

Delphi Corporation

## Field Investigation Report West Lockport Complex, Lockport, NY

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## **1.0 INTRODUCTION**

### **1.1 INTRODUCTION**

This report presents the findings of the Phase II Field Investigation (FI) conducted by Environmental Resources Management (ERM) at the Delphi Corporation (Delphi) West Lockport Complex located at 200 Upper Mountain Road located in the Town and City of Lockport, Niagara County, New York (the Site). Figure 1 presents a map showing the location of the Site. Figure 2 presents a map showing general site layout and the locations of selected features.

The purpose of this Field Investigation Report (FIR) is to describe the field investigation activities and present sampling results pertaining to the Areas of Interest (AOIs) previously identified in the Current Conditions Summary (CCS) report dated October 2006. The objective of the FI was to assess soil and ground water conditions in each AOI and to assess the presence of affected media. A summary of the AOIs and selected analytical parameters are presented in Table 1. ERM performed several site visits and a review of Delphi's environmental files in July, August, and September 2006. ERM prepared a CCS report based on the findings of the file review and site visit. The CCS identified AOIs where evidence of past treatment, storage or disposal (or release) of hazardous waste or hazardous constituents, hazardous substances or petroleum products is known or probable to have occurred.

The scope of the soil investigation included soil borings, sampling of the surface soil, ground water sampling, and sediment sampling of the Gulf creek. ERM completed a total of 144 soil borings (91 interior borings and 53 exterior borings), collected nine creek sediment samples and four surface soil samples (Figures 3 through 6). The scope of the ground water investigation included the installation, development, and sampling of five bedrock monitoring wells (Figure 7). One overburden monitoring well was installed in the vicinity of the waste water treatment plant (WWTP), but was not sampled due to lack of water. ERM also collected ground water samples from four of the existing monitoring wells at the Site.

### **1.2 HISTORIC INVESTIGATION ACTIVITIES**

Prior to the FI performed by ERM, several previous investigations and studies have been conducted at the Site. Subsequent paragraphs of this

section summarize some of the previous investigation activities performed by others at the Site.

Former Tank Farm Ground Water Investigation (Malcolm Pirnie, 1998)

The scope of work performed by Malcolm Pirnie included the following main components:

- installation of four ground water monitoring wells and sampling of three in the area of the former tank farm between Buildings 7 and 10;
- installation of one observation well between two underground fuel oil storage tanks located adjacent to Building 9; and
- laboratory analyses of ground water samples for volatile organic compounds (VOCs) and selected metals.

VOCs and metals were detected in ground water at concentrations above Class "GA" Ground Water Quality Standards. Manganese was detected above the Class "GA" Standard in all three wells. Acetone was detected at 580 mg/l in one of the wells. There was no Class "GA" Standard for Acetone in 1988. Trans-1, 2-dichloroethene, vinyl chloride, tetrachloroethene, and trichloroethene were detected at concentrations above the Class "GA" Standards for these compounds.

Soil Vapor Study Building 7 (Empire Soils Investigations, Inc., 1992)

In 1992, Empire Soils Investigations, Inc. (Empire) performed a soil vapor study in the area of a former degreaser in Building 7 at the Site. The scope of work performed by Empire included the following components:

- installation of seven soil vapor measuring points through the existing concrete floor in an area of a former degreaser in Building 7; and
- soil vapor measurements were collected using a photoionization detector (PID) equipped with a 10.2 electron volt (eV) light source.

Soil vapor measurements ranged from 2 parts per million (ppm) to 500 ppm in the seven soil vapor measuring points.

Focused Remedial Investigation and Focused Feasibility Study Work Plan, Delphi Harrison Thermal Systems, West Lockport Complex, Lockport, New York, NYSDEC Registry Site #932113 and Supplemental Groundwater Sampling Data Report (GZA GeoEnvironmental of New York, April 2001 and October 2001)

Soil and groundwater sampling has been performed by GZA since 1995 to evaluate the extent of constituents resulting from a historic release of trichloroethene (TCE) in the area east of the southeast corner of Building 8. A 1,200-foot long area of affected ground water was investigated as a part of a focused remedial investigation feasibility study (RI/FS). In March of 2005, the NYSDEC issued a Record of Decision (ROD) presenting a selected remedy for the release of TCE from the former AST near Building 8 resulting in contamination of upper bedrock ground water. The ROD specifies monitored natural attenuation (MNA) as the selected remedy based on the RI/FS results (NYSDEC, 2005).

Affected soil was identified in 1994 adjacent to a decommissioned above-ground storage tank (AST) that was used to store TCE. Affected soil was removed in 1994, and subsequent investigations suggested that residual affected soil is not extensive.

The ratio of TCE to its breakdown products (cis-1, 2-DCE and vinyl chloride) decreases downgradient, suggesting that natural attenuation and biodegradation of the contaminants is occurring.

*CBS Tank Closure (letter NYSDEC from Delphi, 9 May 2001)*

Tin (up to 1,200mg/kg) and zinc (to 19,800 mg/kg) was detected in soil beneath the floor in and around the Acid Flux Room located in the south end of Building 7. The metals were identified as being associated with historic releases from eight former sumps located between building columns BB-3 and EE-3. The sumps were used for storage of liquid flux (a chemical material used for metal joining operations).

Affected soil was identified beneath the building floor in an area of approximately 40 to 60-feet surrounding the former sumps. The top of bedrock in the area of the release is approximately 12-feet below the floor. Affected soil was found to extend to the top of bedrock at locations adjacent to the former sumps. NYSDEC made a no further action (NFA) determination in a letter date November 2000.

*Annual Groundwater Sampling, Petroleum Storage Tanks (letter from GZA GeoEnvironmental to Delphi)*

GZA annually samples six sentinel wells (TK-1 through TK-6), wells that surround the two 1.25-million gallon ASTs for No. 2 fuel oil located west

of Building 16 (tanks 16-37 and 16 -38). Samples were analyzed for polynuclear aromatic hydrocarbons (PAHs) by United States Environmental Protection Agency (USEPA) method 8270. PAHs have not been detected in sample rounds. Groundwater elevations ranged from 623 to 617-feet above mean sea level. Shallow ground water flow in the area was toward the southeast.

PCB Cleanup Activity Report (Delphi Harrison Thermal Systems, 12 November 1998)

During a 1998 construction project, PCB residual affected soil resulted during the short-term staging of PCB waste material in a debris staging area. The PCB affected material and debris was derived from the demolition of a former underground oil-handling-sewer manhole in the northeast part of Building 7. The manhole was associated with an abandoned underground oil-recovery sewer. The sewer led from a metal machining operation through the manhole to the waste-oil storage pad located north of the northeast corner of Building 7. Oil was present in this manhole, and demolition of the manhole resulted in the release of PCB oils to surrounding debris and soil.

