a)pyrene                                | ug/kg | 360                    | 150 U                  | 150 U                  | 21                     | 7.8 U                  | 64                     | 27                     | 330                    | 77 U                   | 51                     | 110                    | 180                    |
| Benzo(b)fluoranthene                          | ug/kg | 320                    | 150 U                  | 150 U                  | 32                     | 7.8 U                  | 80                     | 36                     | 430                    | 170                    | 73                     | 170                    | 260                    |
| Benzo(g,h,i)perylene                          | ug/kg | 190                    | 150 U                  | 150 U                  | 18                     | 7.8 U                  | 39                     | 21                     | 250                    | 77 U                   | 39                     | 69                     | 110                    |
| Benzo(k)fluoranthene                          | ug/kg | 340                    | 150 U                  | 150 U                  | 11                     | 7.8 U                  | 35                     | 15                     | 220                    | 77 U                   | 29                     | 71                     | 140                    |
| Biphenyl                                      | ug/kg | 53 U                   | 1100 U                 | 1100 U                 | 57 U                   | 58 U                   | 55 U                   | 58 U                   | 210 U                  | 580 U                  | 55 U                   | 55 U                   | 220 U                  |
| bis(2-Ethylhexyl)phthalate                    | ug/kg | 53 U                   | 1100 U                 | 1100 U                 | 24 J                   | 58 U                   | 55 U                   | 58 U                   | 210 U                  | 580 U                  | 73                     | 23 J                   | 220 U                  |
| Caprolactam                                   | ug/kg | 350 U                  | 7300 U                 | 7300 U                 | 370 U                  | 380 U                  | 360 U                  | 380 U                  | 1400 U                 | 3800 U                 | 360 U                  | 360 U                  | 1400 U                 |
| Carbazole                                     | ug/kg | 58                     | 1100 U                 | 1100 U                 | 57 U                   | 58 U                   | 55 U                   | 58 U                   | 210 U                  | 580 U                  | 55 U                   | 55 U                   | 220 U                  |
| Chrysene                                      | ug/kg | 400                    | 150 U                  | 950                    | 27                     | 7.8 U                  | 74                     | 30                     | 380                    | 77 U                   | 53                     | 150                    | 240                    |
| Dibenz(a,h)anthracene                         | ug/kg | 7.1 U                  | 150 U                  | 150 U                  | 7.5 U                  | 7.8 U                  | 7.3 U                  | 7.7 U                  | 29 U                   | 77 U                   | 7.3 U                  | 7.3 U                  | 29 U                   |
| Dibenzofuran                                  | ug/kg | 42 J                   | 1100 U                 | 1100 U                 | 57 U                   | 58 U                   | 55 U                   | 58 U                   | 210 U                  | 580 U                  | 55 U                   | 55 U                   | 220 U                  |
| Di-n-butylphthalate                           | ug/kg | 53 U                   | 1100 U                 | 1100 U                 | 57 U                   | 58 U                   | 55 U                   | 58 U                   | 210 U                  | 580 U                  | 160                    | 55 U                   | 220 U                  |
| Fluoranthene                                  | ug/kg | 1000                   | 150 U                  | 1800                   | 62                     | 7.8 U                  | 160                    | 62                     | 680                    | 85                     | 110                    | 370                    | 230                    |
| Fluorene                                      | ug/kg | 62                     | 150 U                  | 150 U                  | 7.5 U                  | 7.8 U                  | 7.3 U                  | 7.7 U                  | 29 U                   | 77 U                   | 7.3 U                  | 12                     | 29 U                   |
| Indeno(1,2,3-cd)pyrene                        | ug/kg | 180                    | 150 U                  | 150 U                  | 12                     | 7.8 U                  | 33                     | 16                     | 200                    | 77 U                   | 33                     | 59                     | 110                    |
| Naphthalene                                   | ug/kg | 26                     | 150 U                  | 150 U                  | 7.5 U                  | 7.8 U                  | 7.3 U                  | 7.7 U                  | 74                     | 77 U                   | 7.3 U                  | 7.4                    | 60                     |
| Phenanthrene                                  | ug/kg | 510                    | 150 U                  | 1500                   | 29                     | 7.8 U                  | 80                     | 30                     | 250                    | 77 U                   | 48                     | 160                    | 100                    |
| Pyrene                                        | ug/kg | 800                    | 190 J                  | 1700 J                 | 39                     | 7.8 U                  | 130                    | 55                     | 480                    | 77 U                   | 87                     | 230                    | 210                    |

David Selger

TABLE 4.1

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

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| Sample Location:                                                 | MW-19-07               | MW-20-07               | MW-20-07               | MW-21-07               | BH-22-07               | BH-23-07               | BH-24-07               | BH-25-07               | BH-26-07               | BH-26-07               | MW-27-07               | MW-28-07               |         |
|------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------|
| Sample Depth (ft BGS):                                           | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  |         |
| Sample ID:                                                       | SO-17322-101707-CB-067 | SO-17322-101707-CB-069 | SO-17322-101707-CB-070 | SO-17322-120307-CB-091 | SO-17322-120707-CB-131 | SO-17322-120307-CB-072 | SO-17322-101707-CB-073 | SO-17322-101807-CB-089 | SO-17322-120307-CB-105 | SO-17322-120307-CB-106 | SO-17322-120707-CB-134 | SO-17322-101707-CB-077 |         |
| Sample Date:                                                     | 10/17/2007             | 10/17/2007             | 10/17/2007             | 12/03/2007             | 12/07/2007             | 10/17/2007             | 10/17/2007             | 10/18/2007             | 12/03/2007             | 12/03/2007             | 12/07/2007             | 10/17/2007             |         |
| Sample Type:                                                     |                        |                        |                        | Duplicate              |                        |                        |                        |                        |                        | Duplicate              |                        |                        |         |
| Parameter:                                                       | Units                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Metals                                                           |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Aluminum                                                         | mg/kg                  | 3890                   | 4020                   | 4690                   | 7350                   | 10700                  | 3170                   | 8170                   | 6600                   | 2720                   | 2480                   | 2370                   | 10800   |
| Antimony                                                         | mg/kg                  | 0.17 UJ                | 0.18 UJ                | 0.18 UJ                | 0.18 UJ                | 0.072 J                | 0.18 UJ                | 0.22 UJ                | 0.32 J                 | 0.18 UJ                | 0.18 UJ                | 0.078 J                | 0.63 J  |
| Arsenic                                                          | mg/kg                  | 2.6                    | 4.1                    | 3.0                    | 3.1                    | 5.0                    | 3.0                    | 4.5                    | 4.6                    | 4.4                    | 3.5                    | 4.5                    | 4.5     |
| Barium                                                           | mg/kg                  | 33.8                   | 34.7                   | 44.1                   | 35.1                   | 71.2 J                 | 24.5                   | 77.0                   | 62.0 J                 | 27.9                   | 15.9                   | 16.8 J                 | 139     |
| Beryllium                                                        | mg/kg                  | 0.17 U                 | 0.12 J                 | 0.11 J                 | 0.18 U                 | 0.35 J                 | 0.049 J                | 0.13 J                 | 0.18                   | 0.18 U                 | 0.18 U                 | 0.18 UJ                | 0.17 U  |
| Cadmium                                                          | mg/kg                  | 0.085 U                | 0.089 U                | 0.089 U                | 0.31                   | 0.093 U                | 0.10                   | 0.084 J                | 0.47 J                 | 0.33                   | 0.22                   | 0.14                   | 0.11    |
| Calcium                                                          | mg/kg                  | 81400                  | 6820                   | 8530                   | 44300                  | 2810                   | 35800                  | 56800                  | 40900                  | 76500                  | 45800                  | 38600                  | 32700   |
| Chromium III (Trivalent)                                         | mg/kg                  | 10.8                   | 5.1                    | 5.9                    | 11.6                   | 17.1 J                 | 6.3                    | 13.8                   | 11.2                   | 7.5                    | 5.8                    | 5.1 J                  | 102     |
| Chromium VI (Hexavalent)                                         | mg/kg                  | 0.85 U                 | 1.9                    | 1.9                    | 0.72 J                 | 0.78 J                 | 0.88 U                 | 0.93 U                 | 3.4                    | 0.92 U                 | 0.88 U                 | 0.31 J                 | 1.5     |
| Chromium Total                                                   | mg/kg                  | 11.2                   | 6.9                    | 7.8                    | 12.3                   | 17.9 J                 | 6.8                    | 13.8                   | 14.6                   | 7.5                    | 5.8                    | 5.4 J                  | 103     |
| Cobalt                                                           | mg/kg                  | 2.9                    | 3.2                    | 3.5                    | 5.7                    | 9.1 J                  | 2.9                    | 6.4                    | 5.8                    | 5.1                    | 2.9                    | 2.2 J                  | 65.4    |
| Copper                                                           | mg/kg                  | 8.3                    | 13.6                   | 12.7                   | 12.3                   | 14.3                   | 12.6                   | 22.9                   | 25.7 J                 | 12.0                   | 8.9                    | 7.4                    | 65.6    |
| Iron                                                             | mg/kg                  | 8380                   | 11200                  | 13400                  | 12900                  | 19600                  | 3960                   | 15000                  | 14200                  | 8240                   | 6640                   | 5530                   | 31100   |
| Lead                                                             | mg/kg                  | 8.5                    | 18.4                   | 38.9                   | 8.8 J                  | 12.5                   | 10.8                   | 25.4                   | 71.8                   | 14.7 J                 | 8.6 J                  | 16.9                   | 54.6    |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Magnesium                                                        | mg/kg                  | 15800 J                | 2090 J                 | 2370 J                 | 10500 J                | 2880 J                 | 12100 J                | 8400 J                 | 10200 J                | 11400 J                | 10500 J                | 10100 J                | 3660 J  |
| Manganese                                                        | mg/kg                  | 317                    | 119                    | 143                    | 294                    | 427                    | 345                    | 335                    | 392                    | 232                    | 158                    | 158                    | 2270    |
| Mercury                                                          | mg/kg                  | 0.042 U                | 0.019 J                | 0.037 J                | 0.017 J                | 0.045 J                | 0.044 U                | 0.036 J                | 0.056                  | 0.046 U                | 0.044 UJ               | 0.020 J                | 0.35    |
| Nickel                                                           | mg/kg                  | 9.0                    | 7.4                    | 7.8                    | 13.4                   | 22.0                   | 1.9                    | 17.4                   | 15.2                   | 9.8                    | 7.5                    | 5.2                    | 48.4    |
| Potassium                                                        | mg/kg                  | 433                    | 443 J                  | 512                    | 1720                   | 3060                   | 519                    | 1490                   | 1060                   | 452 J                  | 377 J                  | 448                    | 1290    |
| Selenium                                                         | mg/kg                  | 0.14 J                 | 0.32                   | 0.30                   | 0.19 U                 | 0.12 J                 | 0.19 U                 | 0.20 U                 | 0.32                   | 0.11 J                 | 0.19 U                 | 0.19 U                 | 0.24    |
| Silver                                                           | mg/kg                  | 0.054 J                | 0.046 J                | 0.057 J                | 0.059 J                | 0.077 J                | 0.034 J                | 0.10                   | 0.10                   | 0.049 J                | 0.031 J                | 0.052 J                | 0.18    |
| Sodium                                                           | mg/kg                  | 385                    | 292                    | 365                    | 531                    | 2950                   | 194                    | 1060                   | 139                    | 92.0 UJ                | 87.8 U                 | 156                    | 852     |
| Thallium                                                         | mg/kg                  | 0.037 J                | 0.046 J                | 0.038 J                | 0.10                   | 0.17                   | 0.068 J                | 0.18 J                 | 0.12                   | 0.11                   | 0.088 U                | 0.072 J                | 0.036 J |
| Vanadium                                                         | mg/kg                  | 13.7                   | 10.0                   | 11.1                   | 17.2                   | 23.6                   | 10                     | 19.4                   | 17.3                   | 8.8                    | 7.9                    | 7.6                    | 28.5    |
| Zinc                                                             | mg/kg                  | 16.9 J                 | 23.1 J                 | 33.0 J                 | 28.6 J                 | 40.5                   | 30.9 J                 | 65.5 J                 | 81.6                   | 29.9 J                 | 25.1 J                 | 31.2                   | 84.0 J  |
| Polychlorinated Biphenyls                                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Aroclor-1248 (PCB-1248)                                          | ug/kg                  | 35 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                   | 36 U                   | 38 U                   | 35 U                   | 38 U                   | 36 U                   | 36 U                   | 36 U    |
| Aroclor-1254 (PCB-1254)                                          | ug/kg                  | 35 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                   | 23 J                   | 26 J                   | 35 U                   | 100                    | 100                    | 17 J                   | 36 U    |
| Aroclor-1260 (PCB-1260)                                          | ug/kg                  | 35 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                   | 36 U                   | 38 U                   | 38                     | 38 U                   | 36 U                   | 36 U                   | 36 U    |
| Total PCBs                                                       | ug/kg                  | 35 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                   | 36.5                   | 31.5                   | 42.7                   | 114                    | 113.5                  | 30.5                   | 36 U    |
| General Chemistry                                                |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Cyanide (total)                                                  | mg/kg                  | 0.13 J                 | 0.13 J                 | 0.22 U                 | 0.23 UJ                | 0.23 U                 | 0.22 U                 | 0.23 U                 | 0.21 U                 | 0.23 U                 | 0.22 UJ                | 0.31                   | 0.22 U  |
| Total Solids                                                     | %                      | 94.5                   | 90.2                   | 90.0                   | 88.4                   | 85.9                   | 91.0                   | 86.1                   | 93.6                   | 86.9                   | 91.1                   | 91.3                   | 92.6    |

- Notes:
- <sup>(1)</sup>

If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.
- U

Not present at or above the associated value.
- J

Estimated concentration.
- UJ

Estimated reporting limit.
- R

Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.
- Not analyzed.
- BH

Soil boring.
- MW

Monitoring well (samples taken from soil boring prior to well installation).
- ft BGS

Feet below ground surface.
- mg/kg

Milligrams per kilogram.
- ug/kg

Micrograms per kilogram.
- %

Percent.

David Selger

LFR

Aug 07, 2009 14:49

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                              | MW-28-07               | MW-28-07               | BH-29-07               | BH-30-07               | MW-32-07               | MW-33-07               | MW-33-07               | MW-33-07               | MW-34-07               | MW-35-07               | BH-36-07               | BH-36-07               |        |
|-----------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------|
| Sample Depth (ft BGS):                        | (8-10)                 | (12.75-14.75)          | (0-2)                  | (0-2)                  | (15-17)                | (0-2)                  | (8-10)                 | (16-18)                | (0-2)                  | (0-2)                  | (0-2)                  | (8-10)                 |        |
| Sample ID:                                    | SO-17322-101707-CB-078 | SO-17322-101707-CB-079 | SO-17322-101707-CB-080 | SO-17322-101707-CB-082 | SO-17322-120707-CB-139 | SO-17322-120307-CB-094 | SO-17322-120307-CB-095 | SO-17322-120307-CB-096 | SO-17322-120407-CB-108 | SO-17322-120307-CB-100 | SO-17322-120307-CB-097 | SO-17322-120307-CB-098 |        |
| Sample Date:                                  | 10/17/2007             | 10/17/2007             | 10/17/2007             | 10/17/2007             | 12/07/2007             | 12/03/2007             | 12/03/2007             | 12/03/2007             | 12/04/2007             | 12/03/2007             | 12/03/2007             | 12/03/2007             |        |
| Sample Type:                                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| Parameter:                                    | Units                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| Volatile Organic Compounds                    |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| 1,1,1-Trichloroethane                         | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 1,1-Dichloroethane                            | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 1,1-Dichloroethene                            | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 1,2,4-Trimethylbenzene                        | ug/kg                  | --                     | --                     | 4.0 UJ                 | 4.5 U                  | --                     | 4.2 J                  | 46 U                   | 2500 J                 | 4.1 U                  | 3.9 U                  | 0.85 J                 | R      |
| 1,2-Dichlorobenzene                           | ug/kg                  | --                     | --                     | 4.0 UJ                 | 4.5 U                  | --                     | R                      | 46 U                   | 190 U                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 1,3,5-Trimethylbenzene                        | ug/kg                  | --                     | --                     | 4.0 UJ                 | 4.5 U                  | --                     | 4.9 UJ                 | 46 U                   | 450 J                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 1,3-Dichlorobenzene                           | ug/kg                  | --                     | --                     | 4.0 UJ                 | 4.5 U                  | --                     | R                      | 46 U                   | 190 U                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 1,4-Dichlorobenzene                           | ug/kg                  | --                     | --                     | 4.0 UJ                 | 4.5 U                  | --                     | R                      | 46 U                   | 190 U                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/kg                  | --                     | --                     | 7.8 J                  | 18 U                   | --                     | R                      | 460 U                  | 1400 U                 | 5.2 J                  | 16 U                   | 18 U                   | R      |
| 2-Hexanone                                    | ug/kg                  | --                     | --                     | 16 U                   | 18 U                   | --                     | R                      | 460 U                  | 4800 U                 | 16 U                   | 16 U                   | 18 U                   | R      |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/kg                  | --                     | --                     | 16 U                   | 18 U                   | --                     | R                      | 460 U                  | 4800 U                 | 16 U                   | 16 U                   | 18 U                   | R      |
| Acetone                                       | ug/kg                  | --                     | --                     | 32 J                   | 18 UJ                  | --                     | 55 J                   | 460 U                  | 1400 U                 | 28 U                   | 16 U                   | 18 U                   | R      |
| Benzene                                       | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | 0.62 J                 | 46 U                   | 95 U                   | 0.36 J                 | 3.9 U                  | 4.4 U                  | R      |
| Carbon disulfide                              | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 480 U                  | 2.4 J                  | 3.9 U                  | 4.4 U                  | R      |
| Chloroethane                                  | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 92 U                   | 480 U                  | 4.1 UJ                 | 3.9 U                  | 4.4 UJ                 | R      |
| Chloroform (Trichloromethane)                 | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| cis-1,2-Dichloroethene                        | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Cyclohexane                                   | ug/kg                  | --                     | --                     | 8.1 U                  | 9.0 U                  | --                     | 1.1 J                  | 92 U                   | 2300 U                 | 0.41 J                 | 7.9 U                  | 8.8 U                  | R      |
| Ethylbenzene                                  | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | 3.2 J                  | 46 U                   | 300 J                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Isopropylbenzene                              | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | 0.91 J                 | 46 U                   | 610 J                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Methyl acetate                                | ug/kg                  | --                     | --                     | 8.1 U                  | 9.0 U                  | --                     | R                      | 92 UJ                  | 2300 U                 | R                      | R                      | R                      | R      |
| Methyl cyclohexane                            | ug/kg                  | --                     | --                     | 8.1 U                  | 9.0 U                  | --                     | 1.7 J                  | 92 U                   | 2300 U                 | 0.58 J                 | 7.9 U                  | 8.8 U                  | R      |
| Methyl Tert Butyl Ether                       | ug/kg                  | --                     | --                     | 16 U                   | 18 U                   | --                     | R                      | 180 U                  | 480 U                  | 16 U                   | 16 U                   | 18 U                   | R      |
| Methylene chloride                            | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 180 U                  | R                      | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Tetrachloroethene                             | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Toluene                                       | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | 2.6 J                  | 46 U                   | 190 U                  | 0.51 J                 | 3.9 U                  | 0.30 J                 | R      |
| trans-1,2-Dichloroethene                      | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Trichloroethene                               | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | 1.1 J                  | 46 U                   | 95 U                   | 4.1 U                  | 3.9 U                  | 0.80 J                 | R      |
| Trichlorofluoromethane (CFC-11)               | ug/kg                  | --                     | --                     | 4.0 UJ                 | 4.5 UJ                 | --                     | R                      | 92 UJ                  | 190 U                  | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Vinyl chloride                                | ug/kg                  | --                     | --                     | 4.0 U                  | 4.5 U                  | --                     | R                      | 37 U                   | 76 U                   | 4.1 U                  | 3.9 U                  | 4.4 U                  | R      |
| Xylene (total)                                | ug/kg                  | --                     | --                     | 8.1 U                  | 9.0 U                  | --                     | 19 J                   | 92 U                   | 300 J                  | 0.59 J                 | 7.9 U                  | 0.73 J                 | R      |
| Semi-Volatile Organic Compounds               |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| 2,6-Dinitrotoluene                            | ug/kg                  | --                     | --                     | 220 U                  | 220 U                  | --                     | 450 UJ                 | 230 U                  | 2400 U                 | 230 U                  | 210 U                  | 2100 U                 | 230 UJ |
| 2-Methylnaphthalene                           | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 69                     | 7.6 U                  | 79 U                   | 220                    | 21                     | 70 U                   | 7.6 UJ |
| Acenaphthene                                  | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 100                    | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 210                    | 7.6 UJ |
| Acenaphthylene                                | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 25                     | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 470                    | 7.6 UJ |
| Acetophenone                                  | ug/kg                  | --                     | --                     | 110 U                  | 110 U                  | --                     | 220 UJ                 | 110 UJ                 | 1200 U                 | 120 U                  | 100 U                  | 1100 U                 | 110 UJ |
| Anthracene                                    | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 230                    | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 820                    | 7.6 UJ |
| Benzo(a)anthracene                            | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 490                    | 7.6 U                  | 79 U                   | 15                     | 6.9 U                  | 3700                   | 7.6 UJ |
| Benzo(a)pyrene                                | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 430                    | 7.6 U                  | 79 U                   | 12                     | 6.9 U                  | 2600                   | 7.6 UJ |
| Benzo(b)fluoranthene                          | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 610                    | 7.6 U                  | 79 U                   | 13                     | 12                     | 3600                   | 7.6 UJ |
| Benzo(g,h,i)perylene                          | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 320                    | 7.6 U                  | 79 U                   | 12                     | 6.9 U                  | 1500                   | 7.6 UJ |
| Benzo(k)fluoranthene                          | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 240                    | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 1300                   | 7.6 UJ |
| Biphenyl                                      | ug/kg                  | --                     | --                     | 56 U                   | 54 U                   | --                     | 110 UJ                 | 57 U                   | 590 U                  | 58 U                   | 52 U                   | 530 U                  | 57 UJ  |
| bis(2-Ethylhexyl)phthalate                    | ug/kg                  | --                     | --                     | 56 U                   | 54 U                   | --                     | 61 J                   | 21 J                   | 590 U                  | 110 U                  | 52 U                   | 530 U                  | 57 UJ  |
| Caprolactam                                   | ug/kg                  | --                     | --                     | 370 U                  | 360 U                  | --                     | 740 UJ                 | 380 U                  | 3900 U                 | 380 U                  | 340 U                  | 3500 U                 | 370 UJ |
| Carbazole                                     | ug/kg                  | --                     | --                     | 56 U                   | 54 U                   | --                     | 93 J                   | 57 U                   | 590 U                  | 58 U                   | 52 U                   | 200 J                  | 57 UJ  |
| Chrysene                                      | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 550                    | 7.6 U                  | 79 U                   | 23                     | 6.9 U                  | 2900                   | 7.6 UJ |
| Dibenz(a,h)anthracene                         | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 96                     | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 430                    | 7.6 UJ |
| Dibenzofuran                                  | ug/kg                  | --                     | --                     | 56 U                   | 54 U                   | --                     | 82 J                   | 57 U                   | 590 U                  | 51 J                   | 52 U                   | 220 J                  | 57 UJ  |
| Di-n-butylphthalate                           | ug/kg                  | --                     | --                     | 56 U                   | 54 U                   | --                     | 110 UJ                 | 57 U                   | 590 U                  | 58 U                   | 52 U                   | 530 U                  | 57 UJ  |
| Fluoranthene                                  | ug/kg                  | --                     | --                     | 7.5 U                  | 9.8                    | --                     | 1400                   | 7.6 U                  | 79 U                   | 23                     | 6.9 U                  | 10000                  | 7.6 UJ |
| Fluorene                                      | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 60                     | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 280                    | 7.6 UJ |
| Indeno(1,2,3-cd)pyrene                        | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 270                    | 7.6 U                  | 79 U                   | 7.8 U                  | 6.9 U                  | 1400                   | 7.6 UJ |
| Naphthalene                                   | ug/kg                  | --                     | --                     | 7.5 U                  | 7.2 U                  | --                     | 64                     | 7.6 U                  | 79 U                   | 160                    | 12                     | 79                     | 7.6 UJ |
| Phenanthrene                                  | ug/kg                  | --                     | --                     | 7.5 U                  | 11                     | --                     | 910                    | 7.6 U                  | 96                     | 99                     | 9.2                    | 3400                   | 7.6 UJ |
| Pyrene                                        | ug/kg                  | --                     | --                     | 7.5 U                  | 9.8                    | --                     | 1100                   | 7.6 U                  | 79 U                   | 28                     | 6.9 U                  | 8100                   | 7.6 UJ |