Oil removed from the manhole was discharged to an oil-water separator located at the used oil storage pad and connected to the process wastewater sewer system. The matter was reported by Delphi to NYSDEC (Spill #9803091) and the National Response Center. Approximately 50-tons of PCB affected soil was excavated from the C&D staging area and was properly disposed of offsite at a licensed disposal facility. Confirmation sampling indicated that residual PCB levels were below applicable cleanup standards. The excavation at the manhole was completed as approved by NYSDEC. NYSDEC's spill file for this case was subsequently closed.

Closure Certification Report for Hazardous Waste Piles (Snyder Engineering, September, 1990)

Unlined drying beds used in the 1970s and 1980s for drying wastewater-treatment sludge were located in five areas on the west side of the facility. The sludge placed in these drying beds, which were also referred to as waste piles, contained metal hydroxides (primarily zinc, copper, lead and tin) and calcium fluoride. The waste piles were the subject of the site's previous listing as site #932017 on the state registry of inactive hazardous waste sites.

Closure was conducted under a consent order with NYSDEC. In 1990, residual liquid was removed followed by the removal of approximately 91,000-tons of waste sludge and 44,000-tons of contaminated soil. Soil sampling activities included analysis for a broad range of potential hazardous waste constituents, and results reportedly indicated that soil contaminants were limited to copper, lead and zinc. The closure report states that final rounds of confirmation sampling indicated that metals concentrations were below acceptable concentrations.

The closure certification report references a 9 April 1990 letter from NYSDEC confirming that the closure of the former waste piles had been completed in accordance with the approved closure plan and applicable regulations. The closure report acknowledged that additional ground water monitoring was needed to determine whether post-closure care was required.

The former waste piles were removed from the state registry in 1996. Official notification that the site had been deleted from the registry was provided to Delphi in a letter from NYSDEC dated 14 November 1996. Associated groundwater monitoring wells have been removed.

*Building 7, Investigation of Loading Dock 7W4 (GZA, Inc.)*

In January 2005, Delphi collected soil samples in the vicinity of the loading dock (7W4). Analytical results revealed an exceedance of a TAGM 4046 standard for PCE at three sample locations; Sample 2 (1.5 ppm), Sample 3 (25 ppm) and Sample 4 (450 ppm) and TCE at one location, Sample 4 (1.1 ppm). These samples were collected from a depth of approximately 16-inches bgs.

In June 2005, GZA was retained by Delphi, to assess for the presence and extent of solvents along the western side of Building 7 in the vicinity of Loading Dock 7W4. The work included the completion of soil sampling at 12 locations, headspace screening of soil samples taken from the macrocore sampler and analysis of twelve subsurface soil samples. The results of the sampling event include:

- PCE was detected in 5 of the 12 soil samples sent for analysis at a concentration above method detection limits. PCE was detected at 7W4-A 8 to 9-foot bgs (0.6 ppm), 7W4-B, 6 to 7.9-foot bgs (0.2 ppm), 7W4-C, 8 to 8.8 feet bgs (0.8 ppm), 7W4-D, 6 to 8-foot bgs (1.1 ppm) and

7W4-F, 8 to 8.5-feet bgs (0.5 ppm). These detections of PCE did not exceed its TAGM 4046 RSCO of 1.4 ppm. No other compounds of concerns were detected above method detection limits in samples sent for analysis.

Based on field observations, field screening and subsurface soil analytical data obtained, GZA concluded:

- PCE was detected at 5 of the 12 sampling locations along the western side of Building 7;
- The detections of PCE in the five samples did not exceed the TAGM 4046 RSCO for PCE of 1.4 ppm;
- The soil locations where PCE was identified 7W4-A, -B, -C, -D and -F as part of GZA's June 2005 work and the samples collected by Delphi in January 2005 have either a concrete or asphalt surface cover;
- The PCE identified in soils at the 7W4 loading dock appeared to be from a surface or near surface release and has impacted a relatively small area;
- No additional work was recommended for Spill No. 0485413.

In a letter dated July 27, 2005, from NYSDEC, the spill was assigned an "inactive status."

## 2.0 *BACKGROUND*

The following background information was adapted from previous environmental assessment due diligence and other documentation obtained by ERM during the CCS.

### 2.1 *SITE LOCATION AND DESCRIPTION*

Delphi Corporation's West Lockport Complex is located at 200 Upper Mountain Road in the City and Town of Lockport, Niagara County, New York (Figure 1). Most of the developed area of the Delphi property is located on an annex to the City of Lockport. A portion of Building 6 and the wastewater treatment plant (WWTP) are located within the Town of Lockport. Lockport is located in the northwest portion of New York State approximately 13 miles south of Lake Ontario.

The Site occupies approximately 511-acres with approximately 3.2 million square feet of building space. Elevations at the Site range from 630 to 575-feet above mean sea level. The Site includes three manufacturing buildings (Buildings 7, 8, and 9), one warehouse/distribution center (Building 10) that housed some manufacturing operations in the past, four office and engineering buildings (Buildings 6, 7A, 8A, and 9A), several support buildings, and a wastewater treatment plant (WWTP).

### 2.2 *FACILITY HISTORY*

The Site was initially developed in 1937 by Harrison Radiator of Lockport on vacant agricultural land and orchards. The Site was developed as part of an expansion of Harrison's radiator manufacturing operation then located in downtown Lockport. In 1939, manufacturing operations began at the Site. Today, similar operations are still being performed at the Site. Harrison Radiator was later acquired by General Motors (GM) and in January 1999, GM transferred ownership to Delphi.

The first manufacturing building at the Site was the southwest quarter of Building 7. Building 7 was expanded in 1945 and 1952 to increase manufacturing capacity. As part of the 1952 expansion of Building 7 to the north, a building identified as the "Die Rack & Truck Repair Building" was removed to accommodate the expansion. The Repair Building was constructed some time after 1940. During the 1960s, construction and expansion of other buildings occurred. The WWTP was constructed in 1969 and began operation in 1970. The cogeneration (Co-Gen) plant

located in the western portion of the Site was built by others on vacant land previously acquired by GM and began operation in 1992.

The Site currently operates as Delphi Thermal Division of Delphi Corporation. Currently, Site operations include the manufacture and assembly of components for automotive heating and cooling systems (engine cooling systems and HVAC systems).

The EPA Generator ID Number for the Site is NYD002126852. The Site currently operates as a "Large Quantity Generator" of hazardous waste, generating more than 2,200 pounds per month. Presently, the hazardous waste streams generated at the Site include: metals from brazing activities, ignitable solvents and paints from the painting process, and petroleum distillates from vehicle testing operations.

The Facility purchases water from the City of Lockport, with backup supply occasionally provided by Niagara County. Sanitary sewage and process water at the Facility is discharged to the City of Lockport sewer and Publicly Owned Treatment Works system. Storm water at the Site is discharged under a state SPDES permit to the Gulf, a tributary to 18 Mile Creek.