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

|                                                                   |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |            |
|-------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------|
| Sample Location:                                                  | MW-28-07               | MW-28-07               | BH-29-07               | BH-30-07               | MW-32-07               | MW-33-07               | MW-33-07               | MW-33-07               | MW-33-07               | MW-34-07               | MW-35-07               | BH-36-07               | BH-36-07   |
| Sample Depth (ft BGS):                                            | (8-10)                 | (12.75-14.75)          | (0-2)                  | (0-2)                  | (15-17)                | (0-2)                  | (8-10)                 | (16-18)                | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (8-10)     |
| Sample ID:                                                        | SO-17322-101707-CB-078 | SO-17322-101707-CB-079 | SO-17322-101707-CB-080 | SO-17322-101707-CB-082 | SO-17322-120707-CB-139 | SO-17322-120307-CB-094 | SO-17322-120307-CB-095 | SO-17322-120307-CB-096 | SO-17322-120407-CB-108 | SO-17322-120307-CB-100 | SO-17322-120307-CB-097 | SO-17322-120307-CB-098 |            |
| Sample Date:                                                      | 10/17/2007             | 10/17/2007             | 10/17/2007             | 10/17/2007             | 12/07/2007             | 12/03/2007             | 12/03/2007             | 12/03/2007             | 12/03/2007             | 12/04/2007             | 12/03/2007             | 12/03/2007             | 12/03/2007 |
| Sample Type:                                                      |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |            |
| Parameter:                                                        | Units                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |            |
| Metals                                                            |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |            |
| Aluminum                                                          | mg/kg                  | --                     | --                     | 9940                   | 1880                   | --                     | 10600                  | 8520                   | 4350                   | 9010                   | 1590                   | 4850                   | 8320       |
| Antimony                                                          | mg/kg                  | --                     | --                     | 0.18 UJ                | 0.17 UJ                | --                     | 0.13 J                 | 0.081 J                | 0.19 UJ                | 0.16 J                 | 0.17 UJ                | 0.17 UJ                | 0.087 J    |
| Arsenic                                                           | mg/kg                  | --                     | --                     | 4.6                    | 4.4                    | --                     | 3.5                    | 3.2                    | 1.1                    | 4.1                    | 3.8                    | 3.0                    | 5.3        |
| Barium                                                            | mg/kg                  | --                     | --                     | 59.5                   | 14.7                   | --                     | 130                    | 43.4                   | 16.0                   | 40.1                   | 6.3                    | 42.2                   | 54.9       |
| Beryllium                                                         | mg/kg                  | --                     | --                     | 0.14 J                 | 0.17 U                 | --                     | 1.1                    | 0.15 J                 | 0.19 U                 | 0.53 J                 | 0.17 U                 | 0.25                   | 0.19       |
| Cadmium                                                           | mg/kg                  | --                     | --                     | 0.090 U                | 0.18                   | --                     | 0.32 J                 | 0.12 U                 | 0.21 U                 | 0.16                   | 0.13 U                 | 0.32                   | 0.29 J     |
| Calcium                                                           | mg/kg                  | --                     | --                     | 12000                  | 102000                 | --                     | 131000                 | 85000                  | 53300                  | 33300                  | 40100                  | 81100                  | 80500      |
| Chromium III (Trivalent)                                          | mg/kg                  | --                     | --                     | 16.3                   | 11.7                   | --                     | 33.1 J                 | 15.3 J                 | 8.8                    | 14.3                   | 4.0                    | 8.3                    | 13.4 J     |
| Chromium VI (Hexavalent)                                          | mg/kg                  | --                     | --                     | 1.4                    | 1.8                    | --                     | 0.73 J                 | 0.92 U                 | 0.95 UJ                | 0.60 J                 | 0.83 U                 | 0.84 U                 | 1.8        |
| Chromium Total                                                    | mg/kg                  | --                     | --                     | 17.8                   | 13.4                   | --                     | 33.8 J                 | 15.3 J                 | 8.8                    | 14.9                   | 4.0                    | 8.3                    | 15.2 J     |
| Cobalt                                                            | mg/kg                  | --                     | --                     | 9.3                    | 3.8                    | --                     | 4.8 J                  | 7.5                    | 5.3                    | 8.1 J                  | 1.8                    | 2.8                    | 7.5 J      |
| Copper                                                            | mg/kg                  | --                     | --                     | 15.1                   | 8.8                    | --                     | 9.0 J                  | 15.3                   | 12.1                   | 16.1                   | 3.8                    | 8.8                    | 15.8 J     |
| Iron                                                              | mg/kg                  | --                     | --                     | 19500                  | 8830                   | --                     | 1100                   | 16400                  | 7290                   | 17400                  | 4430                   | 7500                   | 19200      |
| Lead                                                              | mg/kg                  | --                     | --                     | 8.9                    | 4.9                    | --                     | 19.4                   | 6.3                    | 7.5 J                  | 10.3 J                 | 3.2 J                  | 16.2 J                 | 6.7        |
| Lead - Coarse Fraction <sup>(1)</sup>                             | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |
| Lead - Fine Fraction <sup>(1)</sup>                               | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |
| Lead - Total (Calculated by fine/ coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --         |
| Magnesium                                                         | mg/kg                  | --                     | --                     | 5520 J                 | 39700 J                | --                     | 24400                  | 14500 J                | 8190 J                 | 6840 J                 | 14900 J                | 16100 J                | 14700      |
| Manganese                                                         | mg/kg                  | 96.6 J                 | 591 J                  | 484                    | 541                    | --                     | 92                     | 352                    | 322                    | 295                    | 116                    | 285                    | 382        |
| Mercury                                                           | mg/kg                  | --                     | --                     | 0.020 J                | 0.043 U                | --                     | 0.027 J                | 0.046 U                | 0.019 J                | 0.10                   | 0.042 UJ               | 0.042 U                | 0.045 U    |
| Nickel                                                            | mg/kg                  | --                     | --                     | 19.8                   | 10.4                   | --                     | 10.4 J                 | 19.0                   | 12.7                   | 19.0                   | 3.7                    | 6.9                    | 21.6 J     |
| Potassium                                                         | mg/kg                  | --                     | --                     | 1250                   | 468                    | --                     | 1380                   | 1950                   | 801                    | 1670                   | 274 J                  | 806                    | 1760       |
| Selenium                                                          | mg/kg                  | --                     | --                     | 0.11 J                 | 0.18                   | --                     | 0.24                   | 0.19 U                 | 0.31                   | 0.20 U                 | 0.18 U                 | 0.15 J                 | 0.19 U     |
| Silver                                                            | mg/kg                  | --                     | --                     | 0.069 J                | 0.038 J                | --                     | 0.18                   | 0.074 J                | 0.10                   | 0.13                   | 0.024 J                | 0.070 J                | 0.096      |
| Sodium                                                            | mg/kg                  | --                     | --                     | 1380                   | 416                    | --                     | 640                    | 1210                   | 633                    | 167                    | 248                    | 308                    | 1210       |
| Thallium                                                          | mg/kg                  | --                     | --                     | 0.12 J                 | 0.21 J                 | --                     | 0.10 U                 | 0.20                   | 0.19                   | 0.27                   | 0.083 U                | 0.052 J                | 0.24       |
| Vanadium                                                          | mg/kg                  | --                     | --                     | 25.0                   | 16.0                   | --                     | 24.5 J                 | 18.7                   | 10.8                   | 20.1                   | 6.4                    | 13.8                   | 21.1 J     |
| Zinc                                                              | mg/kg                  | --                     | --                     | 35.1 J                 | 27.7 J                 | --                     | 38.9 J                 | 35.9                   | 42.6 J                 | 52.8                   | 20.1 J                 | 27.7 J                 | 38.6 J     |
| Polychlorinated Biphenyls                                         |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |            |
| Aroclor-1248 (PCB-1248)                                           | ug/kg                  | --                     | --                     | 37 U                   | 36 U                   | --                     | 340 J                  | 38 U                   | 39 U                   | 38 U                   | 34 U                   | 65                     | 37 UJ      |
| Aroclor-1254 (PCB-1254)                                           | ug/kg                  | --                     | --                     | 37 U                   | 36 U                   | --                     | 37 UJ                  | 38 U                   | 39 U                   | 38 U                   | 34 U                   | 35 U                   | 37 UJ      |
| Aroclor-1260 (PCB-1260)                                           | ug/kg                  | --                     | --                     | 37 U                   | 36 U                   | --                     | 37 UJ                  | 38 U                   | 39 U                   | 38 U                   | 34 U                   | 11 J                   | 37 UJ      |
| Total PCBs                                                        | ug/kg                  | --                     | --                     | 37 U                   | 36 U                   | 39 U                   | 350.4                  | 38 U                   | 39 U                   | 38 U                   | 34 U                   | 80.65                  | 37 U       |
| General Chemistry                                                 |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |            |
| Cyanide (total)                                                   | mg/kg                  | --                     | --                     | 0.22 U                 | 0.22 U                 | --                     | 0.64                   | 0.23 UJ                | 0.24 UJ                | 0.23 U                 | 0.21 U                 | 0.21 U                 | 0.23 UJ    |
| Total Solids                                                      | %                      | 93.8                   | 85.5                   | 89.0                   | 92.6                   | --                     | 89.6                   | 87.2                   | 84.2                   | 86.0                   | 96.4                   | 95.0                   | 88.2       |

Notes:

<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                              | BH-36-07               | MW-37-07               | MW-38-07               | BH-39-07               | MW-40-07               | BH-41-07               | BH-42-07               | BH-42-07               | MW-43-07               | BH-44-07               | MW-46-07               | MW-46-07               |        |
|-----------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------|
| Sample Depth (ft BGS):                        | (13.5-15.5)            | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (9-10)                 | (9-10)                 |        |
| Sample ID:                                    | SO-17322-120307-CB-099 | SO-17322-120307-CB-102 | SO-17322-120407-CB-111 | SO-17322-120407-CB-114 | SO-17322-120507-CB-117 | SO-17322-120507-CB-120 | SO-17322-120507-CB-123 | SO-17322-120507-CB-124 | SO-17322-120607-CB-126 | SO-17322-120607-CB-128 | SO-17322-100907-CB-013 | SO-17322-100907-CB-014 |        |
| Sample Date:                                  | 12/03/2007             | 12/03/2007             | 12/04/2007             | 12/04/2007             | 12/05/2007             | 12/05/2007             | 12/05/2007             | 12/05/2007             | 12/06/2007             | 12/06/2007             | 10/09/2007             | 10/09/2007             |        |
| Sample Type:                                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| Parameter:                                    | Units                  |                        |                        |                        |                        |                        |                        | Duplicate              |                        |                        |                        | Duplicate              |        |
| Volatile Organic Compounds                    |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| 1,1,1-Trichloroethane                         | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| 1,1-Dichloroethane                            | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| 1,1-Dichloroethene                            | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| 1,2,4-Trimethylbenzene                        | ug/kg                  | R                      | 89 U                   | 5.4 U                  | 4.7 U                  | 5.1 U                  | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 UJ |
| 1,2-Dichlorobenzene                           | ug/kg                  | R                      | 89 U                   | 5.4 U                  | 4.7 U                  | 5.1 U                  | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 UJ |
| 1,3,5-Trimethylbenzene                        | ug/kg                  | R                      | 89 U                   | 5.4 U                  | 4.7 U                  | 5.1 U                  | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 UJ |
| 1,3-Dichlorobenzene                           | ug/kg                  | R                      | 89 U                   | 5.4 U                  | 4.7 U                  | 5.1 U                  | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 UJ |
| 1,4-Dichlorobenzene                           | ug/kg                  | R                      | 89 U                   | 5.4 U                  | 4.7 U                  | 5.1 U                  | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 UJ |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/kg                  | R                      | 670 U                  | 19 J                   | 1.6 J                  | 1.8 J                  | 2.3 J                  | 5.3 J                  | 11 J                   | 2.6 J                  | 9.6 J                  | 14 U                   | 15 U   |
| 2-Hexanone                                    | ug/kg                  | R                      | 2200 U                 | 21 UJ                  | 19 U                   | 21 UJ                  | 17 UJ                  | 15 U                   | 16 U                   | 18 UJ                  | 14 U                   | 15 U                   | 15 U   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/kg                  | R                      | 18 J                   | 21 U                   | 19 U                   | 21 UJ                  | 17 U                   | 17 U                   | 15 U                   | 16 U                   | 18 U                   | 14 U                   | 15 U   |
| Acetone                                       | ug/kg                  | R                      | 670 U                  | 84                     | 19 U                   | 21 UJ                  | 6.6 J                  | 20                     | 43                     | 13 J                   | 33                     | 7.0 J                  | 8.1 J  |
| Benzene                                       | ug/kg                  | R                      | 9.8 J                  | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 0.22 J                 | 4.2 U                  | 3.9 U                  | 3.9 U                  | 0.55 J                 | 3.5 U                  | 3.7 U  |
| Carbon disulfide                              | ug/kg                  | R                      | 220 U                  | 5.4 U                  | 0.46 J                 | 5.1 UJ                 | 0.41 J                 | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 4.1    |
| Chloroethane                                  | ug/kg                  | R                      | 220 U                  | 5.4 UJ                 | 4.7 UJ                 | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 0.82 J                 | 4.6 U                  | 3.5 U                  | 3.7 U  |
| Chloroform (Trichloromethane)                 | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| cis-1,2-Dichloroethene                        | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 0.88 J                 | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| Cyclohexane                                   | ug/kg                  | R                      | 20 J                   | 11 U                   | 9.4 U                  | 38 UJ                  | 0.53 J                 | 8.4 U                  | 7.7 U                  | 7.9 U                  | 9.2 U                  | 7.0 U                  | 7.4 U  |
| Ethylbenzene                                  | ug/kg                  | R                      | 14 J                   | 5.4 UJ                 | 4.7 U                  | 5.1 UJ                 | 21 J                   | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 UJ                 | 3.5 U                  | 3.7 U  |
| Isopropylbenzene                              | ug/kg                  | R                      | 6.0 J                  | 5.4 UJ                 | 4.7 U                  | 5.1 UJ                 | 4.1 UJ                 | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 UJ                 | 3.5 U                  | 3.7 U  |
| Methyl acetate                                | ug/kg                  | R                      | 110 J                  | R                      | R                      | R                      | R                      | R                      | R                      | R                      | R                      | 7.0 U                  | 7.4 U  |
| Methyl cyclohexane                            | ug/kg                  | R                      | 61 J                   | 11 U                   | 9.4 U                  | 30 UJ                  | 8.3 U                  | 8.4 U                  | 7.7 U                  | 7.9 U                  | 9.2 U                  | 7.0 U                  | 7.4 U  |
| Methyl Tert Butyl Ether                       | ug/kg                  | R                      | 220 U                  | 21 U                   | 19 U                   | 21 UJ                  | 17 U                   | 17 U                   | 15 U                   | 16 U                   | 18 U                   | 14 U                   | 15 U   |
| Methylene chloride                            | ug/kg                  | R                      | R                      | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| Tetrachloroethene                             | ug/kg                  | R                      | 45 U                   | 5.4 UJ                 | 4.7 U                  | 5.1 UJ                 | 2.1 J                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 UJ                 | 3.5 U                  | 3.7 U  |
| Toluene                                       | ug/kg                  | R                      | 42 J                   | 5.4 UJ                 | 4.7 U                  | 5.1 UJ                 | 4.1 UJ                 | 4.2 U                  | 3.9 U                  | 3.9 U                  | 0.36 J                 | 3.5 U                  | 3.7 U  |
| trans-1,2-Dichloroethene                      | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| Trichloroethene                               | ug/kg                  | R                      | 45 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 2.7 J                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| Trichlorofluoromethane (CFC-11)               | ug/kg                  | R                      | 89 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 UJ                 | 4.2 UJ                 | 3.9 UJ                 | 3.9 UJ                 | 4.6 UJ                 | 3.5 U                  | 3.7 U  |
| Vinyl chloride                                | ug/kg                  | R                      | 36 U                   | 5.4 U                  | 4.7 U                  | 5.1 UJ                 | 4.1 U                  | 4.2 U                  | 3.9 U                  | 3.9 U                  | 4.6 U                  | 3.5 U                  | 3.7 U  |
| Xylene (total)                                | ug/kg                  | R                      | 82 J                   | 11 UJ                  | 9.4 U                  | 10 UJ                  | 2.0 J                  | 8.4 U                  | 7.7 U                  | 7.9 U                  | 9.2 UJ                 | 7.0 U                  | 7.4 U  |
| Semi-Volatile Organic Compounds               |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |        |
| 2,6-Dinitrotoluene                            | ug/kg                  | 230 UJ                 | 2200 U                 | 230 U                  | 230 U                  | 230 U                  | 230 U                  | 230 U                  | 230 U                  | 220 U                  | 240 U                  | 220 U                  | 220 U  |
| 2-Methylnaphthalene                           | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 7.7 U                  | 7.8 U                  | 7.6 U                  | 7.7                    | 110                    | 7.5 U                  | 7.5 U  |
| Acenaphthene                                  | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 7.7 U                  | 7.8 U                  | 7.6 U                  | 7.5 U                  | 17                     | 7.5 U                  | 7.5 U  |
| Acenaphthylene                                | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 7.7 U                  | 7.8 U                  | 7.6 U                  | 7.5 U                  | 29                     | 7.5 U                  | 7.5 U  |
| Acetophenone                                  | ug/kg                  | 110 UJ                 | 1100 U                 | 120 U                  | 110 U                  | 110 U                  | 110 U                  | 120 U                  | 110 U                  | 110 U                  | 120 U                  | 110 U                  | 110 U  |
| Anthracene                                    | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 6.1 J                  | 7.6 U                  | 15                     | 19                     | 8.2                    | 7.5 U                  | 50                     | 7.5 U                  | 7.5 U  |
| Benzo(a)anthracene                            | ug/kg                  | 7.6 UJ                 | 160                    | 7.8 U                  | 7.6 U                  | 7.6 U                  | 61                     | 130                    | 53                     | 23                     | 180                    | 7.5 U                  | 7.5 U  |
| Benzo(a)pyrene                                | ug/kg                  | 7.6 UJ                 | 120                    | 7.8 U                  | 7.6 U                  | 7.6 U                  | 60                     | 150                    | 69                     | 24                     | 180                    | 7.5 U                  | 7.5 U  |
| Benzo(b)fluoranthene                          | ug/kg                  | 7.6 UJ                 | 250                    | 7.8 U                  | 8.0                    | 7.6 U                  | 86                     | 160                    | 88                     | 37                     | 260                    | 7.5 U                  | 7.5 U  |
| Benzo(g,h,i)perylene                          | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 41                     | 170                    | 120                    | 25                     | 140                    | 7.5 U                  | 7.5 U  |
| Benzo(k)fluoranthene                          | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 30                     | 95                     | 37                     | 11                     | 100                    | 7.5 U                  | 7.5 U  |
| Biphenyl                                      | ug/kg                  | 57 UJ                  | 560 U                  | 58 U                   | 57 U                   | 57 U                   | 57 U                   | 59 U                   | 57 U                   | 56 U                   | 60 U                   | 56 U                   | 56 U   |
| bis(2-Ethylhexyl)phthalate                    | ug/kg                  | 57 UJ                  | 560 U                  | 69 U                   | 57 U                   | 57 U                   | 57 U                   | 59 U                   | 57 U                   | 56 U                   | 60 U                   | 56 U                   | 56 U   |
| Caprolactam                                   | ug/kg                  | 380 UJ                 | 3700 U                 | 390 U                  | 380 U                  | 380 U                  | 380 U                  | 390 U                  | 380 U                  | 370 U                  | 390 U                  | 370 U                  | 370 U  |
| Carbazole                                     | ug/kg                  | 57 UJ                  | 560 U                  | 58 U                   | 57 U                   | 57 U                   | 57 U                   | 59 U                   | 57 U                   | 56 U                   | 27 J                   | 56 U                   | 56 U   |
| Chrysene                                      | ug/kg                  | 7.6 UJ                 | 170                    | 7.8 U                  | 7.6 U                  | 7.6 U                  | 74                     | 140                    | 74                     | 35                     | 230                    | 7.5 U                  | 7.5 U  |
| Dibenz(a,h)anthracene                         | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 9.9                    | 18                     | 13                     | 7.5 U                  | 38                     | 7.5 U                  | 7.5 U  |
| Dibenzofuran                                  | ug/kg                  | 57 UJ                  | 560 U                  | 57 U                   | 57 U                   | 57 U                   | 57 U                   | 59 U                   | 57 U                   | 56 U                   | 34 J                   | 56 U                   | 56 U   |
| Di-n-butylphthalate                           | ug/kg                  | 57 UJ                  | 560 U                  | 58 U                   | 57 U                   | 57 U                   | 57 U                   | 59 U                   | 57 U                   | 56 U                   | 60 U                   | 56 U                   | 56 U   |
| Fluoranthene                                  | ug/kg                  | 7.6 UJ                 | 370                    | 7.8 U                  | 7.6 U                  | 7.6 U                  | 120                    | 280                    | 110                    | 55                     | 410                    | 7.5 U                  | 7.5 U  |
| Fluorene                                      | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 7.7 U                  | 7.8 U                  | 7.6 U                  | 7.5 U                  | 23                     | 7.5 U                  | 7.5 U  |
| Indeno(1,2,3-cd)pyrene                        | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 37                     | 88                     | 47                     | 15                     | 120                    | 7.5 U                  | 7.5 U  |
| Naphthalene                                   | ug/kg                  | 7.6 UJ                 | 74 U                   | 7.8 U                  | 7.6 U                  | 7.6 U                  | 7.7 U                  | 7.8 U                  | 7.6 U                  | 7.5 U                  | 76                     | 7.5 U                  | 7.5 U  |
| Phenanthrene                                  | ug/kg                  | 7.6 UJ                 | 190                    | 7.8 U                  | 8.8                    | 8.9                    | 60                     | 87                     | 37                     | 30                     | 240                    | 7.5 U                  | 7.5 U  |
| Pyrene                                        | ug/kg                  | 7.6 UJ                 | 320                    | 7.8 U                  | 7.6 U                  | 7.6 U                  | 97                     | 190                    | 95                     | 41                     | 330                    | 7.5 U                  | 7.5 U  |