## 2.3 *CLIMATE*

The City of Lockport is located in western New York and experiences a climate influenced by the Great Lakes resulting in a wide range of weather conditions throughout the year. Average temperatures in the winter range from 20°F to 30°F and from 70°F to 80°F in the summer. Lockport experiences on average 2 to 4-inches of precipitation per month throughout the year. During the winter, the City averages 18 to 24-inches of snowfall per month. Wind speeds in the area range from 9 miles per hour (mph) to 14-mph throughout the year.

## 2.4 *DEMOGRAPHICS*

As of the last census conducted in 2000, approximately 22, 279 people (10,660 males and 11,619 females) lived in the City of Lockport. The median resident age was 35.9 years; the median household income was \$35,222; and the median house value was \$69,900. The total number of people who live and work in Lockport is 3,344. The following industries account for the majority of employment in the City of Lockport:



- manufacturing jobs (21.1-percent);
- educational, health, and social services (20.5-percent); and
- retail trade (13.3-percent).

All above demographic information was obtained from [www.city-data.com](http://www.city-data.com).

## 2.5 *SURROUNDING LAND USE*

The property surrounding the Site includes agricultural fields and commercial properties to the southwest and west; an industrial park on the northwest; and private residences along Upper Mountain Road to the north and northeast. A rail line is located along the eastern section of the southern site boundary and Old Saunders Settlement Road is located on the south side of the rail line. A few small industrial properties and a small scrap yard are located on the south side of Old Saunders Settlement Road. An underground gas transmission pipeline transects the property adjacent to the southwest corner of the Site. Lockport Junction Road borders the westernmost portion of the Site. An industrial park is located adjacent to the west boundary west of Building 9.

## 2.6 *SURFACE WATER HYDROLOGY*

Surface water from the western side of the Site flows to an intermittent stream that begins as a ditch and flows east and then southeast to a storm water retention pond located at the south boundary (south of Building 10). This stream becomes a branch of the Gulf, a stream that drains most of the Site. After leaving the pond, the stream crosses under the railroad tracks along the south boundary and flows across the properties located south of Old Saunders Settlement Road. This stream converges with another stream branch and re-enters the site southeast of Building 7. The stream then flows northeast across the eastern end of the Site capturing runoff from the parking lots on the east side of Building 7. Upon crossing Upper Mountain Road, the stream descends down into the valley of the Gulf.

## 2.7 *REGIONAL GEOLOGIC SETTING*

The Site is located just south of the Lockport escarpment. The escarpment was formed by differential erosion of resistant dolostone bedrock and lithologic units.

The following regional surficial geologic information was obtained from the Soil Survey of Niagara County, New York (Higgins, et al; 1972). The Site is located in Niagara County which extends 18 miles from north to south and 30 miles from east to west and occupies a land area of 533 square miles. Niagara County is comprised of eleven soil associations “grouped according to the nature of the material in which the dominant soils formed” (Higgins, et al; 1972).

About 36-percent of Niagara County is dominated by soils formed in lake-laid clays and silts described as level to gently sloping, deep, somewhat poorly drained, and have moderately fine-textured or fine-textured subsoil. These soils are grouped into two associations: Rhinebeck-Ovid-Madalin association (15-percent) and the Odessa-Lakemont-Ovid association (21-percent).

Soils formed in glacial till are present in 33-percent of the county and are described as deep to moderately deep, well drained to very poorly drained, and have a medium-textured to fine-textured subsoil. These soils are grouped into three associations: Appleton-Hilton-Sun association (14-percent), Hilton-Ovid-Ontario association (15-percent), and Lockport-Ovid association (4-percent).

About 17-percent of the county contains soils formed in lake-laid silts and very fine sands described as nearly level to gently sloping, moderately well drained to very poorly drained, and have a medium-textured to fine-textured subsoil. These soils are grouped into two associations: Niagara-Collamer association (6-percent) and Canandaigua-Raynham-Rhinebeck association (11-percent).

Soils formed in lake-laid sands are present in 8-percent of the county and are described as deep, nearly level or gently sloping, moderately well drained and somewhat poorly drained, and have a medium-textured to coarse-textured subsoil. These soils are grouped into two associations: Minoa-Galen-Elnora association (4-percent) and Claverack-Cosad-Elnora association (4-percent).

About 6-percent of the county contains soils formed in gravelly glacial outwash or in beach and bar deposits. These soils are described as deep, excessively drained to poorly drained, and have a medium-textured to coarse-textured subsoil. These soils are grouped into two associations:

Howard-Arkport-Phelps association (2-percent) and Otisville-Altmar-Fredon-Stafford association (4-percent).

The bedrock geology in Niagara County consists primarily of Upper Ordovician Queenston Shale in the northern portion of the county. The southern portion of the county is dominated primarily by Upper Silurian Lockport Dolostone and Salina Group shale and dolostone (Rickard and Fisher, 1970).

## 2.8 *FACILITY GEOLOGIC SETTING*

Site geologic cross-sections based on soil boring information are presented in Figures 8a through 8h. The surficial geology at the site consists predominantly of brown to reddish brown silty clays and ranges in depth from 0 to 15-feet below grade surface (bgs). The silty-clays observed during the FI are typically consistent with soil mapped by others as Ovid Silt Loam (OvA) and were formed in calcareous glacial till that was modified by glacial lake sediment (Higgins, et al; 1972).

Lockport Dolostone bedrock underlies the Site and is exposed at locations on the property. The exposed dolostone contains irregular bedding and ranges in color from brownish gray (5YR 4/1) to light brownish gray (5YR 6/1). The thickness of this formation is approximately 40 to 45-feet and there is no sharp contact with the underlying Rochester Shale (NYSDEC, 2005).

## 2.9 *HYDROGEOLOGIC SETTING*

Based on ERM's FI and previous investigations, the primary water bearing zone is located within the upper Lockport Dolostone. Depth to ground water ranged from 2.1 to 10.0-feet bgs. Previous ground water investigations also indicate that ground water flow is generally to the east towards the Gulf.

The City of Lockport provides water supply service to the Site and potable water to the surrounding properties. Monitoring wells are present, but no water supply wells are located on the property. Several private domestic-water-supply wells are located on adjacent residential properties along Upper Mountain Road. H&A indicated in their Phase I Assessment dated 2001, that four of the water supply wells may be down gradient of the north end of the Site; however, these wells were identified by NYSDEC as

not being utilized. No public water supply wells were identified in the vicinity of the Site during H&A's Phase I Assessment.

## **2.10 CONCEPTUAL SITE MODEL FOR HUMAN AND ECOLOGICAL EXPOSURES**

Preliminary conceptual site models (CSMs) for the Site were prepared to identify human and ecological receptors that could be exposed to constituents of potential concern (COPCs) released during historical operations. These receptor exposures could take place as a result of contact with environmental media on-site at the Site, or as a result of environmental transport of COPCs off-site across the Site boundaries. Based on a review of available information, the preliminary CSMs identify generic types of exposure pathways and receptors typically found at sites with contaminants and media of concern similar to those present at the Delphi Site. If a formal risk assessment were to be performed, all relevant site-specific potential exposure pathways and receptors would be verified prior to characterizing potential risks.