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

|                                                                  |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample Location:                                                 |       | BH-36-07               | MW-37-07               | MW-38-07               | BH-39-07               | MW-40-07               | BH-41-07               | BH-42-07               | BH-42-07               | MW-43-07               | BH-44-07               | MW-46-07               | MW-46-07               |
| Sample Depth (ft BGS):                                           |       | (13.5-15.5)            | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (0-2)                  | (9-10)                 | (9-10)                 |
| Sample ID:                                                       |       | SO-17322-120307-CB-099 | SO-17322-120307-CB-102 | SO-17322-120407-CB-111 | SO-17322-120407-CB-114 | SO-17322-120507-CB-117 | SO-17322-120507-CB-120 | SO-17322-120507-CB-123 | SO-17322-120507-CB-124 | SO-17322-120607-CB-126 | SO-17322-120607-CB-128 | SO-17322-100907-CB-013 | SO-17322-100907-CB-014 |
| Sample Date:                                                     |       | 12/03/2007             | 12/03/2007             | 12/04/2007             | 12/04/2007             | 12/05/2007             | 12/05/2007             | 12/05/2007             | 12/05/2007             | 12/06/2007             | 12/06/2007             | 10/09/2007             | 10/09/2007             |
| Sample Type:                                                     |       |                        |                        |                        |                        |                        |                        |                        | Duplicate              |                        |                        |                        | Duplicate              |
| Parameter:                                                       | Units |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Metals                                                           |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aluminum                                                         | mg/kg | 7230                   | 7110                   | 6860                   | 2650                   | 3280                   | 7060                   | 4620                   | 3250                   | 7410                   | 5300                   | 6240                   | 5130                   |
| Antimony                                                         | mg/kg | 0.079 J                | 0.53 J                 | 0.19 UJ                | 0.18 UJ                | 0.22 J                 | 0.18 UJ                | 0.25 J                 | 0.15 J                 | 0.10 J                 | 0.46 J                 | 0.067 J                | 0.098 J                |
| Arsenic                                                          | mg/kg | 6.5                    | 3.5                    | 3.4                    | 3.8                    | 2.6                    | 3.7                    | 2.7                    | 2.7                    | 4.4                    | 2.0                    | 2.2 J                  | 0.57 J                 |
| Barium                                                           | mg/kg | 34.9                   | 58.8                   | 41.0                   | 11.4                   | 15.2                   | 38.3                   | 50.8 J                 | 16.8 J                 | 46.5 J                 | 92.5 J                 | 42.5                   | 29.9                   |
| Beryllium                                                        | mg/kg | 0.17 J                 | 0.25                   | 0.39 J                 | 0.17 J                 | 0.18 U                 | 0.12 J                 | 0.091 J                | 0.18 U                 | 0.20 J                 | 0.19 UJ                | 0.16 J                 | 0.12 J                 |
| Cadmium                                                          | mg/kg | 0.22 J                 | 0.49                   | 0.22 J                 | 0.17                   | 0.091 U                | 0.082 J                | 0.27                   | 0.091 U                | 0.20                   | 0.47                   | 0.091                  | 0.084 J                |
| Calcium                                                          | mg/kg | 77200                  | 40700                  | 31100                  | 56900                  | 2970                   | 63200                  | 9370                   | 7950                   | 38500                  | 7860                   | 65400 J                | 63200 J                |
| Chromium III (Trivalent)                                         | mg/kg | 11.1 J                 | 17.6                   | 11.1                   | 5.4                    | 6.3                    | 11.6                   | 8.6                    | 5.0                    | 14.2 J                 | 10 J                   | 12.3 J                 | 10.7 J                 |
| Chromium VI (Hexavalent)                                         | mg/kg | 0.83 J                 | 0.89 U                 | 1.1                    | 0.64 J                 | 0.91 U                 | 0.92 U                 | 1.1                    | 0.61 J                 | 0.41 J                 | 2.4                    | 0.89 U                 | 0.89 U                 |
| Chromium Total                                                   | mg/kg | 11.9 J                 | 17.6                   | 12.2                   | 6.0                    | 6.3                    | 11.6                   | 9.7                    | 5.6                    | 14.7 J                 | 12.4 J                 | 12.3 J                 | 10.7 J                 |
| Cobalt                                                           | mg/kg | 6.1 J                  | 8.3                    | 5.3 J                  | 3.1 J                  | 2.6                    | 6.9                    | 3.8                    | 3.0                    | 7.9 J                  | 5.8 J                  | 6.4 J                  | 6.0 J                  |
| Copper                                                           | mg/kg | 13.1 J                 | 142                    | 13.5                   | 7.2                    | 8.1                    | 1.7                    | 21.5                   | 11.6                   | 19.5                   | 30.4                   | 17.3 J                 | 16.0 J                 |
| Iron                                                             | mg/kg | 16100                  | 16200                  | 13300                  | 7780                   | 16300                  | 12200                  | 8040                   | 6120                   | 15400                  | 31900                  | 17000                  | 14300                  |
| Lead                                                             | mg/kg | 6.8                    | 18.7 J                 | 15.5 J                 | 3.8 J                  | 8.3                    | 7.0                    | 36.5 J                 | 7.2 J                  | 18.7                   | 78.2                   | 6.1                    | 5.8                    |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | 139                    | --                     | --                     |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | 237                    | --                     | --                     |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | 175                    | --                     | --                     |
| Magnesium                                                        | mg/kg | 18200                  | 10700 J                | 8270 J                 | 17000 J                | 836                    | 14200                  | 2860                   | 2140                   | 8810 J                 | 2410 J                 | 15100 J                | 14800 J                |
| Manganese                                                        | mg/kg | 268                    | 306                    | 251                    | 225                    | 150 J                  | 373 J                  | 101 J                  | 91.8 J                 | 286                    | 327                    | 315                    | 291                    |
| Mercury                                                          | mg/kg | 0.045 U                | 0.024 J                | 0.050                  | 0.046 U                | 0.046 U                | 0.024                  | 0.74 J                 | 0.071 J                | 0.054                  | 0.17                   | 0.021 J                | 0.018 J                |
| Nickel                                                           | mg/kg | 17.3 J                 | 13.3                   | 13.1                   | 6.9                    | 5.7                    | 4.2                    | 9.9                    | 5.8                    | 15.2                   | 10.3                   | 17.1 J                 | 15.0 J                 |
| Potassium                                                        | mg/kg | 1450                   | 747                    | 995                    | 406 J                  | 373                    | 1210                   | 586                    | 346 J                  | 1070                   | 754                    | 1170                   | 958                    |
| Selenium                                                         | mg/kg | 0.19 U                 | 0.27                   | 0.27                   | 0.19 U                 | 0.19 U                 | 0.20 U                 | 0.27                   | 0.12 J                 | 0.19 U                 | 0.16 J                 | 0.19 U                 | 0.21                   |
| Silver                                                           | mg/kg | 0.099                  | 0.094                  | 0.059 J                | 0.032 J                | 0.030 J                | 0.064 J                | 0.099                  | 0.031 J                | 0.075 J                | 0.16                   | 0.10                   | 0.078 J                |
| Sodium                                                           | mg/kg | 625                    | 1040                   | 166                    | 464                    | 210                    | 422                    | 999                    | 473                    | 983                    | 937                    | 1170                   | 1020                   |
| Thallium                                                         | mg/kg | 0.17                   | 0.12                   | 0.10                   | 0.082 J                | 0.041 J                | 0.12                   | 0.13                   | 0.090 J                | 0.14                   | 0.16                   | 0.11                   | 0.079 J                |
| Vanadium                                                         | mg/kg | 15.9 J                 | 21.2                   | 17.6                   | 11.5                   | 10.2                   | 16.1                   | 11.7                   | 10.4                   | 18.0                   | 12.8                   | 20.5 J                 | 15.6 J                 |
| Zinc                                                             | mg/kg | 33.6 J                 | 41.6 J                 | 33.0                   | 24.3                   | 14.6                   | 30.6                   | 68.0 J                 | 21.1 J                 | 49.5                   | 92.4                   | 27.7 J                 | 17.2 J                 |
| Polychlorinated Biphenyls                                        |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)                                          | ug/kg | 38 U                   | 37 U                   | 39 U                   | 38 U                   | 38 U                   | 32 J                   | 39 U                   | 38 U                   | 190 U                  | 39 U                   | 37 U                   | 37 U                   |
| Aroclor-1254 (PCB-1254)                                          | ug/kg | 38 U                   | 40                     | 39 U                   | 38 U                   | 38 U                   | 38 U                   | 39 U                   | 38 U                   | 600                    | 39 U                   | 37 U                   | 37 U                   |
| Aroclor-1260 (PCB-1260)                                          | ug/kg | 38 U                   | 37 U                   | 39 U                   | 38 U                   | 38 U                   | 38 U                   | 39 U                   | 38 U                   | 190 U                  | 39 U                   | 37 U                   | 37 U                   |
| Total PCBs                                                       | ug/kg | 38 U                   | 54                     | 39 U                   | 38 U                   | 38 U                   | 42.5                   | 39 U                   | 38 U                   | 669.5                  | 39 U                   | 37 U                   | 37 U                   |
| General Chemistry                                                |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Cyanide (total)                                                  | mg/kg | 0.23 UJ                | 0.22 UJ                | 0.23 U                 | 0.23 U                 | 0.23 U                 | 0.23 U                 | 0.23 U                 | 0.23 U                 | 0.22 U                 | 0.24 U                 | 0.23 J                 | 0.48 J                 |
| Total Solids                                                     | %     | 87.9                   | 89.8                   | 85.7                   | 87.2                   | 87.7                   | 87.2                   | 85.4                   | 87.8                   | 88.9                   | 83.8 Dup 98.6 Dup 98.9 | 89.5                   | 89.4                   |

Notes:

<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                              | BH-47-07               | BH-47-07               | BH-47-07               | MW-48-07               | BH-49-07               | BH-50-07               | BH-57-07               | BH-61-08               | BH-62-08               | MW-63-08               | MW-64-08               | BH-65-08               |       |
|-----------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------|
| Sample Depth (ft BGS):                        | (0-2)                  | (8-10)                 | (17.5-20)              | (5-7)                  | (0-2)                  | (0-2)                  | (0-2)                  | (8-10)                 | (9-11)                 | (10-12)                | (10-11.75)             | (10-12)                |       |
| Sample ID:                                    | SO-17322-100907-CB-009 | SO-17322-100907-CB-010 | SO-17322-100907-CB-011 | SO-17322-100907-CB-007 | SO-17322-100907-CB-004 | SO-17322-100907-CB-001 | SO-17322-101807-CB-088 | SO-17322-031008-CB-007 | SO-17322-031008-CB-005 | SO-17322-031008-CB-003 | SO-17322-031008-CB-012 | SO-17322-031108-CB-015 |       |
| Sample Date:                                  | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/18/2007             | 03/10/2008             | 03/10/2008             | 03/10/2008             | 03/10/2008             | 03/11/2008             |       |
| Sample Type:                                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |       |
| Parameter:                                    | Units                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |       |
| Volatile Organic Compounds                    |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |       |
| 1,1,1-Trichloroethane                         | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,1-Dichloroethane                            | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,1-Dichloroethene                            | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,2,4-Trimethylbenzene                        | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 2.0 J                  | 4.2 UJ                 | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,2-Dichlorobenzene                           | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 UJ                 | 4.2 UJ                 | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,3,5-Trimethylbenzene                        | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 0.68 J                 | 4.2 UJ                 | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,3-Dichlorobenzene                           | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 UJ                 | 4.2 UJ                 | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 1,4-Dichlorobenzene                           | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 UJ                 | 4.2 UJ                 | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/kg                  | --                     | --                     | 17 U                   | 17 UJ                  | 16 U                   | 12 U                   | 2.4 J                  | 17 U                   | 700 U                  | 16 U                   | 13 U                   | 17 U  |
| 2-Hexanone                                    | ug/kg                  | --                     | --                     | 17 U                   | 17 UJ                  | 16 U                   | 12 U                   | 12 U                   | 17 U                   | 2300 U                 | 16 U                   | 13 U                   | 17 U  |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/kg                  | --                     | --                     | 17 U                   | 17 UJ                  | 16 U                   | 12 U                   | 12 U                   | 17 U                   | 2300 U                 | 16 U                   | 13 U                   | 17 U  |
| Acetone                                       | ug/kg                  | --                     | --                     | 17 U                   | 24 J                   | 16 U                   | 12 U                   | 15 J                   | 17 U                   | 700 U                  | 16 U                   | 13 U                   | 17 U  |
| Benzene                                       | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Carbon disulfide                              | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 230 U                  | 3.9 U                  | 3.3 U                  | 4.4 U |
| Chloroethane                                  | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 230 U                  | 3.9 U                  | 3.3 U                  | 4.4 U |
| Chloroform (Trichloromethane)                 | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| cis-1,2-Dichloroethene                        | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Cyclohexane                                   | ug/kg                  | --                     | --                     | 8.3 U                  | 0.73 J                 | 5.2 U                  | 5.9 U                  | 5.9 U                  | 8.5 U                  | 1100 U                 | 7.8 U                  | 6.6 U                  | 8.7 U |
| Ethylbenzene                                  | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 0.25 J                 | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Isopropylbenzene                              | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 230 U                  | 3.9 U                  | 3.3 U                  | 4.4 U |
| Methyl acetate                                | ug/kg                  | --                     | --                     | 8.3 U                  | 8.7 UJ                 | 8.2 U                  | 5.9 U                  | 5.9 U                  | 8.5 U                  | 1100 U                 | 7.8 U                  | 6.6 U                  | 8.7 U |
| Methyl cyclohexane                            | ug/kg                  | --                     | --                     | 8.3 U                  | 8.7 UJ                 | 8.2 U                  | 5.9 U                  | 5.9 U                  | 8.5 U                  | 1100 U                 | 7.8 U                  | 6.6 U                  | 8.7 U |
| Methyl Tert Butyl Ether                       | ug/kg                  | --                     | --                     | 17 U                   | 17 UJ                  | 16 U                   | 12 U                   | 12 U                   | 17 U                   | 230 U                  | 16 U                   | 13 U                   | 17 U  |
| Methylene chloride                            | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 230 U                  | 3.9 U                  | 3.3 U                  | 4.4 U |
| Tetrachloroethene                             | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Toluene                                       | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 0.28 J                 | 4.2 U                  | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| trans-1,2-Dichloroethene                      | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Trichloroethene                               | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 46 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Trichlorofluoromethane (CFC-11)               | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 1.2 J                  | 93 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Vinyl chloride                                | ug/kg                  | --                     | --                     | 4.1 U                  | 4.3 UJ                 | 4.1 U                  | 2.9 U                  | 3.0 U                  | 4.2 U                  | 37 U                   | 3.9 U                  | 3.3 U                  | 4.4 U |
| Xylene (total)                                | ug/kg                  | --                     | --                     | 8.3 U                  | 8.7 UJ                 | 8.2 U                  | 5.9 U                  | 1.4 J                  | 8.5 U                  | 140 U                  | 7.8 U                  | 6.6 U                  | 8.7 U |
| Semi-Volatile Organic Compounds               |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |       |
| 2,6-Dinitrotoluene                            | ug/kg                  | --                     | --                     | 220 U                  | 980 U                  | 240 U                  | 230 U                  | 230 U                  | 230 U                  | 240 U                  | 220 U                  | 230 U                  |       |
| 2-Methylnaphthalene                           | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 33                     | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Acenaphthene                                  | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 790                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Acenaphthylene                                | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 7.6 U                  | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Acetophenone                                  | ug/kg                  | --                     | --                     | 110 U                  | 490 U                  | 120 U                  | 110 U                  | 110 U                  | 110 U                  | 120 U                  | 110 U                  | 110 U                  | 110 U |
| Anthracene                                    | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 410                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Benzo(a)anthracene                            | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 45                     | 870                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Benzo(a)pyrene                                | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 48                     | 590                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Benzo(b)fluoranthene                          | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 58                     | 900                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Benzo(g,h,i)perylene                          | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 33                     | 240                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Benzo(k)fluoranthene                          | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 27                     | 350                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Biphenyl                                      | ug/kg                  | --                     | --                     | 54 U                   | 240 U                  | 60 U                   | 56 U                   | 96                     | 56 U                   | 58 U                   | 59 U                   | 55 U                   | 57 U  |
| bis(2-Ethylhexyl)phthalate                    | ug/kg                  | --                     | --                     | 54 U                   | 240 U                  | 60 U                   | 56 U                   | 57 U                   | 56 U                   | 29 J                   | 66                     | 52 J                   | 160   |
| Caprolactam                                   | ug/kg                  | --                     | --                     | 350 U                  | 1600 U                 | 390 U                  | 370 U                  | 370 U                  | 370 U                  | 380 U                  | 390 U                  | 360 U                  | 370 U |
| Carbazole                                     | ug/kg                  | --                     | --                     | 54 U                   | 240 U                  | 60 U                   | 56 U                   | 57 U                   | 56 U                   | 58 U                   | 59 U                   | 55 U                   | 57 U  |
| Chrysene                                      | ug/kg                  | --                     | --                     | 7.2 U                  | 37                     | 8.0 U                  | 52                     | 1100                   | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 8.3   |
| Dibenz(a,h)anthracene                         | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 61                     | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Dibenzofuran                                  | ug/kg                  | --                     | --                     | 54 U                   | 240 U                  | 60 U                   | 56 U                   | 470                    | 56 U                   | 58 U                   | 59 U                   | 55 U                   | 57 U  |
| Di-n-butylphthalate                           | ug/kg                  | --                     | --                     | 54 U                   | 240 U                  | 60 U                   | 56 U                   | 57 U                   | 56 U                   | 58 U                   | 59 U                   | 55 U                   | 57 U  |
| Fluoranthene                                  | ug/kg                  | --                     | --                     | 7.2 U                  | 33                     | 8.0 U                  | 81                     | 3800                   | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Fluorene                                      | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 1000                   | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Indeno(1,2,3-cd)pyrene                        | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 29                     | 250                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Naphthalene                                   | ug/kg                  | --                     | --                     | 7.2 U                  | 33 U                   | 8.0 U                  | 7.5 U                  | 280                    | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Phenanthrene                                  | ug/kg                  | --                     | --                     | 7.2 U                  | 35                     | 8.0 U                  | 33                     | 4400                   | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |
| Pyrene                                        | ug/kg                  | --                     | --                     | 7.2 U                  | 43                     | 8.0 U                  | 71                     | 2800                   | 7.5 U                  | 7.7 U                  | 7.9 U                  | 7.3 U                  | 7.6 U |

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                                                 | BH-47-07               | BH-47-07               | BH-47-07               | MW-48-07               | BH-49-07               | BH-50-07               | BH-57-07               | BH-61-08               | BH-62-08               | MW-63-08               | MW-64-08               | BH-65-08               |         |
|------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------|
| Sample Depth (ft BGS):                                           | (0-2)                  | (8-10)                 | (17.5-20)              | (5-7)                  | (0-2)                  | (0-2)                  | (0-2)                  | (8-10)                 | (9-11)                 | (10-12)                | (10-11.75)             | (10-12)                |         |
| Sample ID:                                                       | SO-17322-100907-CB-009 | SO-17322-100907-CB-010 | SO-17322-100907-CB-011 | SO-17322-100907-CB-007 | SO-17322-100907-CB-004 | SO-17322-100907-CB-001 | SO-17322-101807-CB-088 | SO-17322-031008-CB-007 | SO-17322-031008-CB-005 | SO-17322-031008-CB-003 | SO-17322-031008-CB-012 | SO-17322-031108-CB-015 |         |
| Sample Date:                                                     | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/09/2007             | 10/18/2007             | 03/10/2008             | 03/10/2008             | 03/10/2008             | 03/10/2008             | 03/11/2008             |         |
| Sample Type:                                                     |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Parameter:                                                       | Units                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Metals                                                           |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Aluminum                                                         | mg/kg                  | --                     | --                     | 3020                   | 2690                   | 17000                  | 8250                   | 7040                   | 9680                   | 6040                   | 7110                   | 6250                   | 3190    |
| Antimony                                                         | mg/kg                  | --                     | --                     | 0.074 J                | 0.11 J                 | 0.11 J                 | 0.13 J                 | 0.18 UJ                | 0.060 J                | 0.074 J                | 0.077 J                | 0.074 J                | 0.063 J |
| Arsenic                                                          | mg/kg                  | 4.3                    | 4.1                    | 11.1                   | 3.5                    | 5.2                    | 4.1                    | 2.4                    | 2.5 J                  | 4.7 J                  | 4.1 J                  | 4.7 J                  | 6.0     |
| Barium                                                           | mg/kg                  | --                     | --                     | 13.9                   | 21.6                   | 63.5                   | 40.4                   | 48.5 J                 | 55.7                   | 23.8                   | 35.3                   | 29.5                   | 26.0    |
| Beryllium                                                        | mg/kg                  | --                     | --                     | 0.17 U                 | 0.20 U                 | 0.56                   | 0.069 J                | 0.16 J                 | 0.44                   | 0.29                   | 0.37                   | 0.33                   | 0.20    |
| Cadmium                                                          | mg/kg                  | --                     | --                     | 0.18                   | 0.066 J                | 0.10                   | 0.074 J                | 0.19 J                 | 0.25                   | 0.16                   | 0.31                   | 0.26                   | 0.30    |
| Calcium                                                          | mg/kg                  | --                     | --                     | 53600 J                | 2750 J                 | 2290 J                 | 7660 J                 | 7770                   | 75800                  | 64000                  | 81100                  | 75800                  | 75200   |
| Chromium III (Trivalent)                                         | mg/kg                  | --                     | --                     | 6.0 J                  | 3.7 J                  | 27.8 J                 | 16.1 J                 | 12.1                   | 18.6                   | 13.6                   | 12.9                   | 11.3                   | 6.5     |
| Chromium VI (Hexavalent)                                         | mg/kg                  | --                     | --                     | 0.86 U                 | 0.98 U                 | 0.96 U                 | 0.90 U                 | 1.1 U                  | 0.90 U                 | 0.93 U                 | 0.94 U                 | 0.88 U                 | 0.91 U  |
| Chromium Total                                                   | mg/kg                  | --                     | --                     | 6.5 J                  | 4.4 J                  | 27.8 J                 | 16.6 J                 | 13.2                   | 18.6                   | 13.6                   | 12.9                   | 11.3                   | 6.5     |
| Cobalt                                                           | mg/kg                  | --                     | --                     | 5.8 J                  | 2.6 J                  | 8.5 J                  | 7.5 J                  | 7.3                    | 7.1                    | 6.8                    | 8.1                    | 7.4                    | 4.4     |
| Copper                                                           | mg/kg                  | --                     | --                     | 20.9 J                 | 5.0 J                  | 25.6 J                 | 2.8 J                  | 11.4 J                 | 15.9                   | 16.9                   | 21.0                   | 18.0                   | 18.2    |
| Iron                                                             | mg/kg                  | --                     | --                     | 12000                  | 8660                   | 25800                  | 9700                   | 13500                  | 14900                  | 12400                  | 18600                  | 13900                  | 9560    |
| Lead                                                             | mg/kg                  | --                     | --                     | 9.0                    | 6.4                    | 10.7                   | 15.3                   | 9.8                    | 7.4                    | 9.4                    | 8.2                    | 6.9                    | 6.1     |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Magnesium                                                        | mg/kg                  | --                     | --                     | 8530 J                 | 941 J                  | 5700 J                 | 3890 J                 | 2580 J                 | 15700                  | 11500                  | 14200                  | 13700                  | 10900   |
| Manganese                                                        | mg/kg                  | --                     | --                     | 334                    | 74.0                   | 361                    | 278                    | 585                    | 419                    | 339                    | 542                    | 394                    | 286     |
| Mercury                                                          | mg/kg                  | --                     | --                     | 0.028 J                | 0.049 U                | 0.034 J                | 0.046                  | 0.053                  | 0.025 J                | 0.046 U                | 0.020 J                | 0.044 U                | 0.045 U |
| Nickel                                                           | mg/kg                  | --                     | --                     | 12.9 J                 | 4.1 J                  | 32.8 J                 | 16.9 J                 | 13.1                   | 22.2 J                 | 19.2 J                 | 21.8 J                 | 19.2 J                 | 11.5 J  |
| Potassium                                                        | mg/kg                  | --                     | --                     | 555                    | 253 J                  | 3640                   | 1160                   | 954                    | 2390                   | 1480                   | 1710                   | 1490                   | 819     |
| Selenium                                                         | mg/kg                  | --                     | --                     | 0.10 J                 | 0.28                   | 0.20 U                 | 0.19 U                 | 0.18 J                 | 0.55 J                 | 0.72 J                 | 0.86 J                 | 0.65 J                 | 0.48    |
| Silver                                                           | mg/kg                  | --                     | --                     | 0.072 J                | 0.032 J                | 0.12                   | 0.077 J                | 0.13                   | 0.022 J                | 0.026 J                | 0.035 J                | 0.034 J                | 0.024 J |
| Sodium                                                           | mg/kg                  | --                     | --                     | 108 U                  | 212                    | 1990                   | 90.2 U                 | 107                    | 98.8                   | 134                    | 99.4                   | 167                    | 85.3 J  |
| Thallium                                                         | mg/kg                  | --                     | --                     | 0.26                   | 0.098 U                | 0.19                   | 0.12                   | 0.081 J                | 0.21                   | 0.21                   | 0.23                   | 0.23                   | 0.19    |
| Vanadium                                                         | mg/kg                  | --                     | --                     | 11.4 J                 | 6.8 J                  | 25.8 J                 | 20.9 J                 | 20.1                   | 20.2                   | 14.4                   | 16.7                   | 15.5                   | 10.1    |
| Zinc                                                             | mg/kg                  | --                     | --                     | 63.4 J                 | 25.5 J                 | 44.8 J                 | 40.5 J                 | 26.3                   | 39.7 J                 | 33.7 J                 | 41.7 J                 | 79.4 J                 | 34.7 J  |
| Polychlorinated Biphenyls                                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Aroclor-1248 (PCB-1248)                                          | ug/kg                  | --                     | --                     | 35 U                   | 40 U                   | 39 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                   | 39 U                   | 36 U                   | 37 U    |
| Aroclor-1254 (PCB-1254)                                          | ug/kg                  | --                     | --                     | 35 U                   | 40 U                   | 39 U                   | 37 U                   | 10 J                   | 37 U                   | 38 U                   | 39 U                   | 36 U                   | 37 U    |
| Aroclor-1260 (PCB-1260)                                          | ug/kg                  | --                     | --                     | 35 U                   | 40 U                   | 39 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                   | 39 U                   | 36 U                   | 37 U    |
| Total PCBs                                                       | ug/kg                  | --                     | --                     | 35 U                   | 40 U                   | 39 U                   | 37 U                   | 15.5                   | 37 U                   | 38 U                   | 39 U                   | 36 U                   | 37 U    |

Notes:  
<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | BH-67-08<br>(8-10)     | MW-68-08<br>(10-12)    | MW-69-08<br>(12-14)    | MW-69-08<br>(18-20)    | TMW-70-08<br>(4-6)        | TMW71-08<br>(4-6)         | BH-72-08<br>(0-2)      | BH-72-08<br>(8-10)     | BH-72-08<br>(12-14)    | BH-73-08<br>(8-10)     | MW-74-08<br>(0-2)      |
|--------------------------------------------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|---------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                                                                                                        |       | SO-17322-031008-CB-009 | SO-17322-031208-CB-040 | SO-17322-031208-CB-043 | SO-17322-031208-CB-044 | SO-17322-030508-MC-BH7008 | SO-17322-030608-MC-BH7108 | SO-17322-031308-CB-051 | SO-17322-031308-CB-052 | SO-17322-031308-CB-053 | SO-17322-031408-CB-067 | SO-17322-031408-CB-063 |
|                                                                                                        |       | 03/10/2008             | 03/12/2008             | 03/12/2008             | 03/12/2008             | 03/05/2008                | 03/06/2008                | 03/13/2008             | 03/13/2008             | 03/13/2008             | 03/14/2008             | 03/14/2008             |
|                                                                                                        | Units |                        |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |
| Volatile Organic Compounds                                                                             |       |                        |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                                                                                  | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 UJ                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 93 U                   | 4.5 U                  | 400                    |
| 1,1-Dichloroethane                                                                                     | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 U                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 93 U                   | 4.5 U                  | 18 J                   |
| 1,1-Dichloroethene                                                                                     | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 U                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 93 U                   | 4.5 U                  | 110                    |
| 1,2,4-Trimethylbenzene                                                                                 | ug/kg | 4.3 U                  | 4.4 U                  | R                      | 180 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 190 U                  | 4.5 U                  | 100 U                  |
| 1,2-Dichlorobenzene                                                                                    | ug/kg | 4.3 U                  | 4.4 U                  | 0.31 J                 | 180 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 190 U                  | 4.5 U                  | 100 U                  |
| 1,3,5-Trimethylbenzene                                                                                 | ug/kg | 4.3 U                  | 4.4 U                  | R                      | 180 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 190 U                  | 4.5 U                  | 100 U                  |
| 1,3-Dichlorobenzene                                                                                    | ug/kg | 4.3 U                  | 4.4 U                  | 0.40 J                 | 180 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 190 U                  | 4.5 U                  | 100 U                  |
| 1,4-Dichlorobenzene                                                                                    | ug/kg | 4.3 U                  | 4.4 U                  | 0.47 J                 | 180 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 190 U                  | 4.5 U                  | 100 U                  |
| 2-Butanone (Methyl Ethyl Ketone)                                                                       | ug/kg | 17 U                   | 18 U                   | 14 UJ                  | 1400 UJ                | 19 U                      | 19                        | --                     | --                     | 1400 UJ                | 18 U                   | 790 UJ                 |
| 2-Hexanone                                                                                             | ug/kg | 17 U                   | 18 U                   | 14 UJ                  | 4500 U                 | 19 U                      | 18 U                      | --                     | --                     | 4600 UJ                | 18 U                   | 2600 UJ                |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)                                                          | ug/kg | 17 U                   | 18 U                   | 14 UJ                  | 4500 U                 | 19 U                      | 18 U                      | --                     | --                     | 4600 UJ                | 18 U                   | 2600 UJ                |
| Acetone                                                                                                | ug/kg | 17 U                   | 18 U                   | 14 UJ                  | 1400 UJ                | 19 UJ                     | 77 UJ                     | --                     | --                     | R                      | 18 U                   | 790 UJ                 |
| Benzene                                                                                                | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 U                   | 0.32 J                    | 4.6 U                     | --                     | --                     | 21 J                   | 4.5 U                  | 52 U                   |
| Carbon disulfide                                                                                       | ug/kg | 4.3 U                  | 4.4 U                  | 0.55 J                 | 450 U                  | 0.78 J                    | 0.55 J                    | --                     | --                     | 460 U                  | 4.5 U                  | 260 U                  |
| Chloroethane                                                                                           | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 450 UJ                 | R                         | R                         | --                     | --                     | 460 UJ                 | 4.5 U                  | 260 UJ                 |
| Chloroform (Trichloromethane)                                                                          | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 U                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 93 U                   | 4.5 U                  | 52 U                   |
| cis-1,2-Dichloroethene                                                                                 | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 U                   | 4.9 U                     | 0.61 J                    | --                     | --                     | 93 U                   | 4.5 U                  | 52 U                   |
| Cyclohexane                                                                                            | ug/kg | 8.6 U                  | 8.8 U                  | 6.9 UJ                 | 2200 UJ                | 0.67 J                    | 9.2 U                     | --                     | --                     | 2200 UJ                | 9.1 U                  | 1300 UJ                |
| Ethylbenzene                                                                                           | ug/kg | 4.3 U                  | 4.4 U                  | 4.9 U                  | 91 U                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 40 J                   | 4.5 U                  | 52 U                   |
| Isopropylbenzene                                                                                       | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 170 J                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 240 J                  | 4.5 U                  | 260 U                  |
| Methyl acetate                                                                                         | ug/kg | 8.6 U                  | 8.8 U                  | 6.9 UJ                 | 2200 U                 | R                         | R                         | --                     | --                     | 2200 U                 | 9.1 U                  | 1300 U                 |
| Methyl cyclohexane                                                                                     | ug/kg | 8.6 U                  | 8.8 U                  | 6.9 UJ                 | 320 J                  | 1.7 J                     | 9.2 U                     | --                     | --                     | 160 J                  | 9.1 U                  | 1300 UJ                |
| Methyl Tert Butyl Ether                                                                                | ug/kg | 17 U                   | 18 U                   | 14 UJ                  | 450 U                  | 19 U                      | 18 U                      | --                     | --                     | 460 U                  | 18 U                   | 260 U                  |
| Methylene chloride                                                                                     | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 450 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 460 U                  | 4.5 U                  | 260 U                  |
| Tetrachloroethene                                                                                      | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 74 J                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 93 U                   | 4.5 U                  | 33 J                   |
| Toluene                                                                                                | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 180 U                  | 0.57 J                    | 4.6 U                     | --                     | --                     | 190 U                  | 4.5 U                  | 100 U                  |
| trans-1,2-Dichloroethene                                                                               | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 91 U                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 93 U                   | 4.5 U                  | 52 U                   |
| Trichloroethene                                                                                        | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 59 J                   | 82                        | 0.67 J                    | --                     | --                     | 93 U                   | 4.5 U                  | 1300                   |
| Trichlorofluoromethane (CFC-11)                                                                        | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 180 U                  | 4.9 U                     | 4.6 U                     | --                     | --                     | 190 UJ                 | 4.5 U                  | 100 UJ                 |
| Vinyl chloride                                                                                         | ug/kg | 4.3 U                  | 4.4 U                  | 3.5 UJ                 | 73 U                   | 4.9 U                     | 4.6 U                     | --                     | --                     | 74 U                   | 4.5 U                  | 42 U                   |
| Xylene (total)                                                                                         | ug/kg | 8.6 U                  | 8.8 U                  | 6.9 UJ                 | 270 U                  | 9.7 U                     | 9.2 U                     | --                     | --                     | 280 U                  | 9.1 U                  | 160 U                  |
| Semi-Volatile Organic Compounds                                                                        |       |                        |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                                                                                     | ug/kg | 220 U                  | 230 U                  | 220 U                  | 230 U                  | 240 U                     | 230 U                     | --                     | --                     | 12000 U                | 240 U                  | 210 U                  |
| 2-Methylnaphthalene                                                                                    | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 3100                   | 8.1 U                     | 7.5 U                     | --                     | --                     | 38000                  | 8.1 U                  | 7.1 U                  |
| Acenaphthene                                                                                           | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Acenaphthylene                                                                                         | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Acetophenone                                                                                           | ug/kg | 110 U                  | 110 U                  | 120 U                  | 110 U                  | 120 U                     | 110 U                     | --                     | --                     | 5800 U                 | 120 U                  | 110 U                  |
| Anthracene                                                                                             | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Benzo(a)anthracene                                                                                     | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Benzo(a)pyrene                                                                                         | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Benzo(b)fluoranthene                                                                                   | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Benzo(g,h,i)perylene                                                                                   | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Benzo(k)fluoranthene                                                                                   | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Biphenyl                                                                                               | ug/kg | 56 U                   | 56 U                   | 56 U                   | 57 U                   | 61 U                      | 56 U                      | --                     | --                     | 2700 J                 | 61 U                   | 53 U                   |
| bis(2-Ethylhexyl)phthalate                                                                             | ug/kg | 360                    | 76                     | 20 J                   | 57 U                   | 83                        | 48 J                      | --                     | --                     | 2900 U                 | 61 U                   | 53 U                   |
| Caprolactam                                                                                            | ug/kg | 370 U                  | 370 U                  | 370 U                  | 370 U                  | 400 U                     | 370 U                     | --                     | --                     | 19000 U                | 400 U                  | 220 J                  |
| Carbazole                                                                                              | ug/kg | 56 U                   | 56 U                   | 56 U                   | 57 U                   | 61 U                      | 56 U                      | --                     | --                     | 2900 U                 | 61 U                   | 53 U                   |
| Chrysene                                                                                               | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Dibenz(a,h)anthracene                                                                                  | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Dibenzofuran                                                                                           | ug/kg | 56 U                   | 56 U                   | 56 U                   | 57 U                   | 61 U                      | 56 U                      | --                     | --                     | 2900 U                 | 61 U                   | 53 U                   |
| Di-n-butylphthalate                                                                                    | ug/kg | 56 U                   | 56 U                   | 56 U                   | 57 U                   | 61 U                      | 56 U                      | --                     | --                     | 2900 U                 | 61 U                   | 53 U                   |
| Fluoranthene                                                                                           | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Fluorene                                                                                               | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 68                     | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Indeno(1,2,3-cd)pyrene                                                                                 | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |
| Naphthalene                                                                                            | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 8000                   | 8.1 U                  | 7.1 U                  |
| Phenanthrene                                                                                           | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 88                     | 8.1 U                     | 7.5 U                     | --                     | --                     | 500                    | 8.1 U                  | 7.1 U                  |
| Pyrene                                                                                                 | ug/kg | 7.5 U                  | 7.5 U                  | 7.4 U                  | 7.6 U                  | 8.1 U                     | 7.5 U                     | --                     | --                     | 390 U                  | 8.1 U                  | 7.1 U                  |

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TABLE 4.1

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

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| Sample Location:                                                 | BH-67-08               | MW-68-08               | MW-69-08               | MW-69-08               | TMW-70-08                 | TMW71-08                  | BH-72-08               | BH-72-08               | BH-72-08               | BH-73-08               | MW-74-08               |         |
|------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------|
| Sample Depth (ft BGS):                                           | (8-10)                 | (10-12)                | (12-14)                | (18-20)                | (4-6)                     | (4-6)                     | (0-2)                  | (8-10)                 | (12-14)                | (8-10)                 | (0-2)                  |         |
| Sample ID:                                                       | SO-17322-031008-CB-009 | SO-17322-031208-CB-040 | SO-17322-031208-CB-043 | SO-17322-031208-CB-044 | SO-17322-030508-MC-BH7008 | SO-17322-030608-MC-BH7108 | SO-17322-031308-CB-051 | SO-17322-031308-CB-052 | SO-17322-031308-CB-053 | SO-17322-031408-CB-067 | SO-17322-031408-CB-063 |         |
| Sample Date:                                                     | 03/10/2008             | 03/12/2008             | 03/12/2008             | 03/12/2008             | 03/05/2008                | 03/06/2008                | 03/13/2008             | 03/13/2008             | 03/13/2008             | 03/14/2008             | 03/14/2008             |         |
| Sample Type:                                                     |                        |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |         |
| Parameter:                                                       | Units                  |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |         |
| Metals                                                           |                        |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |         |
| Aluminum                                                         | mg/kg                  | 7900                   | 6190                   | 5720                   | 1930                      | 2740                      | 6920                   | --                     | --                     | 8950                   | 5200                   | 1600    |
| Antimony                                                         | mg/kg                  | 0.071 J                | 0.072 J                | 0.070 J                | 0.042 J                   | R                         | 0.052 J                | --                     | --                     | 0.034 J                | 0.045 J                | 0.17 UJ |
| Arsenic                                                          | mg/kg                  | 4.4 J                  | 3.8 J                  | 3.3 J                  | 2.2                       | 4.4 J                     | 1.7 J                  | --                     | --                     | 4.1 J                  | 5.6 J                  | 2.7 J   |
| Barium                                                           | mg/kg                  | 56.4                   | 38.7                   | 28.2                   | 6.4                       | 19.6                      | 45.1                   | --                     | --                     | 64.4                   | 28.8                   | 6.9     |
| Beryllium                                                        | mg/kg                  | 0.39                   | 0.44 U                 | 0.41 U                 | 0.18 U                    | 0.21                      | 0.36                   | --                     | --                     | 0.26 U                 | 0.19 U                 | 0.17 U  |
| Cadmium                                                          | mg/kg                  | 0.25                   | 0.17 U                 | 0.15 U                 | 0.082 J                   | 0.27                      | 0.34                   | --                     | --                     | 0.093 U                | 0.12 U                 | 0.085 U |
| Calcium                                                          | mg/kg                  | 88800                  | 63200                  | 77200                  | 53300                     | 72100                     | 2750                   | --                     | --                     | 44900 J                | 86200 J                | 39500 J |
| Chromium III (Trivalent)                                         | mg/kg                  | 14.8                   | 10.2                   | 9.7                    | 5.2                       | 7.4                       | 10.2                   | --                     | --                     | 13.3                   | 8.5                    | 0.43 U  |
| Chromium VI (Hexavalent)                                         | mg/kg                  | 0.90 U                 | 0.90 U                 | 0.89 U                 | 0.91 U                    | 0.68 J                    | 1.3                    | --                     | --                     | 1.0                    | 0.35 J                 | 4.1     |
| Chromium Total                                                   | mg/kg                  | 14.8                   | 10.2                   | 9.7                    | 5.2                       | 8.0                       | 11.3                   | --                     | --                     | 14.3 J                 | 8.9 J                  | 3.6 J   |
| Cobalt                                                           | mg/kg                  | 6.6                    | 6.0                    | 6.2                    | 2.4                       | 3.3                       | 4.5                    | --                     | --                     | 4.6                    | 5.8                    | 2.2     |
| Copper                                                           | mg/kg                  | 15.9                   | 17.5                   | 15.5                   | 8.8                       | 13.5                      | 8.0                    | --                     | --                     | 13.4 J                 | 16.6 J                 | 5.1 J   |
| Iron                                                             | mg/kg                  | 16000                  | 12400                  | 11800                  | 5300                      | 8640                      | 8760                   | --                     | --                     | 12800                  | 13400                  | 4370    |
| Lead                                                             | mg/kg                  | 6.2                    | 6.4                    | 5.6                    | 3.0                       | 4.2                       | 8.7                    | --                     | --                     | 7.4 J                  | 6.8 J                  | 2.9 J   |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg                  | --                     | --                     | --                     | --                        | --                        | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg                  | --                     | --                     | --                     | --                        | --                        | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                        | --                        | --                     | --                     | --                     | --                     | --                     | --      |
| Magnesium                                                        | mg/kg                  | 14400                  | 9690                   | 15300                  | 11500                     | 10700                     | 1270                   | --                     | --                     | 18600 J                | 15700 J                | 7430 J  |
| Manganese                                                        | mg/kg                  | 351                    | 331                    | 356                    | 151                       | 263                       | 307                    | --                     | --                     | 218                    | 340                    | 138     |
| Mercury                                                          | mg/kg                  | 0.045 U                | 0.045 U                | 0.018 J                | 0.045 U                   | 0.049 U                   | 0.023 J                | --                     | --                     | 0.031 J                | 0.024 J                | 0.043 U |
| Nickel                                                           | mg/kg                  | 19.5 J                 | 15.8                   | 16.3                   | 5.7                       | 9.9 J                     | 8.8                    | --                     | --                     | 13.3 J                 | 15.0 J                 | 5.5 J   |
| Potassium                                                        | mg/kg                  | 1790                   | 1210                   | 1280                   | 392 J                     | 569                       | 774                    | --                     | --                     | 755                    | 1110                   | 239 J   |
| Selenium                                                         | mg/kg                  | 0.52 J                 | 0.43 J                 | 0.43 J                 | 0.30                      | 0.58 J                    | 0.85 J                 | --                     | --                     | 0.37                   | 0.45                   | 0.15 J  |
| Silver                                                           | mg/kg                  | 0.019 J                | 0.090 U                | 0.026 J                | 0.091 U                   | 2.1 J                     | 0.042 J                | --                     | --                     | 0.027 J                | 0.097 U                | 0.085 U |
| Sodium                                                           | mg/kg                  | 93.8                   | 106                    | 86.6 J                 | 87.9 J                    | 125                       | 554                    | --                     | --                     | 120                    | 131 U                  | 85.3 U  |
| Thallium                                                         | mg/kg                  | 0.24                   | 0.16                   | 0.24                   | 0.091 U                   | 0.13                      | 0.12 U                 | --                     | --                     | 0.095                  | 0.24                   | 0.067 J |
| Vanadium                                                         | mg/kg                  | 20.4                   | 14.7                   | 13.8                   | 7.8                       | 23                        | 15.2                   | --                     | --                     | 21.5 J                 | 14.4 J                 | 6.1 J   |
| Zinc                                                             | mg/kg                  | 33.4 J                 | 33.8 J                 | 31.9 J                 | 19.7                      | 22.0 J                    | 32.8                   | --                     | --                     | 30.3                   | 43.5                   | 17.1    |
| Polychlorinated Biphenyls                                        |                        |                        |                        |                        |                           |                           |                        |                        |                        |                        |                        |         |
| Aroclor-1248 (PCB-1248)                                          | ug/kg                  | 37 U                   | 37 U                   | 37 U                   | 37 U                      | 40 U                      | 37 U                   | 35 U                   | 38 U                   | 3800 U                 | 40 U                   | 35 U    |
| Aroclor-1254 (PCB-1254)                                          | ug/kg                  | 37 U                   | 37 U                   | 37 U                   | 37 U                      | 40 U                      | 37 U                   | 240                    | 38 U                   | 20000                  | 40 U                   | 35 U    |
| Aroclor-1260 (PCB-1260)                                          | ug/kg                  | 37 U                   | 37 U                   | 37 U                   | 37 U                      | 40 U                      | 37 U                   | 35 U                   | 38 U                   | 3800 U                 | 40 U                   | 35 U    |
| Total PCBs                                                       | ug/kg                  | 37 U                   | 37 U                   | 37 U                   | 37 U                      | 40 U                      | 37 U                   | 258                    | 38 U                   | 22000                  | 40 U                   | 35 U    |

Notes:  
<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.  
U Not present at or above the associated value.  
J Estimated concentration.  
UJ Estimated reporting limit.  
R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.  
-- Not analyzed.  
BH Soil boring.  
MW Monitoring well (samples taken from soil boring prior to well installation).  
ft BGS Feet below ground surface.  
mg/kg Milligrams per kilogram.  
ug/kg Micrograms per kilogram.  
% Percent.