The CSMs consider current and hypothetical future land uses for the Facility, as described below:

- *Current Land Uses:* Currently, the Facility is used for on-going industrial operations by Delphi. Properties surrounding the Facility have been developed for mixed purposes, and include residential, commercial/industrial, and recreational land uses.
- *Future Land Uses:* Hypothetical development of the Facility could include residential or commercial/industrial properties. In addition, a portion of the property will continue to be used by Delphi for their industrial operations.

The following subsections describe human and ecological receptor populations and the exposure pathways by which these receptors may be exposed to COPCs under current and future uses.

### **2.10.1 Receptor Populations Exposed to COPCs**

Human and ecological receptors are discussed separately below. A diagram of the human health conceptual site model is provided in Figure 9.

### 2.10.2 *Human Health Receptors*

The following human receptor populations have been identified for the Facility (Figure 9):

- Industrial workers (adult populations only);
- Construction workers (adult populations);
- Facility visitors (adult populations);
- Adolescent trespassers (teenage populations);
- Hypothetical on-site residents (adults and children); and
- Off-site residents (adults and children).

It should be noted that ground water is not currently used for potable purposes either on-site or off-site, and is not expected to be used for potable purposes in the future even under a hypothetical residential scenario. Therefore, direct contact with and ingestion of ground water are not considered complete exposure routes for any potential human receptor population. If off-site discharge of ground water to surface water is a potentially complete exposure pathway, the off-site residential scenario should evaluate incidental surface water and sediment exposures, as described below.

In addition, while the majority of the Facility is covered by buildings, pavement, or landscaped/ruderal grass, the potential for exposure to fugitive dust (particulates) from wind-blown soil is a standard exposure route typically evaluated in a risk assessment.

Exposure routes for each of the potential human receptor populations will be discussed individually below.

### 2.10.3 *Human Health Exposure Pathways*

A complete exposure pathway requires four elements as illustrated in Figure 9.

Typical exposure routes considered for adult **on-site industrial or construction workers** include:

- incidental ingestion of soil;
- incidental dermal contact with soil;
- inhalation of fugitive dust (particulates) from wind-blown soil; and
- inhalation of volatile organic chemicals (VOCs) released from soil or ground water into indoor and outdoor (ambient) air.

No direct contact with ground water, surface water, or sediment is expected to occur.

Typical exposure routes considered for **Facility visitors** are the same as for the on-site industrial or construction workers, and include:

- incidental ingestion of soil;
- incidental dermal contact with soil;
- inhalation of fugitive dust (particulates) from wind-blown soil; and
- inhalation of volatile organic chemicals (VOCs) released from soil or ground water into indoor and outdoor (ambient) air.

No direct contact with ground water, surface water, or sediment is expected to occur. However, because Facility visitors have limited access to the site, their exposure will likely be considerably less intense and less frequent than hypothetical on-site residential and commercial/industrial worker populations.

Similar to the Facility visitors, **adolescent trespassers** at the Facility may occasionally be exposed to COPCs, and their exposure will likely be considerably less intense and less frequent than hypothetical on-site residential and commercial/industrial worker populations. Adolescent trespassers are typically considered potential human receptors even at locations where security is present, unless the site boundaries are completely fenced and monitored. Typical exposure routes considered for adolescent trespassers include:

- incidental ingestion of soil;
- incidental dermal contact with soil;

- inhalation of fugitive dust (particulates) from wind-blown soil; and
- inhalation of VOCs released from soil or ground water into outdoor (ambient) air.

No direct contact with ground water is expected; however, potential contact with on-site surface water, or sediment may occur (incidental ingestion, dermal contact, and inhalation of vapors).

Typical exposure routes to COPCs by **hypothetical on-site residents** would include:

- incidental ingestion of soil, surface water and sediment;
- dermal contact with soil, surface water and sediment;
- inhalation of fugitive dust (particulates) from wind-blown soil; and
- inhalation of VOCs released from soil, surface water or ground water into indoor and outdoor (ambient) air.

Exposure to COPCs by **off-site residents** is limited to the potential for ground water migration, where impacted ground water may potentially discharge to a surface water feature such as a stream or wetland, or where ground water may be captured by a water well. In this case, potential human receptors are evaluated under a wading scenario for shallow water stream systems, or under a recreational swimming scenario for deeper water bodies.

Evaluation of receptor populations in a formal risk assessment will incorporate measures of potential exposure frequency and exposure duration in order to provide conservative estimates of the risks associated with COPCs at the Site.

#### **2.10.4**      *Ecological Receptors*

A diagram of the ecological conceptual site model is provided in Figure 10. Based upon a review of the Site ecological features, there is a lack of significant terrestrial habitat for wildlife and plant species at the Site. The majority of the Site is covered by buildings, pavement, or landscaped/ruderal grass. The principal habitat type for ecological receptors is a small tributary stream which flows across the Site and off-

site into the “Gulf”, which is a naturally-occurring valley with tall, steep slopes. The tributary stream in the Gulf eventually discharges to the 18-Mile Creek. Habitats off-site in the area of the Gulf would include both aquatic and terrestrial ecosystems. For example, the onsite tributary stream discharges to an area of significant terrestrial and aquatic habitats downgradient of the site, in an area called the Guld Wilderness Park.

The discussion below focuses on those receptors that would serve as candidates for evaluation as assessment endpoints in an ecological risk assessment. For purposes of the ecological conceptual site model, species were grouped into broad taxonomic and trophic groupings, based on similar habitat, foraging and nesting preferences, as follows:

- Plants occurring in both wetland and terrestrial habitats, including shrubs, trees, annual grasses, and forbs;
- Invertebrates, including aquatic macroinvertebrates, soil invertebrates, and herbivorous insects;
- Avian wildlife, including raptors; waterbirds; songbirds; and quail and relatives (e.g., ring-necked pheasant, wild turkey);
- Mammalian wildlife, including large herbivores (e.g., deer); carnivores (e.g., skunk, fox); bats; terrestrial small mammals (e.g., squirrels, mice, rabbits); and aquatic mammals (e.g., muskrat, mink);
- Reptiles, including snakes and turtles;
- Amphibians, including frogs, toads and salamanders; and
- Fish.

### **2.10.5** *Ecological Exposure Pathways*

As shown in Figure 10, the conceptual site model illustrates potential exposure pathways for ecological receptors. Ecological receptors are potentially exposed to COPCs through inhalation, contact and absorption, ingestion of drinking water and dietary sources, and incidental ingestion of soil, surface water and sediment. It is important to note that not all potentially ecologically relevant exposure pathways are subject to quantification using predictive methods in an ecological risk assessment (ERA). This is because of the lack of toxicity reference values and/or exposure parameters needed to quantitatively address particular exposure



routes (e.g., dermal exposure, inhalation) and species (e.g., reptiles). However, certain of these exposure pathways can be evaluated qualitatively in a screening-level ERA, and if necessary, more detailed Site-specific investigations may be conducted to address uncertainties in a baseline ERA phase.

The primary exposure routes subject to predictive evaluation are ingestion of food items and drinking water by avian and mammalian wildlife, along with their associated incidental ingestion of soil or sediment. The extent of food chain exposure depends on the placement of each receptor within the food web, whether aquatic or terrestrial. Terrestrial habitat is limited at the Site, therefore, terrestrial species expected to be present on-site would be limited to species common in urbanized settings including small mammals (e.g., rodents), and transient birds. The on-site tributary stream provides habitat that would be expected to contain aquatic plant, invertebrate and small lower trophic level fish species.

Aquatic transport via ground water and surface water flow is expected to be the main migration pathway from source areas to adjacent areas with the potential to affect ecological receptors. Surface water could transport COPCs as a result of erosion and surface runoff, or transport of COPCs in the water column either bound to suspended sediments or in dissolved form.

### 3.0 *INVESTIGATION OVERVIEW*

#### 3.1 *SOIL INVESTIGATION PROCEDURES*

ERM conducted soil investigation in the Fall of 2006. The scope of the soil investigation included installation of soil borings throughout the Site and the collection of surface soil and sediment of the Gulf creek. All soil sampling activities were conducted in conformance with ERMs Quality Assurance Project Plan (QAPP). A total of 144 soil borings (91 interior borings and 53 exterior borings) were completed in October 2006 to evaluate soil conditions at the previously identified 50 AOIs (Figures 3 through 6). The 144 soil borings consisted of:

- 11 borings at Building 6;
- 57 borings at Building 7;
- 41 borings at Building 8;
- 14 borings at Building 9;
- 8 borings at Building 10;
- 2 borings at Building 15;
- 3 borings at Building 18; and
- 8 borings at miscellaneous areas around the Site.

An example of the sampling and boring nomenclature used during the FI is "9-108-C". The "9" designates the Building Number, the "108" designates the AOI sample identification, and the "C" designates the boring identification.

All soil borings were advanced by ERM's drilling subcontractor, TREC Environmental Inc. (TREC), of Spencerport, New York, who utilized both track and truck mounted Geoproses® rigs. In addition, groundwater monitoring wells were installed by Nothnagle Inc., of Rochester, New York who utilized both hollow-stem auger and an air rotary rig.

TREC filed a request through Dig Safely New York for subsurface utility clearance of member companies. All boring locations were cleared by Delphi's senior facility engineer, Mr. Fred Bauer, prior to drilling at each location (in accordance with Delphi Corporate policy). For approximately 12 locations, ERM subcontracted New York Leak Detection, Inc. (NYLD), of Jamesville, New York, a private utility locator, to clear the boring locations prior to drilling. NYLD utilized Ground Penetrating Radar

(GPR) at 250 mhz for depths zero to 30-feet bgs, 500 mhz for zero to six feet bgs, and 1000 mhz for zero to 24-inches bgs.

Soil borings were advanced using direct push or hollow-stem auger drilling technologies. Soil samples were collected using a macro-core sampler or steel split spoons. All recovered soil samples were screened for headspace VOCs in with a calibrated Photo Ionization Detector (PID) with an 11.7 eV UV lamp. A Flame Ionization Detector (FID) was used to continuously monitor VOC concentrations in the breathing zone during boring activities. Soil samples were collected for analysis from the depth interval of highest PID readings at each soil boring location. Subsequent to field screening, soil samples were described by an ERM geologist for color, texture, structure, competence, odor, and moisture content. Soil borings were terminated at refusal. Copies of ERM soil boring logs are included in Appendix A.

### **3.2 *SEDIMENT AND SURFACE SOIL INVESTIGATION PROCEDURES***

ERM collected four surface soil samples and nine creek sediment samples from the Gulf (Figures 6). A hand auger was used to collect all creek sediment and surface soil samples. Recovered soil samples were screened for headspace VOCs with a calibrated PID with an 11.7 eV UV lamp. Subsequent to field screening, soil samples were described by an ERM geologist for color, texture, structure, competence, odor, and moisture content.

### **3.3 *GROUND WATER INVESTIGATION PROCEDURES***

Monitoring wells were installed at six boring locations (7-A-6, 7-C-2, 7-P-1, 8-003-B, 9-101-A, and 88-WWTP-115). Five monitoring wells were extended into shallow bedrock and one was completed in overburden at the WWTP. Ground water sampling activities were conducted in conformance with ERMs QAPP. The five bedrock wells were completed at depths ranging from 12 to 24-feet bgs. The overburden well at the WWTP was completed at 5.5-feet bgs (top of bedrock). Monitoring well locations are presented on Figure 7. Copies of the monitoring well construction logs are included in Appendix B.

Monitoring wells were constructed with 2-inch inside diameter, threaded flush joint, Schedule 40 PVC casing and 0.010-inch factory slotted screens. A washed-sand was used to install a sand filter pack around the screened

interval. The sand filter pack was installed to a height of 1 to 2-feet above the top of each well screen. During the installation of the sand pack, the sand was tamped down using a weighted tape measure to minimize the potential for bridging, and to ensure the proper placement and thickness of the sand. During this time, the augers were slowly removed. A 1-foot thick seal of pre-hydrated bentonite chips was used to install a seal above each sand filter pack. Once the bentonite seal is in place, the remaining annular space was backfilled with cement-bentonite grout. Grout was added as required so the top of the grout settled at an elevation approximately one foot below ground surface. Monitoring Well Construction Logs are presented in Appendix B.

Monitoring wells were developed using a disposable polyethylene bailer and peristaltic pump prior to sampling. Turbidity readings were recorded during developing activities using a Lamotte 2020e Turbidity Meter. Each of the monitoring wells were bailed utilizing a new bailers and bailer cord at each well during well development. Monitoring wells were allowed to equilibrate for approximately one week prior to purging and sampling.

ERM performed a round of ground water sampling including the sampling of four existing wells at the Site on 8 November 2006 and 14 November 2006. Three volumes of water were purged from each of the wells prior to sampling. ERM recorded field data including temperature, pH, conductivity, dissolved oxygen (DO), and oxygen reduction potential (ORP) using a YSI 556 with flow cell prior to collecting ground water samples from each monitoring well. The overburden well at the WWTP was not sampled due to lack of water. A summary of ground water development parameters are presented in Table 2. Copies of the ground water sampling records are included in Appendix C.

### **3.4** *LABORATORY PROCEDURES*

In conformance with ERMs QAPP, all samples were placed in a thermally insulated container and chilled. At the end of each field day, the samples were transported under proper chain of custody procedures via a laboratory courier to Severn Trent Laboratories (STL) in Amherst, New York for analysis. STL is a New York State Department Of Health (NYSDOH)-approved environmental laboratory. One blind duplicate sample was collected per every 20 samples. Copies of laboratory analytical reports and chain of custodies are included in Appendix D.