David Selger

LFR

Aug 07, 2009 14:49

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | MW-74-08<br>(8-10)<br>SO-17322-031408-CB-065<br>03/14/2008 | BH-75-08<br>(8-10)<br>SO-17322-031208-CB-037<br>03/12/2008 | BH-76-08<br>(15.5-17.5)<br>SO-17322-031108-CB-018<br>03/11/2008 | BH-77-08<br>(8-10)<br>SO-17322-031108-CB-020<br>03/11/2008 | BH-77-08<br>(8-10)<br>SO-17322-031108-CB-021<br>03/11/2008<br>Duplicate | MW-78-08<br>(0-2)<br>SO-17322-031108-CB-024<br>03/11/2008 | MW-78-08<br>(0-2)<br>SO-17322-031108-CB-025<br>Duplicate | BH-79-08<br>(12-14)<br>SO-17322-031108-CB-029<br>03/11/2008 | TMW-80-08<br>(4-6)<br>SO-17322-030508-MC-BH8008<br>03/05/2008 | TMW-81-08<br>(4-6)<br>SO-17322-030508-MC-BH8108<br>03/05/2008 | BH-82-08<br>(8-10)<br>SO-17322-031208-CB-034<br>03/12/2008 |
|--------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|
| Volatile Organic Compounds                                                                             |       |                                                            |                                                            |                                                                 |                                                            |                                                                         |                                                           |                                                          |                                                             |                                                               |                                                               |                                                            |
| 1,1,1-Trichloroethane                                                                                  | ug/kg | 1300                                                       | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 1,1-Dichloroethane                                                                                     | ug/kg | 74 J                                                       | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 1,1-Dichloroethene                                                                                     | ug/kg | 260                                                        | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 3.4 J                                                     | 1.8 J                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 1,2,4-Trimethylbenzene                                                                                 | ug/kg | 190 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 460                                                         | 14                                                            | 4.1 U                                                         | 3.7 U                                                      |
| 1,2-Dichlorobenzene                                                                                    | ug/kg | 190 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 89 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 1,3,5-Trimethylbenzene                                                                                 | ug/kg | 190 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 230                                                         | 3.9 J                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 1,3-Dichlorobenzene                                                                                    | ug/kg | 190 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 89 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 1,4-Dichlorobenzene                                                                                    | ug/kg | 190 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 89 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| 2-Butanone (Methyl Ethyl Ketone)                                                                       | ug/kg | 1400 UJ                                                    | 15 U                                                       | 16 U                                                            | 660 U                                                      | 660 U                                                                   | 25 U                                                      | 28 U                                                     | 660 U                                                       | 1.9 J                                                         | 3.1 J                                                         | 15 U                                                       |
| 2-Hexanone                                                                                             | ug/kg | 4600 U                                                     | 15 U                                                       | 16 U                                                            | 2200 U                                                     | 2200 U                                                                  | 25 U                                                      | 28 U                                                     | 2200 U                                                      | 17 U                                                          | 16 U                                                          | 15 U                                                       |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)                                                          | ug/kg | 4600 U                                                     | 15 U                                                       | 16 U                                                            | 2200 U                                                     | 2200 U                                                                  | 25 U                                                      | 28 U                                                     | 2200 U                                                      | 17 U                                                          | 0.89 J                                                        | 15 U                                                       |
| Acetone                                                                                                | ug/kg | 1400 UJ                                                    | 15 U                                                       | 16 U                                                            | 660 U                                                      | 660 U                                                                   | 25 U                                                      | 28 U                                                     | 660 U                                                       | 17 UJ                                                         | 16 UJ                                                         | 15 U                                                       |
| Benzene                                                                                                | ug/kg | 93 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 0.22 J                                                        | 4.1 U                                                         | 3.7 U                                                      |
| Carbon disulfide                                                                                       | ug/kg | 460 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 220 U                                                      | 220 U                                                                   | 6.4 U                                                     | 7.0 U                                                    | 220 U                                                       | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Chloroethane                                                                                           | ug/kg | 460 UJ                                                     | 3.7 U                                                      | 4.0 U                                                           | 220 U                                                      | 220 U                                                                   | 6.4 U                                                     | 7.0 U                                                    | 220 U                                                       | R                                                             | R                                                             | 3.7 U                                                      |
| Chloroform (Trichloromethane)                                                                          | ug/kg | 93 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| cis-1,2-Dichloroethene                                                                                 | ug/kg | 93 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 410                                                        | 730                                                                     | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Cyclohexane                                                                                            | ug/kg | 2200 UJ                                                    | 7.5 U                                                      | 8.0 U                                                           | 1100 U                                                     | 1300 U                                                                  | 13 U                                                      | 14 U                                                     | 27 J                                                        | 8.7 U                                                         | 8.2 U                                                         | 7.4 U                                                      |
| Ethylbenzene                                                                                           | ug/kg | 93 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 25 J                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Isopropylbenzene                                                                                       | ug/kg | 460 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 220 U                                                      | 220 U                                                                   | 6.4 U                                                     | 7.0 U                                                    | 54 J                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Methyl acetate                                                                                         | ug/kg | 2200 U                                                     | 7.5 U                                                      | 8.0 U                                                           | 1100 U                                                     | 1100 U                                                                  | 13 U                                                      | 14 U                                                     | 1100 U                                                      | R                                                             | R                                                             | 7.4 U                                                      |
| Methyl cyclohexane                                                                                     | ug/kg | 2200 UJ                                                    | 7.5 U                                                      | 8.0 U                                                           | 1100 U                                                     | 1300 U                                                                  | 13 U                                                      | 14 U                                                     | 320 J                                                       | 8.7 U                                                         | 8.2 U                                                         | 7.4 U                                                      |
| Methyl Tert Butyl Ether                                                                                | ug/kg | 460 U                                                      | 15 U                                                       | 16 U                                                            | 220 U                                                      | 220 U                                                                   | 25 U                                                      | 28 U                                                     | 220 U                                                       | 17 U                                                          | 16 U                                                          | 15 U                                                       |
| Methylene chloride                                                                                     | ug/kg | 460 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 220 U                                                      | 220 U                                                                   | 6.4 U                                                     | 7.0 U                                                    | 220 U                                                       | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Tetrachloroethene                                                                                      | ug/kg | 93 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 44 U                                                       | 44 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Toluene                                                                                                | ug/kg | 190 U                                                      | 3.7 U                                                      | 0.29 J                                                          | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 89 U                                                        | 0.62 J                                                        | 1.0 J                                                         | 3.7 U                                                      |
| trans-1,2-Dichloroethene                                                                               | ug/kg | 93 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 48                                                         | 90                                                                      | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Trichloroethene                                                                                        | ug/kg | 7600                                                       | 3.7 U                                                      | 4.0 U                                                           | 120 J                                                      | 220 J                                                                   | 6.4 U                                                     | 7.0 U                                                    | 44 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Trichlorofluoromethane (CFC-11)                                                                        | ug/kg | 190 U                                                      | 3.7 U                                                      | 4.0 U                                                           | 89 U                                                       | 88 U                                                                    | 6.4 U                                                     | 7.0 U                                                    | 89 U                                                        | 0.66 J                                                        | 4.1 U                                                         | 3.7 U                                                      |
| Vinyl chloride                                                                                         | ug/kg | 74 U                                                       | 3.7 U                                                      | 4.0 U                                                           | 45                                                         | 66                                                                      | 6.4 U                                                     | 7.0 U                                                    | 35 U                                                        | 4.4 U                                                         | 4.1 U                                                         | 3.7 U                                                      |
| Xylene (total)                                                                                         | ug/kg | 280 U                                                      | 7.5 U                                                      | 8.0 U                                                           | 130 U                                                      | 130 U                                                                   | 13 U                                                      | 14 U                                                     | 92 J                                                        | 1.3 J                                                         | 0.63 J                                                        | 7.4 U                                                      |
| Semi-Volatile Organic Compounds                                                                        |       |                                                            |                                                            |                                                                 |                                                            |                                                                         |                                                           |                                                          |                                                             |                                                               |                                                               |                                                            |
| 2,6-Dinitrotoluene                                                                                     | ug/kg | --                                                         | 220 U                                                      | 220 U                                                           | 220 U                                                      | 220 U                                                                   | 220 U                                                     | 220 U                                                    | 220 U                                                       | 150 J                                                         | 220 U                                                         | 220 U                                                      |
| 2-Methylnaphthalene                                                                                    | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 1100                                                        | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Acenaphthene                                                                                           | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Acenaphthylene                                                                                         | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Acetophenone                                                                                           | ug/kg | --                                                         | 110 U                                                      | 110 U                                                           | 110 U                                                      | 110 U                                                                   | 110 U                                                     | 110 U                                                    | 110 U                                                       | 110 U                                                         | 110 U                                                         | 110 U                                                      |
| Anthracene                                                                                             | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Benzo(a)anthracene                                                                                     | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 8.8                                                       | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Benzo(a)pyrene                                                                                         | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 8.1                                                       | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Benzo(b)fluoranthene                                                                                   | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 8.6                                                       | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Benzo(g,h,i)perylene                                                                                   | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 8.8                                                       | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Benzo(k)fluoranthene                                                                                   | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Biphenyl                                                                                               | ug/kg | --                                                         | 56 U                                                       | 56 U                                                            | 55 U                                                       | 55 U                                                                    | 54 U                                                      | 55 U                                                     | 200                                                         | 57 U                                                          | 55 U                                                          | 56 U                                                       |
| bis(2-Ethylhexyl)phthalate                                                                             | ug/kg | --                                                         | 56 U                                                       | 30 J                                                            | 55 U                                                       | 55 U                                                                    | 28 J                                                      | 41 J                                                     | 22 J                                                        | 63                                                            | 28 J                                                          | 56 U                                                       |
| Caprolactam                                                                                            | ug/kg | --                                                         | 370 U                                                      | 370 U                                                           | 370 U                                                      | 360 U                                                                   | 360 U                                                     | 360 U                                                    | 370 U                                                       | 370 U                                                         | 370 U                                                         | 370 U                                                      |
| Carbazole                                                                                              | ug/kg | --                                                         | 56 U                                                       | 56 U                                                            | 55 U                                                       | 55 U                                                                    | 54 U                                                      | 55 U                                                     | 55 U                                                        | 57 U                                                          | 55 U                                                          | 56 U                                                       |
| Chrysene                                                                                               | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 12                                                        | 10                                                       | 7.4 U                                                       | 23                                                            | 8.8                                                           | 7.5 U                                                      |
| Dibenz(a,h)anthracene                                                                                  | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Dibenzofuran                                                                                           | ug/kg | --                                                         | 56 U                                                       | 56 U                                                            | 55 U                                                       | 55 U                                                                    | 54 U                                                      | 55 U                                                     | 55 U                                                        | 57 U                                                          | 55 U                                                          | 56 U                                                       |
| Di-n-butylphthalate                                                                                    | ug/kg | --                                                         | 56 U                                                       | 56 U                                                            | 55 U                                                       | 55 U                                                                    | 54 U                                                      | 55 U                                                     | 55 U                                                        | 41 J                                                          | 55 U                                                          | 56 U                                                       |
| Fluoranthene                                                                                           | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 9.5                                                        | 9.6                                                                     | 14                                                        | 7.3 U                                                    | 7.4 U                                                       | 22                                                            | 7.4 U                                                         | 7.5 U                                                      |
| Fluorene                                                                                               | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Indeno(1,2,3-cd)pyrene                                                                                 | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Naphthalene                                                                                            | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.4 U                                                      | 7.4 U                                                                   | 7.3 U                                                     | 7.3 U                                                    | 7.4 U                                                       | 7.6 U                                                         | 7.4 U                                                         | 7.5 U                                                      |
| Phenanthrene                                                                                           | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.5                                                        | 7.8                                                                     | 7.3 U                                                     | 7.3 U                                                    | 94                                                          | 22                                                            | 10                                                            | 7.5 U                                                      |
| Pyrene                                                                                                 | ug/kg | --                                                         | 7.5 U                                                      | 7.5 U                                                           | 7.5                                                        | 8.0                                                                     | 13                                                        | 7.7                                                      | 21                                                          | 16                                                            | 7.4 U                                                         | 7.5 U                                                      |

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                                                 | MW-74-08               | BH-75-08               | BH-76-08               | BH-77-08               | BH-77-08               | MW-78-08               | MW-78-08               | BH-79-08               | TMW-80-08                 | TMW-81-08                 | BH-82-08               |
|------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|---------------------------|------------------------|
| Sample Depth (ft BGS):                                           | (8-10)                 | (8-10)                 | (15.5-17.5)            | (8-10)                 | (8-10)                 | (0-2)                  | (0-2)                  | (12-14)                | (4-6)                     | (4-6)                     | (8-10)                 |
| Sample ID:                                                       | SO-17322-031408-CB-065 | SO-17322-031208-CB-037 | SO-17322-031108-CB-018 | SO-17322-031108-CB-020 | SO-17322-031108-CB-021 | SO-17322-031108-CB-024 | SO-17322-031108-CB-025 | SO-17322-031108-CB-029 | SO-17322-030508-MC-BH8008 | SO-17322-030508-MC-BH8108 | SO-17322-031208-CB-034 |
| Sample Date:                                                     | 03/14/2008             | 03/12/2008             | 03/11/2008             | 03/11/2008             | 03/11/2008             | 03/11/2008             | 03/11/2008             | 03/11/2008             | 03/05/2008                | 03/05/2008                | 03/12/2008             |
| Sample Type:                                                     |                        |                        |                        |                        | Duplicate              |                        | Duplicate              |                        |                           |                           |                        |
| Parameter:                                                       | Units                  |                        |                        |                        |                        |                        |                        |                        |                           |                           |                        |
| Metals                                                           |                        |                        |                        |                        |                        |                        |                        |                        |                           |                           |                        |
| Aluminum                                                         | mg/kg                  | --                     | 7110                   | 7650                   | 5250                   | 5290                   | 2930                   | 3450                   | 6920                      | 6710                      | 7610                   |
| Antimony                                                         | mg/kg                  | --                     | 0.069 J                | 0.070 J                | 0.044 J                | 0.041 J                | 0.098 J                | 0.081 J                | 0.057 J                   | 0.034 J                   | 0.092 J                |
| Arsenic                                                          | mg/kg                  | --                     | 4.8 J                  | 5.3                    | 4.2                    | 4.1                    | 5.1                    | 6.4                    | 4.0 J                     | 3.8 J                     | 4.8 J                  |
| Barium                                                           | mg/kg                  | --                     | 34.7                   | 48.5                   | 34.6                   | 31.5                   | 17.1                   | 17.4                   | 39.3                      | 44.0                      | 47.3                   |
| Beryllium                                                        | mg/kg                  | --                     | 0.40 U                 | 0.40                   | 0.27                   | 0.27                   | 0.21                   | 0.22                   | 0.33                      | 0.39                      | 0.51                   |
| Cadmium                                                          | mg/kg                  | --                     | 0.11 U                 | 0.28                   | 0.22                   | 0.21                   | 0.30                   | 0.36                   | 0.28                      | 0.39                      | 0.31                   |
| Calcium                                                          | mg/kg                  | --                     | 568                    | 75700                  | 61600                  | 57200                  | 45600                  | 37500                  | 75600                     | 65700                     | 83700                  |
| Chromium III (Trivalent)                                         | mg/kg                  | --                     | 13.6                   | 12.6                   | 11.4                   | 10.1                   | 4.7                    | 5.0                    | 13.2                      | 12.4                      | 12.1                   |
| Chromium VI (Hexavalent)                                         | mg/kg                  | --                     | 0.50 J                 | 1.0                    | 1.1                    | 0.27 J                 | 1.8                    | 2.1                    | 0.47 J                    | 0.89 U                    | 1.0                    |
| Chromium Total                                                   | mg/kg                  | --                     | 14.1                   | 13.7                   | 12.4                   | 10.4                   | 6.5                    | 7.1                    | 13.7                      | 12.1                      | 13.0                   |
| Cobalt                                                           | mg/kg                  | --                     | 6.8                    | 9.1                    | 5.3                    | 6.2                    | 4.5                    | 4.8                    | 7.4                       | 6.0                       | 7.8                    |
| Copper                                                           | mg/kg                  | --                     | 13.2                   | 15.6                   | 10.6                   | 11.1                   | 9.6                    | 12.7                   | 13.7                      | 14.7                      | 17.5                   |
| Iron                                                             | mg/kg                  | --                     | 12600                  | 15600                  | 10900                  | 10800                  | 7900                   | 9870                   | 13500                     | 13800                     | 16100                  |
| Lead                                                             | mg/kg                  | --                     | 7.7                    | 6.8                    | 4.9                    | 5.2                    | 5.9                    | 6.7                    | 6.1                       | 6.8                       | 6.6                    |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                        | --                        | --                     |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                        | --                        | --                     |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                        | --                        | --                     |
| Magnesium                                                        | mg/kg                  | --                     | 1940                   | 14100                  | 18500                  | 15300                  | 11800                  | 11400                  | 19600                     | 15500                     | 14100                  |
| Manganese                                                        | mg/kg                  | --                     | 293                    | 495                    | 278                    | 302                    | 250                    | 228                    | 349                       | 285                       | 421                    |
| Mercury                                                          | mg/kg                  | --                     | 0.038 J                | 0.023 J                | 0.044 U                | 0.012 J                | 0.043 U                | 0.017 J                | 0.021 J                   | 0.045 U                   | 0.022 J                |
| Nickel                                                           | mg/kg                  | --                     | 13.9                   | 21.3 J                 | 13.8 J                 | 13.7 J                 | 11.2 J                 | 13.3 J                 | 18.0 J                    | 16.2 J                    | 20.8                   |
| Potassium                                                        | mg/kg                  | --                     | 818                    | 1690                   | 1090                   | 1110                   | 639                    | 683                    | 1320                      | 1340                      | 1540                   |
| Selenium                                                         | mg/kg                  | --                     | 0.45 J                 | 0.50                   | 0.35                   | 0.30                   | 0.31                   | 0.33                   | 0.39                      | 0.90 J                    | 0.49 J                 |
| Silver                                                           | mg/kg                  | --                     | 0.089 U                | 0.018 J                | 0.089 U                | 0.088 U                | 0.019 J                | 0.088 U                | 0.089 U                   | 0.091 UJ                  | 0.090 U                |
| Sodium                                                           | mg/kg                  | --                     | 428                    | 241                    | 834                    | 874                    | 87.0 U                 | 87.7 U                 | 627                       | 121                       | 323                    |
| Thallium                                                         | mg/kg                  | --                     | 0.11 U                 | 0.23                   | 0.13                   | 0.14                   | 0.22                   | 0.22                   | 0.18                      | 0.18                      | 0.25                   |
| Vanadium                                                         | mg/kg                  | --                     | 18.7                   | 17.9                   | 14.3                   | 14.2                   | 9.9                    | 10.8                   | 18.4                      | 16.2                      | 17.4                   |
| Zinc                                                             | mg/kg                  | --                     | 25.1 J                 | 36.1 J                 | 27.6 J                 | 26.7 J                 | 40.9 J                 | 90.6 J                 | 33.4 J                    | 34.8 J                    | 37.4 J                 |
| Polychlorinated Biphenyls                                        |                        |                        |                        |                        |                        |                        |                        |                        |                           |                           |                        |
| Aroclor-1248 (PCB-1248)                                          | ug/kg                  | --                     | 37 U                   | 37 U                   | 37 U                   | 36 U                   | 36 U                   | 36 U                   | 37 U                      | 37 U                      | 37 U                   |
| Aroclor-1254 (PCB-1254)                                          | ug/kg                  | --                     | 37 U                   | 37 U                   | 37 U                   | 36 U                   | 36 U                   | 36 U                   | 37 U                      | 37 U                      | 37 U                   |
| Aroclor-1260 (PCB-1260)                                          | ug/kg                  | --                     | 37 U                   | 37 U                   | 37 U                   | 36 U                   | 36 U                   | 36 U                   | 37 U                      | 37 U                      | 37 U                   |
| Total PCBs                                                       | ug/kg                  | --                     | 37 U                   | 37 U                   | 37 U                   | 36 U                   | 36 U                   | 36 U                   | 37 U                      | 37 U                      | 37 U                   |
| General Chemistry                                                |                        |                        |                        |                        |                        |                        |                        |                        |                           |                           |                        |
| Cyanide (total)                                                  | mg/kg                  | --                     | 0.22 U                 | 0.22 U                 | 0.22 U                 | 0.22 U                 | 0.22 U                 | 0.22 U                 | 0.22 U                    | 0.23 U                    | 0.22 U                 |
| Total Solids                                                     | %                      | 86.2                   | 89.5                   | 89.1                   | 90.4                   | 90.6                   | 92.0                   | 91.2                   | 90.3                      | 88.1                      | 88.9                   |

Notes:

<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

David Selger

TABLE 4.1

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

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| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | BH-82-08<br>(8-10)<br>SO-17322-031208-CB-035<br>03/12/2008<br>Duplicate | BH-83-08<br>(10-12)<br>SO-17322-031208-CB-032<br>03/12/2008 | BH-84-08<br>(10-11.5)<br>SO-17322-031208-CB-047<br>03/12/2008 | BH-84-08<br>(10-11.5)<br>SO-17322-031208-CB-048<br>03/12/2008<br>Duplicate | BH-85-08<br>(8-10)<br>SO-17322-031308-CB-055<br>03/13/2008 | BH-86-08<br>(8-10)<br>SO-17322-031208-CB-050<br>03/12/2008 | TMW87-08<br>(7-9)<br>SO-17322-030608-MC-BH8708<br>03/06/2008 | BH-88-08<br>(8-10)<br>SO-17322-031108-CB-023<br>03/11/2008 | BH-89-08<br>(10.5-12.5)<br>SO-17322-031308-CB-059<br>03/13/2008 | BH-90-08<br>(7-9)<br>SO-17322-031308-CB-060<br>03/13/2008 | BH-91-08<br>(6-8)<br>SO-17322-031308-CB-061<br>03/13/2008 |
|--------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Volatile Organic Compounds                                                                             |       |                                                                         |                                                             |                                                               |                                                                            |                                                            |                                                            |                                                              |                                                            |                                                                 |                                                           |                                                           |
| 1,1,1-Trichloroethane                                                                                  | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 UJ                                                      | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| 1,1-Dichloroethane                                                                                     | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| 1,1-Dichloroethene                                                                                     | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| 1,2,4-Trimethylbenzene                                                                                 | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 52 J                                                      |
| 1,2-Dichlorobenzene                                                                                    | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 0.28 J                                                        | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 93 U                                                      |
| 1,3,5-Trimethylbenzene                                                                                 | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 53 J                                                      |
| 1,3-Dichlorobenzene                                                                                    | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 93 U                                                      |
| 1,4-Dichlorobenzene                                                                                    | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 93 U                                                      |
| 2-Butanone (Methyl Ethyl Ketone)                                                                       | ug/kg | 16 U                                                                    | 3.4 J                                                       | 15 U                                                          | 17 U                                                                       | 16 U                                                       | 690 U                                                      | 20 U                                                         | 16 U                                                       | 14 U                                                            | 1.5 J                                                     | 700 UJ                                                    |
| 2-Hexanone                                                                                             | ug/kg | 16 U                                                                    | 21 U                                                        | 15 U                                                          | 17 U                                                                       | 16 U                                                       | 2300 U                                                     | 20 U                                                         | 16 U                                                       | 14 U                                                            | 16 U                                                      | 2300 UJ                                                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)                                                          | ug/kg | 16 U                                                                    | 21 U                                                        | 15 U                                                          | 17 U                                                                       | 16 U                                                       | 2300 U                                                     | 20 U                                                         | 16 U                                                       | 14 U                                                            | 16 U                                                      | 2300 UJ                                                   |
| Acetone                                                                                                | ug/kg | 16 U                                                                    | 20 J                                                        | 15 U                                                          | 17 U                                                                       | 16 U                                                       | 690 U                                                      | 20 UJ                                                        | 13 J                                                       | 14 U                                                            | 7.7 J                                                     | R                                                         |
| Benzene                                                                                                | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| Carbon disulfide                                                                                       | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 230 U                                                      | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 1.2 J                                                     | 230 U                                                     |
| Chloroethane                                                                                           | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 230 U                                                      | R                                                            | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 230 UJ                                                    |
| Chloroform (Trichloromethane)                                                                          | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| cis-1,2-Dichloroethene                                                                                 | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| Cyclohexane                                                                                            | ug/kg | 8.0 U                                                                   | 11 U                                                        | 7.4 U                                                         | 8.3 U                                                                      | 8.1 U                                                      | 1100 U                                                     | 9.9 U                                                        | 8.1 U                                                      | 6.8 U                                                           | 8.2 U                                                     | 58 J                                                      |
| Ethylbenzene                                                                                           | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 22 J                                                      |
| Isopropylbenzene                                                                                       | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 230 U                                                      | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 74 J                                                      |
| Methyl acetate                                                                                         | ug/kg | 8.0 U                                                                   | 11 U                                                        | 7.4 U                                                         | 8.3 U                                                                      | 8.1 U                                                      | 1100 U                                                     | R                                                            | 8.1 U                                                      | 6.8 U                                                           | 8.2 U                                                     | 1100 U                                                    |
| Methyl cyclohexane                                                                                     | ug/kg | 8.0 U                                                                   | 11 U                                                        | 7.4 U                                                         | 8.3 U                                                                      | 8.1 U                                                      | 1100 U                                                     | 9.9 U                                                        | 8.1 U                                                      | 6.8 U                                                           | 8.2 U                                                     | 110 J                                                     |
| Methyl Tert Butyl Ether                                                                                | ug/kg | 16 U                                                                    | 21 U                                                        | 15 U                                                          | 17 U                                                                       | 16 U                                                       | 230 U                                                      | 20 U                                                         | 16 U                                                       | 14 U                                                            | 16 U                                                      | 230 U                                                     |
| Methylene chloride                                                                                     | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 230 U                                                      | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 230 U                                                     |
| Tetrachloroethene                                                                                      | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| Toluene                                                                                                | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 0.21 J                                                        | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 0.37 J                                                       | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 14 J                                                      |
| trans-1,2-Dichloroethene                                                                               | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 46 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| Trichloroethene                                                                                        | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 0.47 J                                                        | 4.2 U                                                                      | 4.1 U                                                      | 22 J                                                       | 140                                                          | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 47 U                                                      |
| Trichlorofluoromethane (CFC-11)                                                                        | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 91 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 93 U                                                      |
| Vinyl chloride                                                                                         | ug/kg | 4.0 U                                                                   | 5.3 U                                                       | 3.7 U                                                         | 4.2 U                                                                      | 4.1 U                                                      | 37 U                                                       | 5.0 U                                                        | 4.1 U                                                      | 3.4 U                                                           | 4.1 U                                                     | 37 U                                                      |
| Xylene (total)                                                                                         | ug/kg | 8.0 U                                                                   | 11 U                                                        | 7.4 U                                                         | 8.3 U                                                                      | 8.1 U                                                      | 140 U                                                      | 9.9 U                                                        | 8.1 U                                                      | 6.8 U                                                           | 8.2 U                                                     | 81 J                                                      |
| Semi-Volatile Organic Compounds                                                                        |       |                                                                         |                                                             |                                                               |                                                                            |                                                            |                                                            |                                                              |                                                            |                                                                 |                                                           |                                                           |
| 2,6-Dinitrotoluene                                                                                     | ug/kg | 220 U                                                                   | 240 U                                                       | 220 U                                                         | 220 U                                                                      | 220 U                                                      | 230 U                                                      | 230 U                                                        | 230 U                                                      | 230 U                                                           | 230 U                                                     | 4700 U                                                    |
| 2-Methylnaphthalene                                                                                    | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 2400                                                      |
| Acenaphthene                                                                                           | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 1300                                                      |
| Acenaphthylene                                                                                         | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Acetophenone                                                                                           | ug/kg | 110 U                                                                   | 120 U                                                       | 110 U                                                         | 110 U                                                                      | 110 U                                                      | 110 U                                                      | 120 U                                                        | 110 U                                                      | 110 U                                                           | 110 U                                                     | 2300 U                                                    |
| Anthracene                                                                                             | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Benzo(a)anthracene                                                                                     | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Benzo(a)pyrene                                                                                         | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Benzo(b)fluoranthene                                                                                   | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Benzo(g,h,i)perylene                                                                                   | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 14                                                              | 7.6 U                                                     | 160 U                                                     |
| Benzo(k)fluoranthene                                                                                   | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Biphenyl                                                                                               | ug/kg | 56 U                                                                    | 61 U                                                        | 56 U                                                          | 56 U                                                                       | 56 U                                                       | 57 U                                                       | 58 U                                                         | 57 U                                                       | 57 U                                                            | 57 U                                                      | 930 J                                                     |
| bis(2-Ethylhexyl)phthalate                                                                             | ug/kg | 60                                                                      | 140                                                         | 26 J                                                          | 56 U                                                                       | 56 U                                                       | 57 U                                                       | 30 J                                                         | 30 J                                                       | 25 J                                                            | 57 U                                                      | 570 J                                                     |
| Caprolactam                                                                                            | ug/kg | 370 U                                                                   | 400 U                                                       | 370 U                                                         | 370 U                                                                      | 370 U                                                      | 380 U                                                      | 380 U                                                        | 380 U                                                      | 370 U                                                           | 380 U                                                     | 7700 U                                                    |
| Carbazole                                                                                              | ug/kg | 56 U                                                                    | 61 U                                                        | 56 U                                                          | 56 U                                                                       | 56 U                                                       | 57 U                                                       | 58 U                                                         | 57 U                                                       | 57 U                                                            | 57 U                                                      | 1200 U                                                    |
| Chrysene                                                                                               | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 180                                                       |
| Dibenz(a,h)anthracene                                                                                  | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Dibenzofuran                                                                                           | ug/kg | 56 U                                                                    | 61 U                                                        | 56 U                                                          | 56 U                                                                       | 56 U                                                       | 57 U                                                       | 58 U                                                         | 57 U                                                       | 57 U                                                            | 57 U                                                      | 1200 U                                                    |
| Di-n-butylphthalate                                                                                    | ug/kg | 56 U                                                                    | 61 U                                                        | 56 U                                                          | 56 U                                                                       | 56 U                                                       | 57 U                                                       | 58 U                                                         | 57 U                                                       | 57 U                                                            | 57 U                                                      | 1200 U                                                    |
| Fluoranthene                                                                                           | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 25                                                              | 7.6 U                                                     | 310                                                       |
| Fluorene                                                                                               | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Indeno(1,2,3-cd)pyrene                                                                                 | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 160 U                                                     |
| Naphthalene                                                                                            | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 7.5 U                                                           | 7.6 U                                                     | 1600                                                      |
| Phenanthrene                                                                                           | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 34                                                              | 7.6 U                                                     | 2600                                                      |
| Pyrene                                                                                                 | ug/kg | 7.4 U                                                                   | 8.1 U                                                       | 7.4 U                                                         | 7.4 U                                                                      | 7.4 U                                                      | 7.6 U                                                      | 7.7 U                                                        | 7.6 U                                                      | 25                                                              | 7.6 U                                                     | 560                                                       |