## 4.0 INVESTIGATION RESULTS AND EVALUATION

### 4.1 SOIL INVESTIGATION RESULTS

Due to the volume of soil samples collected during the FI, the data were organized in a Microsoft Access database and screened according to concentrations exceeding Part 375 Soil Cleanup Objectives (SCOs) for Unrestricted Use (USCOs), Restricted Commercial Use (RCSCOs), and Restricted Industrial Use (RISCOs) (NYSDEC, 2006).

Interferences in several samples resulted in many reporting limits higher than the USCOs. In these cases it cannot be determined if a contaminant exceeds the screening criteria. A conservative way to treat these non-detect results is to consider it an exceedance if a contaminant was not detected above the reporting limit but the reporting limit was above the USCO.

Table 3, Summary of Exceedances in Soil, presents all results above the USCOs regardless of laboratory flag. Sample results with a "U" flag were not detected but the detection limit was above the USCO. For a complete set of analytical results refer to the laboratory analytical reports included in Appendix D.

Soil results exceeding screening criteria are also presented on Figures 12 through 17. For most figures the screening criteria are RCSCOs and RISCOs. However, on Figures 12A and 17A, USCOs are used. On the figures, ERM applied a factor of 25-percent above the unrestricted standard as screening criteria for non-detect results that have a reporting limit above the applicable SCO. That is, results flagged with a "U" are not shown on the figures unless they are at least 25% above the SCOs. As an aid for the reader, actual detections above screening criteria (without a "U" flag) are highlighted in yellow on the figures.

In the remainder of Section 4.1, only concentrations exceeding the USCOs that are *not* noted with a "U" flag will be discussed. Compounds exceeding the USCOs will be provided in a bulleted list, parameters exceeding the RCSCOs will be indicated by \*, and compounds detected above both the RCSCOs and RISCOs will be indicated by \*\*.

#### 4.1.1 Building 6

Building 6 consisted of four AOIs, two interior (3 and 4), one exterior (2), and one interior/exterior (1). AOI 1 evaluated the historic brine vault and associated drainage tile on the northwest corner of Building 6. AOI 2

evaluated the two former 20,000-gallon #2 fuel oil USTs removed in the mid-1980's from this area. The investigation at AOI 3 focused on the historical location of the former model shop PCE degreaser. AOI 4 evaluated the hydraulic lifts used without containment in Building 6. Boring 6-A-1 could not be completed in the brine vault due to the thickness of the concrete.

A total of 11 borings were completed at Building 6 (6 interior and 5 exterior). Building 6 interior and exterior boring locations and associated concentrations exceeding the Draft Part 375 RCSCOs and RISCOs are presented in Figure 12. Building 6 concentrations exceeding the Draft Part 375 USCOS are presented in Figure 12a.

At AOI 2, VOCs and SVOCs were detected at concentrations above USCOS in one boring (sample 6-B-1) for the following parameters:

- acetone;
- benzo(b)fluoranthene;
- benzo(a)pyrene\*\*;
- indeno(1,23-cd)pyrene;
- total cadmium\*; and
- total zinc.

At, AOI 3, VOCs were detected at concentrations above the USCOS in three borings (samples 6-C-1, 6-C-2, and 6-C-3) for the following parameters:

- 1,2-dichloroethane;
- acetone;
- methylene chloride;
- tetrachloroethene; and
- vinyl chloride (6-C-1 and 6-C-3).

#### **4.1.2 Building 7**

The results from Building 7 will be discussed in two sub-sections, the eastern and western areas. Building 7 interior and exterior boring locations and concentrations exceeding the Draft Part 375 RCSCOs and RISCOs are presented in Figure 13.

### *Eastern Portion of Building 7*

The eastern portion of Building 7 consists of five AOIs, three interior (12, 15, and 16), one exterior (10), and one interior/exterior (14). AOI 12 evaluated the soil conditions at the former degreaser locations. AOI 15 evaluated the Acid Flux Room and associated process at the south side of Building 7. AOI 16 focused on the historical presence of PCBs and employee observations in the area. AOI 10 evaluated the area of a former coal pile historically located on the northeast side of Building 7. The primary focus of AOI 14 was to evaluate soil conditions in the Used Oil Containment Area near the northeast corner of Building 7.

A total of 22 borings were completed in the eastern portion of Building 7 (15 interior and 7 exterior).

Approximately one-half of the interior borings had concentrations above USCOs. At AOI 10, VOCs, SVOCs, and metals were detected at concentrations above the USCOs for the following parameters:

- acetone (7-C-3);
- acenaphthene (7-C-3);
- benzo(a)anthracene (7-C-2\* and 7-C-3\*\*);
- benzo(b)fluoranthene (7-C-2\* and 7-C-3\*\*);
- benzo(k)fluoranthene (7-C-2 and 7-C-3);
- benzo(a)pyrene (7-C-2\*\* and 7-C-3\*\*);
- chrysene (7-C-2 and 7-C-3);
- dibenzo(a,h)anthracene (7-C-2\*\* and 7-C-3\*\*);
- fluoranthene (7-C-3);
- fluorene (7-C-3);
- naphthalene (7-C-3);
- phenanthrene (7-C-3);
- pyrene (7-C-3);
- total lead (7-C-3 and 7-C-2); and
- indeno(1,2,3-cd)pyrene (7-C-2 and 7-C-3\*).

At AOI 12, VOCs and PCBs were detected above USCOs for the following parameters:

- 1,2-dichloroethane (7-G-7-A);
- total 1,2-dichloroethene (7-G-8-C);

- acetone (7-G-7-A);
- tetrachloroethene (7-G-7-A, 7-G-8-A, 7-G-8-B\*\*, and 7-G-8-C\*\*);
- trichloroethene (7-G-8-B and 7-G-8-C); and
- vinyl chloride (7-G-7-A and 7-G-8-C).

At AOI 14, Aroclor 1248 was detected in 7-M-3 above all three soil cleanup objectives. SVOCs were detected in sample 7-M-2 above the USCOs for the following parameters:

- benzo(a)anthracene;
- benzo(b)fluoranthene;
- benzo(a)pyrene\*\*;
- chrysene; and
- indeno(1,2,3-cd)pyrene.

No concentrations exceeded USCOs in AOI 15.

At AOI 16, SVOCs and metals were detected above USCOs for the following parameters:

- benzo(a)anthracene (7-R-1 and 7-R-3);
- benzo(b)fluoranthene (7-R-1, 7-R-2, and 7-R-3\*\*);
- benzo(k)fluoranthene (7-R-1 and 7-R-3);
- benzo(a)pyrene (7-R-1\*\* and 7-R-3\*\*);
- chrysene (7-R-1 and 7-R-3);
- dibenzo(a,h)anthracene (7-R-1\* and 7-R-3\*\*);
- indeno(1,2,3-cd)pyrene (7-R-1, 7-R-2, and 7-R-3);
- total copper (7-R-3\*);
- total lead (7-R-3);
- total zinc (7-R-3); and
- PCBs (7-R-3).

### *Western Portion of Building 7*

The western portion of Building 7 consists of five AOIs, four interior (9, 17, 12, and 13) and one exterior (8). AOI 9 evaluates the limited use of hex-chrome for aluminium radiator chromate conversion coating in the west central portion of Building 7. The purpose of AOI 17 was to evaluate the historical presence of oil from the D-466 Presses in the train and truck docks in the northwest portion of Building 7. AOI 12 evaluates soil conditions at the former PCE and Trichloroethene (TCE) degreasers,



specifically the PCE spill at the D-400 degreaser. AOI 13 focuses on a former UST discovered during an audit in 1995 that was closed prior to 1982. On the west side of Building 7, AOI 8 evaluates the former tank farm area and the historical presence of chlorinated volatile organic compounds (CVOCs). A total of 35 borings were completed in the western portion of Building 7 (27 interior and 8 exterior).

For the interior AOIs, 13 borings have concentrations exceeding the USCOs. At AOI 8, VOCs and metals were detected above USCOs for the following parameters:

- acetone (7-A-5, 7-A-6, and 7-A-9);
- methylene chloride (7-A-5, 7-A-6, and 7-A-9);
- tetrachloroethene (7-A-5, 7-A-6, and 7-A-9);
- trichloroethene (7-A-5);
- vinyl chloride (7-A-7); and
- total mercury (7-A-7).

At AOI 9, metals were detected above the USCOs for the following parameters:

- hex chrome (7-B-1 and 7-B-2) and
- total zinc (7-B-1).

At AOI 12, VOCs and PCBs were detected above USCOs for the following parameters:

- 1,2-dichloroethane (7-G-3-C and 7-G-4);
- Total 1,2-dichloroethene (7-G-1-A and 7-G-3);
- acetone (7-G-1-A, 7-G-2-A, 7-G-3-A, 7-G-3-B, 7-G-3-C, 7-G-4-C, 7-G-4-D, 7-G-10-B, 7-G-11-B, and 7-G-11-C);
- ethylbenzene (7-G-11-C);
- methylene chloride (7-G-3-A, 7-G-3-B, 7-G-4-C, 7-G-11-B, and 7-G-11-C);
- tetrachloroethene (7-G-1-A, 7-G-3-B\*\*, 7-G-3-C, 7-G-4-C, , and 7-G-8-B);
- total xylenes (7-G-11-B and 7-G-11-C);
- trichloroethene (7-G-1-A, 7-G-3-A, 7-G-3-B, and 7-G-3-C);
- vinyl chloride (7-G-3-B); and
- Aroclor 1248 (7-G-4-C\*).

No parameters were detected above USCOs within AOI 13 and 17.

### 4.1.3

#### *Building 8*

Building 8 will be discussed in two sections, the northern and southern areas. Building 8 interior and exterior boring locations and concentrations exceeding the Draft Part 375 RCSCOs and RISCOs are presented in Figure 14.

#### *Northern Portion of Building 8*

The northern portion of Building 8 consists of four AOIs, three interior (18 and a portion of 22 (8-005-5 and 8-005-1 borings), and 23) and one exterior (19). AOI 18 evaluates the eight former chromium sump locations and the associated processes and repairs in the central portion of Building 8. The purpose of AOI 22 was to evaluate soil conditions at the former solvent degreaser locations in Building 8. The focus of AOI 23 was to assess the impact of historic press operations in the northeast corner of Building 8. AOI 19 evaluates the three USTs and underground paint dump associated with painting operations on the north/northwest side of Building 8.

A total of 18 borings were completed in the northern portion of Building 8 (15 interior and 3 exterior).

At AOI 18, metals were detected at concentrations exceeding the USCOs for the following parameters:

- total arsenic (8-001-G\*\*);
- hex chrome (8-001-D, 8-001-G, 8-001-J); and
- total lead (8-001-E and 8-001-J).

Concentrations were not detected above the USCOs in the exterior borings at AOI 19 of Building 10. At AOI 22, total zinc was detected at a concentration exceeding the USCOs in boring 8-005-1. In boring 8-005-5D of AOI 22, concentrations of VOCs were detected above the USCOs in for the following parameters:

- total 1,2-dichloroethene;
- acetone;
- methylene chloride; and
- trichloroethene.

At AOI 23, concentrations of VOCs and SVOCs were detected above the USCOs for the following parameters:

- acetone (8-006-E and 8-006-F);
- benzo(a)anthracene (8-006-C);
- benzo(b)fluoranthene (8-006-C and 8-006-F);
- benzo(k)fluoranthene (8-006-F);
- benzo(a)pyrene (8-006-F\*\*);
- chrysene (8-006-C); and
- indeno(1,2,3-cd)pyrene (8-006-F).

### *Southern Portion of Building 8*

The southern portion of Building 8 consists of five AOIs, two interior (a portion of 22) and three exterior (20, 21, and 24). The purpose of AOI 22 was to assess soil conditions at the former degreaser locations, more specifically the former D-868 and D-861 TCE degreasers. On the exterior southeast side of Building 8, AOI 20 evaluates the impact at the historical location of two former fuel oil USTs. Also on the southeast side of Building 8, AOI 21 evaluates the former 1,000-gallon gasoline UST location. The purpose of AOI 24 was to assess soil conditions near the southeast corner of Pump House #2.

A total of 23 borings were completed in the southern portion of Building 8 (17 interior and 6 exterior).

At AOI 21, concentrations of VOCs, SVOCs, and metals were detected above the USCOs for the following parameters:

- 1,2-dichloroethane (8-004-B);
- total 1,2-dichloroethene (8-004-C);
- acetone (8-004-C);
- benzene (8-004-C);
- methylene chloride (8-004-B and 8-004-C);
- toluene (8-004-C);
- total xylenes (8-004-C);
- trichloroethene (8-004-B and 8-004-C);
- vinyl chloride (8-004-B and 8-004-C);
- benzo(b)fluoranthene (8-004-B); and
- total mercury (8-004-B).

In AOI 22, concentrations of VOCs and SVOCs were detected above the USCOS for the following parameters:

- 1,2-dichloroethane (8-005-3A, 8-005-3B, 8-005-4A, and 8-005-4C);
- total 1,2-dichloroethene (8-005-2A, 8-005-2B, 8-005-3A, 8-005-3B, 8-005-3C, 8-005-4A, and 8-005-4C);
- acetone (8-005-2A, 8-005-2B, 8-005-3A, 8-005-3B, 8-005-3C, 8-005-4A, 8-005-4C, and 8-005-4E);
- methylene chloride (8-005-2A, 8-005-2B, 8-005-3A, 8-005-3B, 8-005-3C, 8-005-4A, 8-005-4C, and 8-005-4E);
- tetrachloroethene (8-005-2B);
- trichloroethene (8-005-2A, 8-005-2B, 8-005-3C\*\*, 8-005-4C, and 8-005-4E);
- vinyl chloride (8-005-3A, 8-005-3B, and 8-005-4C);
- benzo(a)anthracene (8-005-3C);
- benzo(b)fluoranthene (8-005-3C);
- benzo(k)fluoranthene (8-005-3C); and
- chrysene (8-005-3C).