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Aug 07, 2009 14:49

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TABLE 4.1

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

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| Sample Location:                                                 | BH-82-08               | BH-83-08               | BH-84-08               | BH-84-08               | BH-85-08               | BH-86-08               | TMW87-08                  | BH-88-08               | BH-89-08               | BH-90-08               | BH-91-08               |
|------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample Depth (ft BGS):                                           | (8-10)                 | (10-12)                | (10-11.5)              | (10-11.5)              | (8-10)                 | (8-10)                 | (7-9)                     | (8-10)                 | (10.5-12.5)            | (7-9)                  | (6-8)                  |
| Sample ID:                                                       | SO-17322-031208-CB-035 | SO-17322-031208-CB-032 | SO-17322-031208-CB-047 | SO-17322-031208-CB-048 | SO-17322-031308-CB-055 | SO-17322-031208-CB-050 | SO-17322-030608-MC-BH8708 | SO-17322-031108-CB-023 | SO-17322-031308-CB-059 | SO-17322-031308-CB-060 | SO-17322-031308-CB-061 |
| Sample Date:                                                     | 03/12/2008             | 03/12/2008             | 03/12/2008             | 03/12/2008             | 03/13/2008             | 03/12/2008             | 03/06/2008                | 03/11/2008             | 03/13/2008             | 03/13/2008             | 03/13/2008             |
| Sample Type:                                                     | Duplicate              |                        |                        | Duplicate              |                        |                        |                           |                        |                        |                        |                        |
| Parameter:                                                       | Units                  |                        |                        |                        |                        |                        |                           |                        |                        |                        |                        |
| <b>Metals</b>                                                    |                        |                        |                        |                        |                        |                        |                           |                        |                        |                        |                        |
| Aluminum                                                         | mg/kg                  | 6990                   | 10400                  | 5490                   | 5930                   | 6220                   | 4840                      | 4140                   | 6790                   | 6790                   | 5740                   |
| Antimony                                                         | mg/kg                  | 0.080 J                | 0.14 J                 | 0.064 J                | 0.067 J                | 0.18 UJ                | R                         | 0.051 J                | 0.049 J                | 0.18 UJ                | 0.19 UJ                |
| Arsenic                                                          | mg/kg                  | 4.7 J                  | 5.2 J                  | 4.6 J                  | 5.0 J                  | 4.4 J                  | 0.97 J                    | 4.2 J                  | 7.4                    | 3.9 J                  | 3.1 J                  |
| Barium                                                           | mg/kg                  | 45.8                   | 83.9                   | 38.1                   | 38.4                   | 41.1                   | 38.2                      | 20.4                   | 43.6                   | 25.3                   | 35.9                   |
| Beryllium                                                        | mg/kg                  | 0.48 U                 | 1.1                    | 0.40 U                 | 0.43 U                 | 0.18 U                 | 0.32 U                    | 0.21                   | 0.36                   | 0.18 U                 | 0.11 U                 |
| Cadmium                                                          | mg/kg                  | 0.20 U                 | 0.17 U                 | 0.30                   | 0.33                   | 0.12 U                 | 0.14 U                    | 0.42                   | 0.23                   | 0.14 U                 | 0.093 U                |
| Calcium                                                          | mg/kg                  | 74200                  | 2240                   | 57400                  | 73100                  | 71700 J                | 95400                     | 93800                  | 63300                  | 81300 J                | 38400 J                |
| Chromium III (Trivalent)                                         | mg/kg                  | 12.3                   | 18.4                   | 9.7                    | 10.7                   | 10.7                   | 9.1                       | 13.6                   | 11.7                   | 12.0                   | 10.1                   |
| Chromium VI (Hexavalent)                                         | mg/kg                  | 0.89 U                 | 0.97 U                 | 0.89 U                 | 0.89 U                 | 0.55 J                 | 0.30 J                    | 0.92 U                 | 1.2                    | 0.90 U                 | 0.93 U                 |
| Chromium Total                                                   | mg/kg                  | 12.3                   | 18.4                   | 9.7                    | 10.7                   | 11.3 J                 | 9.4                       | 13.6                   | 12.8                   | 12.0 J                 | 10.1 J                 |
| Cobalt                                                           | mg/kg                  | 7.0                    | 7.2                    | 5.3                    | 6.4                    | 6.2                    | 2.2                       | 5.0                    | 6.8                    | 7.5                    | 5.4                    |
| Copper                                                           | mg/kg                  | 17.2                   | 13.4                   | 12.6                   | 14.3                   | 12.7 J                 | 6.8                       | 15.4                   | 13.8                   | 15.7 J                 | 10.2 J                 |
| Iron                                                             | mg/kg                  | 14500                  | 29300                  | 11000                  | 12700                  | 12500                  | 3980                      | 10800                  | 13700                  | 13300                  | 15200                  |
| Lead                                                             | mg/kg                  | 6.5                    | 9.9                    | 4.2                    | 5.1                    | 5.5 J                  | 3.9                       | 5.4                    | 5.5                    | 6.8 J                  | 6.5 J                  |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                        | --                     | --                     | --                     | --                     |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                        | --                     | --                     | --                     | --                     |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                        | --                     | --                     | --                     | --                     |
| Magnesium                                                        | mg/kg                  | 12600                  | 2210                   | 15400                  | 19400                  | 14300 J                | 17300                     | 12100                  | 14300                  | 12800 J                | 9350 J                 |
| Manganese                                                        | mg/kg                  | 391                    | 230                    | 338                    | 290                    | 277                    | 156                       | 365 J                  | 308                    | 343                    | 214                    |
| Mercury                                                          | mg/kg                  | 0.022 J                | 0.037 J                | 0.020 J                | 0.063                  | 0.045 U                | 0.021 J                   | 0.046 U                | 0.019 J                | 0.021 J                | 0.047 U                |
| Nickel                                                           | mg/kg                  | 19.7                   | 15.4                   | 14.4                   | 14.8                   | 15.3 J                 | 3.0                       | 13.4                   | 16.3 J                 | 19.3 J                 | 13.2 J                 |
| Potassium                                                        | mg/kg                  | 1460                   | 861                    | 1140                   | 1220                   | 3210                   | 668                       | 727                    | 1250                   | 1650                   | 971                    |
| Selenium                                                         | mg/kg                  | 0.43 J                 | 0.90 J                 | 0.34 J                 | 0.36 J                 | 0.32                   | 0.30 J                    | 1.4 J                  | 0.37                   | 0.54                   | 0.46                   |
| Silver                                                           | mg/kg                  | 0.089 U                | 0.040 J                | 0.089 U                | 0.089 U                | 0.089 U                | 0.037 J                   | 0.092 U                | 0.091 U                | 0.032 J                | 0.021 J                |
| Sodium                                                           | mg/kg                  | 78.7 J                 | 1850                   | 88.9 U                 | 108                    | 89.0 U                 | 105                       | 115                    | 256                    | 283 U                  | 862                    |
| Thallium                                                         | mg/kg                  | 0.22                   | 0.11 U                 | 0.16                   | 0.17                   | 0.15                   | 0.12 U                    | 0.20                   | 0.12                   | 0.20                   | 0.12                   |
| Vanadium                                                         | mg/kg                  | 16.0                   | 44.6                   | 14.0                   | 15.7                   | 14.8 J                 | 8.2                       | 12.5                   | 17.6                   | 15.7 J                 | 13.1 J                 |
| Zinc                                                             | mg/kg                  | 35.6 J                 | 43.1 J                 | 35.4 J                 | 37.4 J                 | 31.2                   | 21.4 J                    | 29.7                   | 28.6 J                 | 36.4                   | 32.8                   |
| <b>Polychlorinated Biphenyls</b>                                 |                        |                        |                        |                        |                        |                        |                           |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)                                          | ug/kg                  | 37 U                   | 40 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                      | 38 U                   | 38 U                   | 37 U                   | 39 U                   |
| Aroclor-1254 (PCB-1254)                                          | ug/kg                  | 37 U                   | 40 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                      | 38 U                   | 38 U                   | 37 U                   | 39 U                   |
| Aroclor-1260 (PCB-1260)                                          | ug/kg                  | 37 U                   | 40 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                      | 38 U                   | 38 U                   | 37 U                   | 39 U                   |
| Total PCBs                                                       | ug/kg                  | 37 U                   | 40 U                   | 37 U                   | 37 U                   | 37 U                   | 38 U                      | 38 U                   | 38 U                   | 37 U                   | 39 U                   |
| <b>General Chemistry</b>                                         |                        |                        |                        |                        |                        |                        |                           |                        |                        |                        |                        |
| Cyanide (total)                                                  | mg/kg                  | 0.22 U                 | 0.24 U                 | 0.22 U                 | 0.22 U                 | 0.22 U                 | 0.23 U                    | 0.21 J                 | 0.23 U                 | 0.23 U                 | 0.23 U                 |
| Total Solids                                                     | %                      | 89.6                   | 82.5                   | 90.0                   | 90.0                   | 89.8                   | 87.6                      | 86.5                   | 87.6                   | 88.5                   | 85.6                   |

Notes:

<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

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Aug 07, 2009 14:49

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:<br>Sample Depth (ft BGS):<br>Sample ID:<br>Sample Date:<br>Sample Type:<br>Parameter: |       | BH-92-08<br>(7.5-9.5)  | BH-96-08<br>(8-10)     | TP-1<br>(6-6)          | TP-1<br>(7-7)          | TP-1<br>(10-10)        | TP-1<br>(10-10)        | TP-2<br>(4-4)          | TP-2<br>(6.5-6.5)      | TP-3<br>(3-3)          | TP-3<br>(7-7)          | TP-4<br>(5-5)          | TP-4<br>(10-10)        |
|--------------------------------------------------------------------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                                                                                                        |       | SO-17322-031408-CB-062 | SO-17322-031408-CB-069 | SO-17322-101007-CB-019 | SO-17322-101007-CB-020 | SO-17322-101007-CB-017 | SO-17322-101007-CB-018 | SO-17322-101007-CB-022 | SO-17322-101007-CB-021 | SO-17322-101007-CB-024 | SO-17322-101007-CB-023 | SO-17322-101007-CB-016 | SO-17322-101007-CB-015 |
|                                                                                                        |       | 03/14/2008             | 03/14/2008             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             |
|                                                                                                        | Units |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Volatile Organic Compounds                                                                             |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                                                                                  | ug/kg | 4.8 U                  | 4.3 U                  | 44 UJ                  | 4.1 U                  | 46 UJ                  | 68 UJ                  | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| 1,1-Dichloroethane                                                                                     | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| 1,1-Dichloroethene                                                                                     | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| 1,2,4-Trimethylbenzene                                                                                 | ug/kg | 4.8 U                  | 4.3 U                  | 43 J                   | 4.1 U                  | 50 J                   | 66 J                   | 4.4 U                  | 5.3 UJ                 | 4.8 UJ                 | 0.85 J                 | 4.7 UJ                 | 4.6 UJ                 |
| 1,2-Dichlorobenzene                                                                                    | ug/kg | 4.8 U                  | 4.3 U                  | 89 U                   | 4.1 U                  | 91 U                   | 140 U                  | 4.4 U                  | 5.3 UJ                 | 4.8 UJ                 | 5.7 U                  | 4.7 UJ                 | 4.6 UJ                 |
| 1,3,5-Trimethylbenzene                                                                                 | ug/kg | 4.8 U                  | 4.3 U                  | 89 U                   | 4.1 U                  | 43 J                   | 63 J                   | 4.4 U                  | 5.3 UJ                 | 4.8 UJ                 | 0.44 J                 | 4.7 UJ                 | 4.6 UJ                 |
| 1,3-Dichlorobenzene                                                                                    | ug/kg | 4.8 U                  | 4.3 U                  | 89 U                   | 4.1 U                  | 91 U                   | 140 U                  | 4.4 U                  | 5.3 UJ                 | 4.8 UJ                 | 5.7 U                  | 4.7 UJ                 | 4.6 UJ                 |
| 1,4-Dichlorobenzene                                                                                    | ug/kg | 4.8 U                  | 4.3 U                  | 89 U                   | 4.1 U                  | 12 J                   | 140 U                  | 4.4 U                  | 5.3 UJ                 | 4.8 UJ                 | 5.7 U                  | 4.7 UJ                 | 4.6 UJ                 |
| 2-Butanone (Methyl Ethyl Ketone)                                                                       | ug/kg | 1.8 J                  | 17 U                   | 660 U                  | 6.3 J                  | 690 U                  | 1000 U                 | 5.9 J                  | 21 U                   | 19 U                   | 23 U                   | 7.2 J                  | 18 U                   |
| 2-Hexanone                                                                                             | ug/kg | 19 U                   | 17 U                   | 2200 UJ                | 16 U                   | 2300 UJ                | 3400 UJ                | 18 U                   | 21 U                   | 19 U                   | 23 U                   | 19 U                   | 18 U                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)                                                          | ug/kg | 19 U                   | 17 U                   | 2200 U                 | 16 U                   | 2300 U                 | 3400 U                 | 18 U                   | 21 U                   | 19 U                   | 23 U                   | 19 U                   | 18 U                   |
| Acetone                                                                                                | ug/kg | 7.1 J                  | 17 U                   | 660 U                  | 30                     | 690 U                  | 1000 U                 | 28                     | 21 U                   | 19 U                   | 23 U                   | 35                     | 18 U                   |
| Benzene                                                                                                | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 0.49 J                 | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Carbon disulfide                                                                                       | ug/kg | 4.8 U                  | 4.3 U                  | 220 U                  | 0.49 J                 | 230 U                  | 340 U                  | 4.4 U                  | 1.1 J                  | 4.8 U                  | 1.3 J                  | 0.60 J                 | 4.6 U                  |
| Chloroethane                                                                                           | ug/kg | 4.8 U                  | 4.3 U                  | 220 U                  | 4.1 U                  | 230 U                  | 340 U                  | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Chloroform (Trichloromethane)                                                                          | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| cis-1,2-Dichloroethene                                                                                 | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Cyclohexane                                                                                            | ug/kg | 9.7 U                  | 8.5 U                  | 50 J                   | 8.2 U                  | 1300 U                 | 1600 U                 | 8.8 U                  | 11 U                   | 9.6 U                  | 0.50 J                 | 9.4 U                  | 9.2 U                  |
| Ethylbenzene                                                                                           | ug/kg | 4.8 U                  | 4.3 U                  | 8.1 J                  | 4.1 U                  | 37 J                   | 68 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 3.2 J                  | 4.7 U                  | 4.6 U                  |
| Isopropylbenzene                                                                                       | ug/kg | 4.8 U                  | 4.3 U                  | 220 U                  | 4.1 U                  | 69 U                   | 92 J                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Methyl acetate                                                                                         | ug/kg | 9.7 U                  | 8.5 U                  | 1100 U                 | 8.2 U                  | 68 J                   | 1600 U                 | 8.8 U                  | 11 U                   | 9.6 U                  | 11 U                   | 9.4 U                  | 9.2 U                  |
| Methyl cyclohexane                                                                                     | ug/kg | 9.7 U                  | 8.5 U                  | 79 J                   | 8.2 U                  | 1300 UJ                | 1600 UJ                | 8.8 U                  | 11 U                   | 9.6 U                  | 0.38 J                 | 9.4 U                  | 9.2 U                  |
| Methyl Tert Butyl Ether                                                                                | ug/kg | 19 U                   | 17 U                   | 220 U                  | 16 U                   | 230 U                  | 340 U                  | 18 U                   | 21 U                   | 19 U                   | 23 U                   | 19 U                   | 18 U                   |
| Methylene chloride                                                                                     | ug/kg | 4.8 U                  | 4.3 U                  | 220 U                  | 4.1 U                  | 230 U                  | 340 U                  | 4.8                    | 5.3 U                  | 0.89 J                 | 2.2 J                  | 4.7 U                  | 4.6 U                  |
| Tetrachloroethene                                                                                      | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 20 J                   | 68 U                   | 1.4 J                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Toluene                                                                                                | ug/kg | 0.30 J                 | 4.3 U                  | 18 J                   | 4.1 U                  | 27 J                   | 140 U                  | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| trans-1,2-Dichloroethene                                                                               | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Trichloroethene                                                                                        | ug/kg | 4.8 U                  | 4.3 U                  | 44 U                   | 4.1 U                  | 46 U                   | 68 U                   | 4.4 U                  | 5.3 U                  | 13                     | 0.87 J                 | 4.7 U                  | 4.6 U                  |
| Trichlorofluoromethane (CFC-11)                                                                        | ug/kg | 4.8 U                  | 4.3 U                  | 89 UJ                  | 4.1 U                  | 91 UJ                  | 140 UJ                 | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Vinyl chloride                                                                                         | ug/kg | 4.8 U                  | 4.3 U                  | 35 U                   | 4.1 U                  | 37 U                   | 55 U                   | 4.4 U                  | 5.3 U                  | 4.8 U                  | 5.7 U                  | 4.7 U                  | 4.6 U                  |
| Xylene (total)                                                                                         | ug/kg | 9.7 U                  | 8.5 U                  | 70 J                   | 8.2 U                  | 91 J                   | 83 J                   | 0.82 J                 | 11 U                   | 9.6 U                  | 4.7 J                  | 9.4 U                  | 9.2 U                  |
| Semi-Volatile Organic Compounds                                                                        |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                                                                                     | ug/kg | 1200 U                 | 230 U                  | 2200 U                 | 1500 U                 | 990 U                  | 160000 U               | 230 U                  | 460 U                  | 1100 U                 | 220 UJ                 | 570 U                  | 240 U                  |
| 2-Methylnaphthalene                                                                                    | ug/kg | 40 U                   | 7.8 U                  | 110                    | 330                    | 42                     | 36000                  | 520                    | 160                    | 96                     | 160 J                  | 130                    | 7.9 U                  |
| Acenaphthene                                                                                           | ug/kg | 180                    | 7.8 U                  | 140                    | 520                    | 44                     | 130000                 | 24                     | 69                     | 35 U                   | 34 J                   | 19 U                   | 7.9 U                  |
| Acenaphthylene                                                                                         | ug/kg | 40 U                   | 7.8 U                  | 74 U                   | 93                     | 33 U                   | 5300 U                 | 50                     | 15 U                   | 66                     | 22 J                   | 19 U                   | 7.9 U                  |
| Acetophenone                                                                                           | ug/kg | 610 U                  | 120 U                  | 1100 U                 | 740 U                  | 500 U                  | 79000 U                | 110 U                  | 230 U                  | 530 U                  | 110 UJ                 | 290 U                  | 120 U                  |
| Anthracene                                                                                             | ug/kg | 560                    | 7.8 U                  | 74 U                   | 1500                   | 100                    | 200000                 | 73                     | 260                    | 84                     | 66 J                   | 61                     | 7.9 U                  |
| Benzo(a)anthracene                                                                                     | ug/kg | 690                    | 7.8 U                  | 74 U                   | 3300                   | 390                    | 350000                 | 160                    | 970                    | 210                    | 200 J                  | 140                    | 7.9 U                  |
| Benzo(a)pyrene                                                                                         | ug/kg | 460                    | 7.8 U                  | 140                    | 3300                   | 430                    | 270000                 | 170                    | 820                    | 290                    | 210 J                  | 160                    | 7.9 U                  |
| Benzo(b)fluoranthene                                                                                   | ug/kg | 160                    | 7.8 U                  | 150                    | 4400                   | 620                    | 360000                 | 280                    | 1100 J                 | 450                    | 300 J                  | 240                    | 7.9 U                  |
| Benzo(g,h,i)perylene                                                                                   | ug/kg | 380                    | 7.8 U                  | 74 U                   | 2900                   | 360                    | 150000                 | 130                    | 590                    | 260                    | 180 J                  | 140                    | 7.9 U                  |
| Benzo(k)fluoranthene                                                                                   | ug/kg | 40 U                   | 7.8 U                  | 100                    | 1400                   | 170                    | 170000                 | 98                     | 390                    | 150                    | 120 J                  | 85                     | 7.9 U                  |
| Biphenyl                                                                                               | ug/kg | 300 U                  | 58 U                   | 550 U                  | 370 U                  | 250 U                  | 40000 U                | 39 J                   | 120 U                  | 270 U                  | 56 UJ                  | 140 U                  | 59 U                   |
| bis(2-Ethylhexyl)phthalate                                                                             | ug/kg | 300 U                  | 58 U                   | 550 U                  | 370 U                  | 250 U                  | 40000 U                | 56 J                   | 44 J                   | 270 U                  | 64 UJ                  | 140 U                  | 29 J                   |
| Caprolactam                                                                                            | ug/kg | 2000 U                 | 390 U                  | 3700 U                 | 2400 U                 | 1600 U                 | 260000 U               | 380 U                  | 760 U                  | 1800 U                 | 370 UJ                 | 940 U                  | 390 U                  |
| Carbazole                                                                                              | ug/kg | 300 U                  | 58 U                   | 550 U                  | 450                    | 250 U                  | 130000                 | 40 J                   | 140                    | 270 U                  | 43 J                   | 140 U                  | 59 U                   |
| Chrysene                                                                                               | ug/kg | 960                    | 7.8 U                  | 93                     | 3200                   | 380                    | 350000                 | 220                    | 950                    | 330                    | 260 J                  | 220                    | 7.9 U                  |
| Dibenz(a,h)anthracene                                                                                  | ug/kg | 98                     | 7.8 U                  | 74 U                   | 580                    | 84                     | 47000                  | 36                     | 140                    | 59                     | 43 J                   | 32                     | 7.9 U                  |
| Dibenzofuran                                                                                           | ug/kg | 300 U                  | 58 U                   | 550 U                  | 310 J                  | 250 U                  | 79000                  | 130                    | 61 J                   | 270 U                  | 53 J                   | 140 U                  | 59 U                   |
| Di-n-butylphthalate                                                                                    | ug/kg | 300 U                  | 58 U                   | 550 U                  | 370 U                  | 250 U                  | 40000 U                | 57 U                   | 120 U                  | 170 J                  | 56 UJ                  | 140 U                  | 59 U                   |
| Fluoranthene                                                                                           | ug/kg | 40 U                   | 7.8 U                  | 300                    | 7300                   | 770                    | 960000                 | 300                    | 1900 J                 | 410                    | 440 J                  | 340                    | 7.9 U                  |
| Fluorene                                                                                               | ug/kg | 40 U                   | 7.8 U                  | 96                     | 520                    | 53                     | 150000                 | 29                     | 74                     | 35 U                   | 40 J                   | 24                     | 7.9 U                  |
| Indeno(1,2,3-cd)pyrene                                                                                 | ug/kg | 83                     | 7.8 U                  | 74 U                   | 2300                   | 280                    | 130000                 | 100                    | 500                    | 210                    | 150 J                  | 100                    | 7.9 U                  |
| Naphthalene                                                                                            | ug/kg | 40 U                   | 7.8 U                  | 74 U                   | 280                    | 33 U                   | 5300 U                 | 330                    | 100                    | 49                     | 110 J                  | 80                     | 7.9 U                  |
| Phenanthrene                                                                                           | ug/kg | 1500                   | 7.8 U                  | 250                    | 4900                   | 370                    | 900000                 | 340                    | 980                    | 210                    | 300 J                  | 250                    | 7.9 U                  |
| Pyrene                                                                                                 | ug/kg | 1800                   | 7.8 U                  | 280                    | 6100                   | 600                    | 700000                 | 240                    | 1600 J                 | 370                    | 370 J                  | 270                    | 7.9 U                  |

DETECTED PARAMETERS IN SOIL  
PHASE II ESA  
PONTIAC WASTE TREATMENT CENTER  
PONTIAC, MICHIGAN

| Sample Location:                                                 | BH-92-08               | BH-96-08               | TP-1                   | TP-1                   | TP-1                   | TP-1                   | TP-2                   | TP-2                   | TP-3                   | TP-3                   | TP-4                   | TP-4                   |         |
|------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------|
| Sample Depth (ft BGS):                                           | (7.5-9.5)              | (8-10)                 | (6-6)                  | (7-7)                  | (10-10)                | (10-10)                | (4-4)                  | (6.5-6.5)              | (3-3)                  | (7-7)                  | (5-5)                  | (10-10)                |         |
| Sample ID:                                                       | SO-17322-031408-CB-062 | SO-17322-031408-CB-069 | SO-17322-101007-CB-019 | SO-17322-101007-CB-020 | SO-17322-101007-CB-017 | SO-17322-101007-CB-018 | SO-17322-101007-CB-022 | SO-17322-101007-CB-021 | SO-17322-101007-CB-024 | SO-17322-101007-CB-023 | SO-17322-101007-CB-016 | SO-17322-101007-CB-015 |         |
| Sample Date:                                                     | 03/14/2008             | 03/14/2008             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             | 10/10/2007             |         |
| Sample Type:                                                     |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Parameter:                                                       | Units                  |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Metals                                                           |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Aluminum                                                         | mg/kg                  | 14700                  | 9050                   | 5660                   | 5790                   | 5390                   | 9920                   | 5550                   | 5460                   | 4420                   | 4320                   | 5070                   | 3650    |
| Antimony                                                         | mg/kg                  | 0.12 J                 | 0.077 J                | 0.18 UJ                | 0.53 J                 | 0.31 UJ                | 1.5 J                  | 0.27 UJ                | 0.39 J                 | 0.51 J                 | 0.22 UJ                | 0.57 J                 | 0.19 UJ |
| Arsenic                                                          | mg/kg                  | 12.1 J                 | 7.4 J                  | 4.1                    | 5.9                    | 5.1                    | 11.4                   | 7.3                    | 4.3                    | 6.5                    | 4.6                    | 4.9                    | 3.3     |
| Barium                                                           | mg/kg                  | 55.8                   | 50.2                   | 35.6                   | 64.8                   | 44.8                   | 263                    | 42.1                   | 40.3                   | 39.9                   | 32.0                   | 54.9                   | 17.2    |
| Beryllium                                                        | mg/kg                  | 0.24 U                 | 0.19 U                 | 0.056 J                | 0.077 J                | 0.074 J                | 0.26                   | 0.17 J                 | 0.077 J                | 0.10 J                 | 0.089 J                | 0.14 J                 | 0.19 U  |
| Cadmium                                                          | mg/kg                  | 0.097 U                | 0.12 U                 | 0.21                   | 0.43                   | 0.30                   | 1.4                    | 0.23                   | 0.15                   | 0.56                   | 0.27                   | 0.33                   | 0.15    |
| Calcium                                                          | mg/kg                  | 4350 J                 | 77500 J                | 52200                  | 29100                  | 54400                  | 42700                  | 44100                  | 90700                  | 38600                  | 77600                  | 29800                  | 94900   |
| Chromium III (Trivalent)                                         | mg/kg                  | 23.6                   | 14.4                   | 8.4                    | 21.1                   | 16.0                   | 67.4                   | 10.8                   | 9.9                    | 9.2                    | 10.2                   | 12.1                   | 7.7     |
| Chromium VI (Hexavalent)                                         | mg/kg                  | 0.97 U                 | 1.1                    | 3.1                    | 0.77 J                 | 0.74 J                 | 1.4                    | 0.74 J                 | 1.3                    | 0.51 J                 | 0.69 J                 | 0.79 J                 | 0.49 J  |
| Chromium Total                                                   | mg/kg                  | 23.6 J                 | 15.5 J                 | 11.5                   | 21.8                   | 16.7                   | 67.4                   | 11.6                   | 11.1                   | 9.7                    | 10.9                   | 12.9                   | 8.1     |
| Cobalt                                                           | mg/kg                  | 15.0                   | 8.9                    | 5.9                    | 6.8                    | 5.8                    | 12.5                   | 5.6                    | 4.4                    | 5.3                    | 4.8                    | 6.2                    | 4.6     |
| Copper                                                           | mg/kg                  | 48.9 J                 | 19.8 J                 | 17.2                   | 203                    | 67.0                   | 404                    | 21.3                   | 17.6                   | 25.6                   | 22.9                   | 22.9                   | 17.1    |
| Iron                                                             | mg/kg                  | 34200                  | 18100                  | 12600                  | 15500                  | 16000                  | 39300                  | 14500                  | 11500                  | 12000                  | 11800                  | 10400                  | 10200   |
| Lead                                                             | mg/kg                  | 18.0 J                 | 8.6 J                  | 14.0                   | 127                    | 139                    | 835                    | 52.7                   | 33.0                   | 20.6                   | 29.2                   | 61.9                   | 5.6     |
| Lead - Coarse Fraction <sup>(1)</sup>                            | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Fine Fraction <sup>(1)</sup>                              | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Lead - Total (Calculated by fine/coarse fraction) <sup>(1)</sup> | mg/kg                  | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --                     | --      |
| Magnesium                                                        | mg/kg                  | 4460 J                 | 9930 J                 | 11500                  | 7060                   | 16300                  | 11900                  | 12100                  | 9250                   | 7890                   | 10000                  | 10100                  | 15700   |
| Manganese                                                        | mg/kg                  | 923                    | 536                    | 363                    | 240                    | 347                    | 397                    | 349                    | 254                    | 348                    | 270                    | 208                    | 370     |
| Mercury                                                          | mg/kg                  | 0.028 J                | 0.023 J                | 0.022 J                | 0.091                  | 0.058                  | 0.39                   | 0.087                  | 0.024 J                | 0.040 J                | 0.044 J                | 0.092                  | 0.047 U |
| Nickel                                                           | mg/kg                  | 40.0 J                 | 24.8 J                 | 17.3                   | 39.3                   | 38.2                   | 23                     | 13.2                   | 10.4                   | 19.8                   | 12.9                   | 11.7                   | 10.2    |
| Potassium                                                        | mg/kg                  | 1710                   | 1640                   | 1070                   | 938                    | 86                     | 1650                   | 1020                   | 1330                   | 909                    | 825                    | 620                    | 618     |
| Selenium                                                         | mg/kg                  | 1.6                    | 0.56                   | 0.19 U                 | 0.23                   | 0.21 U                 | 1.2                    | 0.41                   | 0.20 U                 | 0.16 J                 | 0.11 J                 | 0.40                   | 0.15 J  |
| Silver                                                           | mg/kg                  | 0.042 J                | 0.035 J                | 0.060 J                | 0.13                   | 0.098 J                | 0.44                   | 0.075 J                | 0.066 J                | 0.093                  | 0.062 J                | 0.097                  | 0.048 J |
| Sodium                                                           | mg/kg                  | 709                    | 905                    | 552                    | 191                    | 543                    | 711                    | 574                    | 472                    | 97.0                   | 420                    | 408                    | 368     |
| Thallium                                                         | mg/kg                  | 0.42                   | 0.24                   | 0.15                   | 0.15                   | 0.14                   | 0.28                   | 0.15                   | 0.13                   | 0.17                   | 0.12                   | 0.15                   | 0.13    |
| Vanadium                                                         | mg/kg                  | 36.2 J                 | 19.6 J                 | 15.3                   | 16.8                   | 15.3                   | 28.3                   | 14.9                   | 13.7                   | 26.0                   | 13.3                   | 14.7                   | 11.4    |
| Zinc                                                             | mg/kg                  | 92.1                   | 45.2                   | 57.1                   | 101                    | 152                    | 411                    | 55.1                   | 41.3                   | 70.6                   | 58.6                   | 104                    | 25.0    |
| Polychlorinated Biphenyls                                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Aroclor-1248 (PCB-1248)                                          | ug/kg                  | 40 U                   | 39 U                   | 37 U                   | 37 U                   | 41 U                   | 52 U                   | 38 U                   | 38 U                   | 35 U                   | 37 U                   | 75 U                   | 39 U    |
| Aroclor-1254 (PCB-1254)                                          | ug/kg                  | 40 U                   | 39 U                   | 37 U                   | 51                     | 41 U                   | 52 U                   | 33 J                   | 12 J                   | 33 J                   | 220                    | 610                    | 39 U    |
| Aroclor-1260 (PCB-1260)                                          | ug/kg                  | 40 U                   | 39 U                   | 37 U                   | 37 U                   | 49                     | 180                    | 38 U                   | 38 U                   | 35 U                   | 37 U                   | 75 U                   | 39 U    |
| Total PCBs                                                       | ug/kg                  | 40 U                   | 39 U                   | 37 U                   | 56.5                   | 54.5                   | 187                    | 38.5                   | 17.5                   | 38                     | 225.5                  | 621                    | 39 U    |
| General Chemistry                                                |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |         |
| Cyanide (total)                                                  | mg/kg                  | 0.24 U                 | 0.23 U                 | 0.22 U                 | 0.13 J                 | 0.31 J                 | 1.4 J                  | 0.12 J                 | 0.20 J                 | 0.18 J                 | 0.13 J                 | 2.9 J                  | 0.24 U  |
| Total Solids                                                     | %                      | 82.5                   | 85.6                   | 90.3                   | 90.2                   | 80.5                   | 63.1                   | 87.0                   | 86.6                   | 94.1                   | 89.3                   | 87.6                   | 84.6    |

Notes:

<sup>(1)</sup> If the total lead was greater than 75 mg/kg, the soil sample was analyzed for fractionated lead.

U Not present at or above the associated value.

J Estimated concentration.

UJ Estimated reporting limit.

R Rejected based on excess holding time, insufficient surrogate recovery, calibration errors, or relative percent differences.

-- Not analyzed.

BH Soil boring.

MW Monitoring well (samples taken from soil boring prior to well installation).

ft BGS Feet below ground surface.

mg/kg Milligrams per kilogram.

ug/kg Micrograms per kilogram.

% Percent.

DETECTED PARAMETERS IN GROUNDWATER  
PHASE II ESA  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location:                              |       | MW-2-07                | MW-4-07                | MW-7-07                | MW-10-07               | MW-11-07               | MW-15-07               | MW-15-07               | MW-17-07               | MW-19-07               | MW-32-07               |
|-----------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID:                                    |       | GW-17322-112807-CB-008 | GW-17322-112807-CB-009 | GW-17322-112807-CB-007 | GW-17322-112707-CB-004 | GW-17322-112707-CB-002 | GW-17322-112707-CB-005 | GW-17322-112707-CB-006 | GW-17322-112707-CB-001 | GW-17322-112707-CB-003 | GW-17322-010908-CB-016 |
| Sample Date:                                  |       | 11/28/2007             | 11/28/2007             | 11/28/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 01/09/2008             |
| Sample Type:                                  |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Parameter:                                    | Units |                        |                        |                        |                        |                        |                        | Duplicate              |                        |                        |                        |
| Volatile Organic Compounds                    |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                         | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,1-Dichloroethane                            | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,1-Dichloroethene                            | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.47 J                 |
| 1,2,4-Trimethylbenzene                        | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,2-Dichlorobenzene                           | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,3,5-Trimethylbenzene                        | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,3-Dichlorobenzene                           | ug/L  | 1.7 U                  | 0.18 J                 | 1.0 U                  | 1.0 U                  | 0.28 J                 | 0.22 J                 | 0.21 J                 | 1.0 U                  | 0.29 J                 | 1.0 U                  |
| 1,4-Dichlorobenzene                           | ug/L  | 1.7 U                  | 0.30 J                 | 1.0 U                  | 1.0 U                  | 0.48 J                 | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/L  | 42 U                   | 2.5 J                  | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   |
| 2-Hexanone                                    | ug/L  | 84 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/L  | 84 U                   | 3.2 J                  | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 UJ                  |
| Acetone                                       | ug/L  | 42 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   |
| Benzene                                       | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Carbon disulfide                              | ug/L  | 8.4 U                  | 5.0 UJ                 | 5.0 UJ                 | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Chloroethane                                  | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Chloroform (Trichloromethane)                 | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| cis-1,2-Dichloroethene                        | ug/L  | 8.8                    | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Cyclohexane                                   | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Ethylbenzene                                  | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Isopropylbenzene                              | ug/L  | 8.4 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Methyl acetate                                | ug/L  | 17 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   |
| Methyl cyclohexane                            | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Methyl Tert Butyl Ether                       | ug/L  | 8.4 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Methylene chloride                            | ug/L  | 8.4 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Tetrachloroethene                             | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Toluene                                       | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.24 J                 |
| trans-1,2-Dichloroethene                      | ug/L  | 2.9                    | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Trichloroethene                               | ug/L  | 51                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Trichlorofluoromethane (CFC-11)               | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.22 J                 |
| Vinyl chloride                                | ug/L  | 1.7 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Xylene (total)                                | ug/L  | 3.3 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  |
| Semi-Volatile Organic Compounds               |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                            | ug/L  | 5.0 U                  | 25 U                   | 5.0 U                  | 6.1 U                  | 5.0 U                  | 5.0 U                  | 6.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| 2-Methylnaphthalene                           | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Acenaphthene                                  | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Acenaphthylene                                | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Acetophenone                                  | ug/L  | 1.0 U                  | 5.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Anthracene                                    | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(a)anthracene                            | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(a)pyrene                                | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(b)fluoranthene                          | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(g,h,i)perylene                          | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(k)fluoranthene                          | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Biphenyl                                      | ug/L  | 1.0 U                  | 5.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| bis(2-Ethylhexyl)phthalate                    | ug/L  | 1.0 U                  | 5.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 0.93 J                 |
| Caprolactam                                   | ug/L  | 5.0 U                  | 25 U                   | 5.0 U                  | 6.1 U                  | 5.0 U                  | 5.0 U                  | 6.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Carbazole                                     | ug/L  | 1.0 U                  | 5.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Chrysene                                      | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Dibenz(a,h)anthracene                         | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Dibenzofuran                                  | ug/L  | 1.0 U                  | 5.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Di-n-butylphthalate                           | ug/L  | 1.0 U                  | 5.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.2 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Fluoranthene                                  | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Fluorene                                      | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Indeno(1,2,3-cd)pyrene                        | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Naphthalene                                   | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Phenanthrene                                  | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Pyrene                                        | ug/L  | 0.20 U                 | 1.0 U                  | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.24 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |

DETECTED PARAMETERS IN GROUNDWATER  
PHASE II ESA  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location:                 |       | MW-2-07                | MW-4-07                | MW-7-07                | MW-10-07               | MW-11-07               | MW-15-07               | MW-15-07               | MW-17-07               | MW-19-07               | MW-32-07               |
|----------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID:                       |       | GW-17322-112807-CB-008 | GW-17322-112807-CB-009 | GW-17322-112807-CB-007 | GW-17322-112707-CB-004 | GW-17322-112707-CB-002 | GW-17322-112707-CB-005 | GW-17322-112707-CB-006 | GW-17322-112707-CB-001 | GW-17322-112707-CB-003 | GW-17322-010908-CB-016 |
| Sample Date:                     |       | 11/28/2007             | 11/28/2007             | 11/28/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 11/27/2007             | 01/09/2008             |
| Sample Type:                     |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Parameter:                       | Units |                        |                        |                        |                        |                        |                        | Duplicate              |                        |                        |                        |
| Metals                           |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aluminum                         | ug/L  | 11.6 J                 | 14.2 J                 | 50.0 U                 | 644                    | 523                    | 9.8 J                  | 50.0 U                 | 191                    | 463                    | 325                    |
| Antimony                         | ug/L  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 1.1 J                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 1.3 J                  | 2.0 U                  | 1.7 J                  |
| Arsenic                          | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.9                    | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Barium                           | ug/L  | 394                    | 79.5                   | 197                    | 9.7 J                  | 52.6 J                 | 310                    | 296                    | 21.2 J                 | 12.0 J                 | 8.1 J                  |
| Beryllium                        | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Cadmium                          | ug/L  | 1.0 U                  | 1.0 U                  | 0.71 J                 | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Calcium                          | ug/L  | 323000                 | 226000                 | 324000                 | 12800                  | 67500                  | 334000                 | 321000                 | 47400                  | 29400                  | 22500                  |
| Chromium III (Trivalent)         | mg/L  | 0.0051 J               | 0.0050 UJ              | 0.0050 UJ              | 0.0050 UJ              | 0.0050 UJ              | 0.0050 UJ              | 0.0050 UJ              | 0.0050 UJ              | 0.0050 UJ              | 0.0076 J               |
| Chromium VI (Hexavalent)         | mg/L  | 0.01 UJ                | 0.01 UJ                | 0.01 UJ                | 0.006 J                | 0.01 UJ                | 0.01 UJ                | 0.01 UJ                | 0.01 J                 | 0.01 UJ                | 0.01 UJ                |
| Chromium Total                   | ug/L  | 5.1                    | 5.0 U                  | 5.0 U                  | 6.5                    | 5.0 U                  | 5.0 U                  | 5.0 U                  | 9.2                    | 5.0 U                  | 7.6                    |
| Cobalt                           | ug/L  | 2.5 J                  | 7.0 U                  | 2.1 J                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  |
| Copper                           | ug/L  | 2.0 U                  | 2.4 U                  | 2.2 U                  | 4.4                    | 2.4 U                  | 2.0 U                  | 2.0 U                  | 6.3                    | 2.5 U                  | 2.4 U                  |
| Iron                             | ug/L  | 1810 J                 | 87.1 J                 | 125 J                  | 1030 J                 | 879 J                  | 100 U                  | 100 U                  | 415 J                  | 829 J                  | 783                    |
| Lead                             | ug/L  | 3.0 U                  | 3.0 U                  | 3.0 U                  | 5.6                    | 3.0 U                  | 3.0 U                  | 3.0 U                  | 3.0 U                  | 3.0 U                  | 3.0 U                  |
| Magnesium                        | ug/L  | 56000                  | 16200                  | 70900                  | 2020                   | 23400                  | 59300                  | 57100                  | 6860                   | 4700                   | 3590                   |
| Manganese                        | ug/L  | 2150                   | 57.7                   | 192                    | 23.5                   | 245                    | 121                    | 114                    | 15.1                   | 14.5 J                 | 10.8 J                 |
| Mercury                          | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Nickel                           | ug/L  | 6.7 J                  | 20.0 U                 | 3.5 J                  | 20.0 U                 | 4.0 J                  | 20.0 U                 | 20.0 U                 | 20.0 U                 | 20.0 U                 | 20.0 U                 |
| Potassium                        | ug/L  | 5270 J                 | 11000 J                | 7370 J                 | 4560 J                 | 1860 J                 | 6320 J                 | 6020 J                 | 7770 J                 | 2370 J                 | 2460                   |
| Selenium                         | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Silver                           | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Sodium                           | ug/L  | 876000                 | 643000                 | 488000                 | 68900                  | 444000                 | 2060000                | 2030000                | 54900                  | 284000                 | 66800                  |
| Thallium                         | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Vanadium                         | ug/L  | 4.0 U                  | 4.0 U                  | 4.0 U                  | 3.4                    | 4.0 U                  | 4.0 U                  | 4.0 U                  | 3.3 J                  | 3.2                    | 3.3 J                  |
| Zinc                             | ug/L  | 5.8 J                  | 20.0 U                 | 5.8 J                  | 16.2 J                 | 6.0 J                  | 20.0 U                 | 20.0 U                 | 20.0 U                 | 10.5 J                 | 20.0 U                 |
| Polychlorinated Biphenyls (PCBs) |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)          | ug/L  | 0.33                   | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.086 J                | 0.10 U                 | 0.10 U                 |
| Aroclor-1254 (PCB-1254)          | ug/L  | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 |
| Aroclor-1260 (PCB-1260)          | ug/L  | 0.29                   | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 |
| Total PCBs                       | ug/L  | 0.62                   | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.105                  | 0.10 U                 | 0.10 U                 |
| General Chemistry                |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Cyanide (amenable)               | mg/L  | 0.0050 U               | 0.0050 U               | 0.0050 U               | 0.0050 U               | 0.0050 U               | 0.0071                 | 0.0050 U               | 0.0050 U               | 0.0050 U               | 0.0050 U               |

Notes:

|      |                                               |
|------|-----------------------------------------------|
| U    | Not present at or above the associated value. |
| J    | Estimated concentration.                      |
| UJ   | Estimated reporting limit.                    |
| MW   | Monitoring well.                              |
| mg/L | Milligrams per liter.                         |
| ug/L | Micrograms per liter.                         |

DETECTED PARAMETERS IN GROUNDWATER  
PHASE II ESA  
PONTIAC VALLEY AIRPORT  
PONTIAC, MICHIGAN

| Sample Location:                              |       | MW-33-07               | MW-33-07               | MW-34-07               | MW-35-07               | MW-35-07               | MW-37-07               | MW-38-07               | MW-40-07               | MW-40-07               | MW-48-07               |
|-----------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID:                                    |       | GW-17322-010808-CB-011 | GW-17322-010908-CB-011 | GW-17322-010808-CB-013 | GW-17322-010808-CB-012 | GW-17322-010908-CB-012 | GW-17322-010808-CB-010 | GW-17322-010908-CB-017 | GW-17322-010808-CB-014 | GW-17322-010808-CB-015 | GW-17322-040808-CB-006 |
| Sample Date:                                  |       | 01/08/2008             | 01/09/2008             | 01/08/2008             | 01/08/2008             | 01/09/2008             | 01/08/2008             | 01/09/2008             | 01/08/2008             | 01/08/2008             | 04/08/2008             |
| Sample Type:                                  |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Parameter:                                    | Units |                        |                        |                        |                        |                        |                        |                        |                        | Duplicate              |                        |
| Volatile Organic Compounds                    |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                         | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,1-Dichloroethane                            | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,1-Dichloroethene                            | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.65 J                 |
| 1,2,4-Trimethylbenzene                        | ug/L  | 0.85 J                 | --                     | 1.0 U                  | 0.22 J                 | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,2-Dichlorobenzene                           | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,3,5-Trimethylbenzene                        | ug/L  | 0.29 J                 | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,3-Dichlorobenzene                           | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 1,4-Dichlorobenzene                           | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/L  | 25 U                   | --                     | 2.7 J                  | 25 U                   | --                     | 7.0 J                  | 25 U                   | 25 U                   | 25 U                   | 25 U                   |
| 2-Hexanone                                    | ug/L  | 50 U                   | --                     | 50 U                   | 50 U                   | --                     | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 50 U                   |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/L  | 50 UJ                  | --                     | 50 UJ                  | 50 UJ                  | --                     | 50 UJ                  | 50 UJ                  | 50 UJ                  | 50 UJ                  | 50 U                   |
| Acetone                                       | ug/L  | 25 U                   | --                     | 25 U                   | 25 U                   | --                     | 25 U                   | 25 U                   | 25 U                   | 25 U                   | 25 U                   |
| Benzene                                       | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 0.22 J                 | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Carbon disulfide                              | ug/L  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | --                     | 0.36 J                 | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Chloroethane                                  | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Chloroform (Trichloromethane)                 | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| cis-1,2-Dichloroethene                        | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Cyclohexane                                   | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Ethylbenzene                                  | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Isopropylbenzene                              | ug/L  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Methyl acetate                                | ug/L  | 10 U                   | --                     | 10 U                   | 10 U                   | --                     | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 10 U                   |
| Methyl cyclohexane                            | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Methyl Tert Butyl Ether                       | ug/L  | 0.23 J                 | --                     | 5.0 U                  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Methylene chloride                            | ug/L  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Tetrachloroethene                             | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Toluene                                       | ug/L  | 1.8                    | --                     | 1.0 U                  | 0.88 J                 | --                     | 3.1                    | 0.54 J                 | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| trans-1,2-Dichloroethene                      | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Trichloroethene                               | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Trichlorofluoromethane (CFC-11)               | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Vinyl chloride                                | ug/L  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 UJ                 |
| Xylene (total)                                | ug/L  | 2.0 U                  | --                     | 2.0 U                  | 2.0 U                  | --                     | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  |
| Semi-Volatile Organic Compounds               |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                            | ug/L  | --                     | 6.2 U                  | 5.0 U                  | 5.0 U                  | 12 U                   | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| 2-Methylnaphthalene                           | ug/L  | --                     | 0.38                   | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Acenaphthene                                  | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Acenaphthylene                                | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Acetophenone                                  | ug/L  | --                     | 0.55 J                 | 1.0 U                  | 1.0 U                  | 2.5 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Anthracene                                    | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(a)anthracene                            | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.73                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(a)pyrene                                | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.64                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(b)fluoranthene                          | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 1.2                    | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(g,h,i)perylene                          | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.57                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Benzo(k)fluoranthene                          | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.38                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Biphenyl                                      | ug/L  | --                     | 1.2 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| bis(2-Ethylhexyl)phthalate                    | ug/L  | --                     | 2.1                    | 1.0 U                  | 6.9                    | 1.4 J                  | 1.5                    | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Caprolactam                                   | ug/L  | --                     | 6.2 U                  | 5.0 U                  | 5.0 U                  | 12 U                   | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | 5.0 UJ                 |
| Carbazole                                     | ug/L  | --                     | 1.2 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Chrysene                                      | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.94                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Dibenz(a,h)anthracene                         | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Dibenzofuran                                  | ug/L  | --                     | 1.2 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Di-n-butylphthalate                           | ug/L  | --                     | 1.2 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Fluoranthene                                  | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.23                   | 0.50 U                 | 2.5                    | --                     | 0.20 U                 | 0.20 U                 | 0.24                   |
| Fluorene                                      | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Indeno(1,2,3-cd)pyrene                        | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.49                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Naphthalene                                   | ug/L  | --                     | 0.92                   | 0.20 U                 | 0.20 U                 | 0.50 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Phenanthrene                                  | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.22                   | 0.50 U                 | 0.87                   | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Pyrene                                        | ug/L  | --                     | 0.25 U                 | 0.20 U                 | 0.20 U                 | 0.50 U                 | 1.7                    | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 |

DETECTED PARAMETERS IN GROUNDWATER  
PHASE II ESA  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location:                 |       | MW-33-07               | MW-33-07               | MW-34-07               | MW-35-07               | MW-35-07               | MW-37-07               | MW-38-07               | MW-40-07               | MW-40-07               | MW-48-07               |
|----------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID:                       |       | GW-17322-010808-CB-011 | GW-17322-010908-CB-011 | GW-17322-010808-CB-013 | GW-17322-010808-CB-012 | GW-17322-010908-CB-012 | GW-17322-010808-CB-010 | GW-17322-010908-CB-017 | GW-17322-010808-CB-014 | GW-17322-010808-CB-015 | GW-17322-040808-CB-006 |
| Sample Date:                     |       | 01/08/2008             | 01/09/2008             | 01/08/2008             | 01/08/2008             | 01/09/2008             | 01/08/2008             | 01/09/2008             | 01/08/2008             | 01/08/2008             | 04/08/2008             |
| Sample Type:                     |       |                        |                        |                        |                        |                        |                        |                        |                        | Duplicate              |                        |
| Parameter:                       | Units |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Metals                           |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aluminum                         | ug/L  | --                     | 929                    | 366                    | --                     | 927                    | 48.7 J                 | 148                    | 19.8 J                 | 25.2 J                 | 22.5 J                 |
| Antimony                         | ug/L  | --                     | 1.9 J                  | 2.0 U                  | --                     | 0.80 J                 | 1.0 J                  | 0.14 J                 | 2.0 U                  | 2.0 U                  | 2.0 U                  |
| Arsenic                          | ug/L  | --                     | 5.0 U                  | 5.0 U                  | --                     | 49.3                   | 9.2                    | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Barium                           | ug/L  | --                     | 448                    | 95.0 J                 | --                     | 46.0 J                 | 150                    | 119                    | 103                    | 102                    | 299                    |
| Beryllium                        | ug/L  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Cadmium                          | ug/L  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Calcium                          | ug/L  | --                     | 221000                 | 120000                 | --                     | 107000                 | 154000                 | 148000                 | 121000                 | 119000                 | 143000                 |
| Chromium III (Trivalent)         | mg/L  | --                     | 0.0099 J               | 0.0050 UJ              | --                     | 0.0050 UJ              | 0.0050 UJ              | --                     | 0.0050 UJ              | 0.0050 UJ              | 0.0050 U               |
| Chromium VI (Hexavalent)         | mg/L  | --                     | 0.03 J                 | 0.01 UJ                | --                     | 0.008 J                | 0.01 UJ                | --                     | 0.01 UJ                | 0.01 UJ                | 0.01 U                 |
| Chromium Total                   | ug/L  | --                     | 41.4                   | 5.0 U                  | --                     | 7.5                    | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Cobalt                           | ug/L  | --                     | 7.0 U                  | 7.0 U                  | --                     | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  |
| Copper                           | ug/L  | --                     | 7.5                    | 2.4 U                  | --                     | 7.2                    | 2.3 U                  | 3.9                    | 2.0 U                  | 2.0 U                  | 2.0 U                  |
| Iron                             | ug/L  | --                     | 102                    | 575                    | --                     | 767                    | 100 U                  | 346                    | 106                    | 82.5 J                 | 7670                   |
| Lead                             | ug/L  | --                     | 3.0 U                  | 3.0 U                  | --                     | 3.0 U                  | 3.0 U                  | 3.0 U                  | 3.0 U                  | 3.0 U                  | 3.0 U                  |
| Magnesium                        | ug/L  | --                     | 1000 U                 | 28700                  | --                     | 1000 U                 | 39800                  | 80500                  | 77700                  | 33500                  |                        |
| Manganese                        | ug/L  | --                     | 2.5 J                  | 233                    | --                     | 11.1 J                 | 57.0                   | 254                    | 87.3                   | 89.8                   | 324                    |
| Mercury                          | ug/L  | --                     | 0.20 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Nickel                           | ug/L  | --                     | 20.0 U                 | 20.0 U                 | --                     | 3.3 J                  | 5.5 J                  | 9.4 J                  | 3.2 J                  | 4.3 J                  | 20.0 U                 |
| Potassium                        | ug/L  | --                     | 20900                  | 3740                   | --                     | 18200                  | 14100                  | 4940                   | 7490                   | 7550                   | 6790 J                 |
| Selenium                         | ug/L  | --                     | 5.0 U                  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  |
| Silver                           | ug/L  | --                     | 0.20 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 |
| Sodium                           | ug/L  | --                     | 277000                 | 227000                 | --                     | 1290000                | 367000                 | 84200                  | 1080000                | 1040000                | 730000                 |
| Thallium                         | ug/L  | --                     | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  |
| Vanadium                         | ug/L  | --                     | 7.2                    | 2.4 J                  | --                     | 48.8                   | 1.8 J                  | 4.0 U                  | 4.0 U                  | 4.0 U                  | 4.0 U                  |
| Zinc                             | ug/L  | --                     | 20.0 U                 | 20.0 U                 | --                     | 20.0 U                 | 20.0 U                 | 21.5                   | 20.0 U                 | 20.0 U                 | 20.0 U                 |
| Polychlorinated Biphenyls (PCBs) |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)          | ug/L  | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | 0.10 U                 |
| Aroclor-1254 (PCB-1254)          | ug/L  | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | 0.10 U                 |
| Aroclor-1260 (PCB-1260)          | ug/L  | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.041 J                | 0.10 U                 | 0.10 U                 |
| Total PCBs                       | ug/L  | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.0715                 | 0.10 U                 | 0.10 U                 |
| General Chemistry                |       |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |
| Cyanide (amenable)               | mg/L  | --                     | 0.0050 U               | 0.0050 U               | --                     | 0.0050 U               | 0.0050 U               | --                     | 0.0050 U               | 0.0050 U               | 0.0050 U               |

Notes:

|      |                                               |
|------|-----------------------------------------------|
| U    | Not present at or above the associated value. |
| J    | Estimated concentration.                      |
| UJ   | Estimated reporting limit.                    |
| MW   | Monitoring well.                              |
| mg/L | Milligrams per liter.                         |
| ug/L | Micrograms per liter.                         |

DETECTED PARAMETERS IN GROUNDWATER  
PHASE II ESA  
PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location:                              |       | MW-48-07               | MW-63-08               | MW-64-08               | MW-68-08               | TMW71-08               | MW-74-08               | MW-78-08               | TMW-81-08              |
|-----------------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID:                                    |       | GW-17322-040808-CB-007 | GW-17322-040708-CB-002 | GW-17322-040708-CB-001 | GW-17322-040708-CB-005 | WG-17322-031008-MC-002 | GW-17322-040708-CB-004 | GW-17322-040708-CB-003 | WG-17322-031008-MC-001 |
| Sample Date:                                  |       | 04/08/2008             | 04/07/2008             | 04/07/2008             | 04/07/2008             | 03/10/2008             | 04/07/2008             | 04/07/2008             | 03/10/2008             |
| Sample Type:                                  |       | Duplicate              |                        |                        |                        |                        |                        |                        |                        |
| Parameter:                                    | Units |                        |                        |                        |                        |                        |                        |                        |                        |
| Volatile Organic Compounds                    |       |                        |                        |                        |                        |                        |                        |                        |                        |
| 1,1,1-Trichloroethane                         | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 1000                   | 1.0 U                  | 4.0 U                  |
| 1,1-Dichloroethane                            | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 230                    | 1.0 U                  | 4.0 U                  |
| 1,1-Dichloroethene                            | ug/L  | 0.68 J                 | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 57 J                   | 1.0 U                  | 4.0 U                  |
| 1,2,4-Trimethylbenzene                        | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| 1,2-Dichlorobenzene                           | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| 1,3,5-Trimethylbenzene                        | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| 1,3-Dichlorobenzene                           | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| 1,4-Dichlorobenzene                           | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| 2-Butanone (Methyl Ethyl Ketone)              | ug/L  | 0.74 J                 | 25 U                   | 25 U                   | 25 U                   | 14 J                   | 1900 U                 | 25 U                   | 36 J                   |
| 2-Hexanone                                    | ug/L  | 50 U                   | 50 U                   | 50 U                   | 50 U                   | 120 UJ                 | 3800 U                 | 50 U                   | 3.8 J                  |
| 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) | ug/L  | 50 U                   | 50 U                   | 0.79 J                 | 50 U                   | 3.0 J                  | 3800 U                 | 50 U                   | 7.6 J                  |
| Acetone                                       | ug/L  | 25 UJ                  | 25 UJ                  | 25 UJ                  | 25 UJ                  | 79 J                   | 1900 UJ                | 25 UJ                  | 180 J                  |
| Benzene                                       | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| Carbon disulfide                              | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 1.8 J                  | 380 U                  | 5.0 U                  | 20 U                   |
| Chloroethane                                  | ug/L  | 1.0 UJ                 | 1.0 UJ                 | 1.0 UJ                 | 1.0 UJ                 | 2.5 U                  | 77 UJ                  | 1.0 UJ                 | 4.0 U                  |
| Chloroform (Trichloromethane)                 | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 17 J                   | 1.0 U                  | 4.0 U                  |
| cis-1,2-Dichloroethene                        | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.60 J                 | 76 J                   | 1.0 U                  | 4.0 U                  |
| Cyclohexane                                   | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| Ethylbenzene                                  | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| Isopropylbenzene                              | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 12 U                   | 380 U                  | 5.0 U                  | 20 U                   |
| Methyl acetate                                | ug/L  | 10 U                   | 10 U                   | 10 U                   | 10 U                   | 25 U                   | 770 U                  | 10 U                   | 40 U                   |
| Methyl cyclohexane                            | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| Methyl Tert Butyl Ether                       | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 12 U                   | 380 U                  | 5.0 U                  | 20 U                   |
| Methylene chloride                            | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 12 U                   | 380 U                  | 5.0 U                  | 20 U                   |
| Tetrachloroethene                             | ug/L  | 1.0 U                  | 1.0 UJ                 | 1.0 UJ                 | 1.0 UJ                 | 2.5 U                  | 77 UJ                  | 1.0 UJ                 | 4.0 U                  |
| Toluene                                       | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.58 J                 | 77 U                   | 1.0 U                  | 4.0 U                  |
| trans-1,2-Dichloroethene                      | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 77 U                   | 1.0 U                  | 4.0 U                  |
| Trichloroethene                               | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 2.5 U                  | 2100                   | 1.0 U                  | 4.0 U                  |
| Trichlorofluoromethane (CFC-11)               | ug/L  | 1.0 U                  | 1.0 UJ                 | 1.0 UJ                 | 1.0 UJ                 | 2.5 U                  | 77 UJ                  | 1.0 UJ                 | 4.0 U                  |
| Vinyl chloride                                | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.79 J                 | 77 U                   | 1.0 U                  | 4.0 U                  |
| Xylene (total)                                | ug/L  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 2.0 U                  | 5.0 U                  | 150 U                  | 2.0 U                  | 8.0 U                  |
| Semi-Volatile Organic Compounds               |       |                        |                        |                        |                        |                        |                        |                        |                        |
| 2,6-Dinitrotoluene                            | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | --                     | 9.0 U                  | 5.0 U                  | --                     |
| 2-Methylnaphthalene                           | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.36 U                 | 0.20 U                 | --                     |
| Acenaphthene                                  | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.66                   | 0.20 U                 | --                     |
| Acenaphthylene                                | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.36 U                 | 0.20 U                 | --                     |
| Acetophenone                                  | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 1.8 U                  | 1.0 U                  | --                     |
| Anthracene                                    | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 1.3                    | 0.20 U                 | --                     |
| Benzo(a)anthracene                            | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.35                   | --                     | 3.4                    | 0.20 U                 | --                     |
| Benzo(a)pyrene                                | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.30                   | --                     | 3.3                    | 0.20 U                 | --                     |
| Benzo(b)fluoranthene                          | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.35                   | --                     | 4.1                    | 0.20 U                 | --                     |
| Benzo(g,h,i)perylene                          | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 2.2                    | 0.20 U                 | --                     |
| Benzo(k)fluoranthene                          | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 1.7                    | 0.20 U                 | --                     |
| Biphenyl                                      | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 1.8 U                  | 1.0 U                  | --                     |
| bis(2-Ethylhexyl)phthalate                    | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 0.97 J                 | --                     | 0.90 J                 | 1.0 U                  | --                     |
| Caprolactam                                   | ug/L  | 5.0 UJ                 | 5.0 UJ                 | 5.0 UJ                 | 5.0 UJ                 | --                     | 9.0 UJ                 | 5.0 UJ                 | --                     |
| Carbazole                                     | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 0.97 J                 | 1.0 U                  | --                     |
| Chrysene                                      | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.32                   | --                     | 3.3                    | 0.20 U                 | --                     |
| Dibenz(a,h)anthracene                         | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.61                   | 0.20 U                 | --                     |
| Dibenzofuran                                  | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 1.8 U                  | 1.0 U                  | --                     |
| Di-n-butylphthalate                           | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 0.73 J                 | 1.0 U                  | --                     |
| Fluoranthene                                  | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.74                   | --                     | 8.4                    | 0.20 U                 | --                     |
| Fluorene                                      | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.72                   | 0.20 U                 | --                     |
| Indeno(1,2,3-cd)pyrene                        | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 2.0                    | 0.20 U                 | --                     |
| Naphthalene                                   | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.36 U                 | 0.20 U                 | --                     |
| Phenanthrene                                  | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.59                   | --                     | 5.8                    | 0.20 U                 | --                     |
| Pyrene                                        | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.59                   | --                     | 6.3                    | 0.20 U                 | --                     |

DETECTED PARAMETERS IN GROUNDWATER  
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PONTIAC VALIDATION CENTER  
PONTIAC, MICHIGAN

| Sample Location:                        |       | MW-48-07               | MW-63-08               | MW-64-08               | MW-68-08               | TMW71-08               | MW-74-08               | MW-78-08               | TMW-81-08              |
|-----------------------------------------|-------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID:                              |       | GW-17322-040808-CB-007 | GW-17322-040708-CB-002 | GW-17322-040708-CB-001 | GW-17322-040708-CB-005 | WG-17322-031008-MC-002 | GW-17322-040708-CB-004 | GW-17322-040708-CB-003 | WG-17322-031008-MC-001 |
| Sample Date:                            |       | 04/08/2008             | 04/07/2008             | 04/07/2008             | 04/07/2008             | 03/10/2008             | 04/07/2008             | 04/07/2008             | 03/10/2008             |
| Sample Type:                            |       | Duplicate              |                        |                        |                        |                        |                        |                        |                        |
| Parameter:                              | Units |                        |                        |                        |                        |                        |                        |                        |                        |
| <b>Metals</b>                           |       |                        |                        |                        |                        |                        |                        |                        |                        |
| Aluminum                                | ug/L  | 26.2 J                 | 172                    | 157                    | 467                    | --                     | 459                    | 92.8                   | --                     |
| Antimony                                | ug/L  | 2.0 U                  | 0.17 J                 | 0.78 J                 | 0.30 J                 | --                     | 0.51 J                 | 0.39 J                 | --                     |
| Arsenic                                 | ug/L  | 5.0 U                  | 5.0 U                  | 5.0 U                  | 5.0 U                  | --                     | 5.0 U                  | 5.0 U                  | --                     |
| Barium                                  | ug/L  | 293                    | 111                    | 46.7 J                 | 23.4 J                 | --                     | 90.8 J                 | 43.5 J                 | --                     |
| Beryllium                               | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     |
| Cadmium                                 | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     |
| Calcium                                 | ug/L  | 142000                 | 141000                 | 73200                  | 73200                  | --                     | 118000                 | 164000                 | --                     |
| Chromium III (Trivalent)                | mg/L  | 0.0050 U               | 0.0050 U               | 0.0050 U               | 0.0050 U               | --                     | 0.0050 U               | 0.0050 U               | --                     |
| Chromium VI (Hexavalent)                | mg/L  | 0.01 U                 | 0.01 U                 | 0.01 U                 | 0.01 U                 | --                     | 0.01 U                 | 0.01 U                 | --                     |
| Chromium Total                          | ug/L  | 5.0 U                  | 5.0 U                  | 3.3 J                  | 2.4 J                  | --                     | 2.4 J                  | 5.0 U                  | --                     |
| Cobalt                                  | ug/L  | 7.0 U                  | 7.0 U                  | 7.0 U                  | 7.0 U                  | --                     | 13.3                   | 7.0 U                  | --                     |
| Copper                                  | ug/L  | 2.0 U                  | 2.0 U                  | 2.3 U                  | 2.0 U                  | --                     | 4.1                    | 2.0 U                  | --                     |
| Iron                                    | ug/L  | 7880                   | 539                    | 1080                   | 711                    | --                     | 1250                   | 166                    | --                     |
| Lead                                    | ug/L  | 3.0 U                  | 22.5                   | 3.0 U                  | 3.0 U                  | --                     | 3.0 U                  | 2.5 J                  | --                     |
| Magnesium                               | ug/L  | 33000                  | 32100                  | 24500                  | 19200                  | --                     | 29800                  | 56400                  | --                     |
| Manganese                               | ug/L  | 323                    | 595                    | 91.7                   | 23.1                   | --                     | 475                    | 238                    | --                     |
| Mercury                                 | ug/L  | 0.20 U                 | 0.20 U                 | 0.12 J                 | 0.20 U                 | --                     | 0.20 U                 | 0.12 J                 | --                     |
| Nickel                                  | ug/L  | 20.0 U                 | 20.0 U                 | 20.0 U                 | 20.0 U                 | --                     | 8.6 J                  | 20.0 U                 | --                     |
| Potassium                               | ug/L  | 6700 J                 | 4550 J                 | 5320 J                 | 2340 J                 | --                     | 5990 J                 | 22800 J                | --                     |
| Selenium                                | ug/L  | 5.0 U                  | 5.0 U                  | 5.4                    | 3.5 J                  | --                     | 5.0 U                  | 5.0 U                  | --                     |
| Silver                                  | ug/L  | 0.20 U                 | 0.20 U                 | 0.20 U                 | 0.20 U                 | --                     | 0.20 U                 | 0.20 U                 | --                     |
| Sodium                                  | ug/L  | 716000                 | 365000                 | 165000                 | 123000                 | --                     | 593000                 | 44400                  | --                     |
| Thallium                                | ug/L  | 1.0 U                  | 1.0 U                  | 1.0 U                  | 1.0 U                  | --                     | 1.0 U                  | 1.0 U                  | --                     |
| Vanadium                                | ug/L  | 4.0 U                  | 4.0 U                  | 2.1 J                  | 1.0 J                  | --                     | 4.0 U                  | 4.0 U                  | --                     |
| Zinc                                    | ug/L  | 20.0 U                 | 7.2 J                  | 20.0 U                 | 20.0 U                 | --                     | 31.4                   | 20.0 U                 | --                     |
| <b>Polychlorinated Biphenyls (PCBs)</b> |       |                        |                        |                        |                        |                        |                        |                        |                        |
| Aroclor-1248 (PCB-1248)                 | ug/L  | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | --                     |
| Aroclor-1254 (PCB-1254)                 | ug/L  | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | --                     |
| Aroclor-1260 (PCB-1260)                 | ug/L  | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | --                     |
| Total PCBs                              | ug/L  | 0.10 U                 | 0.10 U                 | 0.10 U                 | 0.10 U                 | --                     | 0.10 U                 | 0.10 U                 | --                     |
| <b>General Chemistry</b>                |       |                        |                        |                        |                        |                        |                        |                        |                        |
| Cyanide (amenable)                      | mg/L  | 0.0050 U               | 0.020                  | 0.0050 U               | 0.0050 U               | --                     | 0.014                  | 0.0050 U               | --                     |

Notes:  
U Not present at or above the associated value.  
J Estimated concentration.  
UJ Estimated reporting limit.  
MW Monitoring well.  
mg/L Milligrams per liter.  
ug/L Micrograms per liter.