No concentrations were detected above the USCOS in the two borings completed in AOI 24.

#### **4.1.4 Building 9**

Building 9 consists of four AOIs, one interior (31), two exterior (29 and 30), and one interior/exterior (32). AOI 31 evaluates a historical spill at column 93 and the sump beneath the oil tanks at the loading docks along the southwest corner of Building 9. The purpose of AOI 29 is to evaluate the condition of the soil in the area of the former 2,000-gallon gasoline UST along the southeast exterior of Building 9. AOI 30 focuses on the former location of two 20,000-gallon #2 fuel oil USTs along the southwest exterior of Building 9. In the southern portion of Building 9, AOI 32 evaluates a historic oil leak from a non-treated sewer discovered in 1994.

A total of 14 borings were completed at Building 9 (seven interior and seven exterior). Building 9 interior and exterior boring locations and concentrations exceeding the Draft Part 375 RCSCOs and RISCOs are presented in Figure 15.

At AOI 29, VOCs were detected in boring 9-100-A at concentrations exceeding the USCOS for the following parameters:

- 1,2-dichloroethane;
- acetone;
- ethylbenzene;
- methylene chloride;
- total xylenes; and
- vinyl chloride.

Concentrations of VOCs, SVOCs, and metals at AOI 31 exceed the USCOs for the following parameters:

- acetone (9-102-D and 9-102-E);
- benzo(a)anthracene (9-102-C\*\*);
- benzo(a)pyrene (9-102-C\*\*);
- benzo(b)fluoranthene (9-102-C\*\*);
- benzo(k)fluoranthene (9-102-C);
- chrysene (9-102-C);
- dibenzo(a,h)anthracene (9-102-C\*\*);
- indeno(1,2,3-cd)pyrene (9-102-C\*);
- lead (9-102-A); and
- zinc (9-102-A).

At AOI 32, SVOCs were detected in boring 9-108-C at concentrations exceeding the USCOs for the following parameters:

- benzo(a)anthracene;
- benzo(a)pyrene\*\*;
- benzo(b)fluoranthene;
- chrysene; and
- indeno(1,2,3-cd)pyrene.

#### 4.1.5 *Building 10*

Building 10 consists of five AOIs, two interior (36 and 37) and three exterior (33, 34, and 35). AOI 36 evaluates historic painting operations in the western portion of Building 10. The purpose of AOI 37 was to evaluate current soil conditions at the former excavation area of an indoor sump near column WK45 where naphthalene and PCE were encountered. AOI 33 focuses on the former location of a 1,000-gallon gasoline UST (10-25) along the northwest exterior of Building 10. AOI 34 evaluates the historical location of a former 2,000-gallon gasoline UST (10-1) along the

southwest exterior of Building 10. AOI 35 was incorporated into the FI to evaluate soil conditions near the salvage equipment storage area near the west central portion of Building 10.

A total of eight soil borings were completed (5 exterior and 3 interior) and one surface soil sample was collected at AOI 35. Building 10 interior and exterior boring locations and concentrations exceeding the Draft Part 375 RCSCOs and RISCOs are presented in Figure 16.

The concentration of zinc in boring 10-106 of AOI 36 exceeds the USCOs. At AOI 37, concentrations of VOCs and SVOCs exceed the USCOs for the following parameters:

- acetone (10-107-A);
- methylene chloride (10-107-A and 10-107-B); and
- tetrachloroethene (10-107-A\* and 10-107-B\*).

Concentrations of VOCs and metals at AOI 33 exceed the USCOs for the following parameters:

- acetone (10-103-A and 10-103-B);
- benzene (10-103-B);
- methylene chloride (10-103-A and 10-103-B);
- total xylenes (10-103-A and 10-103-B); and
- zinc (10-103-B).

Due to shallow refusal, boring 10-104-A of AOI 34 was relocated and re-drilled to 9-foot bgs and renamed boring "10-104-AR."

The concentration of zinc in boring 10-104-AR exceeds the USCOs. At boring 10-105 of AOI 35, concentrations of the following metals and PCBs were detected above the USCOs:

- total cadmium\*;
- total copper;
- total lead;
- total nickel;
- total zinc;
- Aroclor 1254; and
- Aroclor 1260.

#### **4.1.6**      *Building 15*

Building 15 consists of one exterior AOI (38). A total of two soil borings were completed during the FI. AOI 38 evaluates a former gasoline and kerosene UST location near the southwest corner of Building 15. Building 15 exterior boring locations are presented in Figure 13.

Boring 15-112-B had to be relocated and re-drilled due to shallow refusal. VOCs were detected at concentrations above the USCOs at the re-drilled location (15-112-BR) for the following parameters:

- 1,2-dichloroethane;
- methylene chloride;
- total xylenes; and
- vinyl chloride.

#### **4.1.7**      *Building 18*

Building 18 consists of one exterior AOI (39). A total of three soil borings were completed by ERM during the FI. AOI 39 evaluates the historical locations of both a 5,000 (18-39) and 2,000-gallon (18-40) diesel fuel UST removed in 1990. Building 18 exterior boring locations are presented in Figure 16. Concentrations were not detected above the RSCOs in Building 18.

#### **4.1.8**      *Miscellaneous AOIs*

Miscellaneous AOI are located throughout the Site. Since they were not associated with a building or unique area, they were compiled into one area entitled "Miscellaneous AOIs."

A total of five exterior AOIs (11, 44, 46, 47, 48, and 49) comprised the Miscellaneous AOIs. The Miscellaneous exterior AOI boring locations and concentrations exceeding the Draft Part 375 RCSCOs and RISCOs are presented in Figure 17. Miscellaneous AOI concentrations exceeding the Draft Part 375 USCOs are presented in Figure 17a.

AOI 11 evaluated the impact of historical lead concentrations from Building 7 lead air emissions to prevailing downwind locations. The focus of AOI 44 was to assess the condition of sediment in the central area of the Gulf Creek. AOI 46 assessed sediment conditions near Outfall 002.

AOI 47 evaluated the area in the immediate vicinity of Pump House #1. In the vicinity of Outfall 002, there has been a documented leak in an underground chromium pipe line and wooden block debris was encountered during an excavation in 1989. The focus of AOI 48 was to investigate the soil conditions in the vicinity of the Site's general sewers. AOI 49 evaluated the WWTP and the former acid and chromium tanks associated with the processes.

A total of 12 sediment samples and 4 soil borings were completed during the FI.

Soil samples were collected at depths of 0 to 1-foot bgs at the three locations of AOI 11. Metals were detected above USCOs in AOI 11 for the following parameters:

- total lead (7-E-1 and 7-E-2);
- total copper (7-E-2);
- total mercury (7-E-2); and
- total zinc (7-E-2).

At AOI 44, VOCs, SVOCs, metals, and PCBs were detected above USCOs in the following parameters:

- acetone (116-1 and 116-3);
- benzo(a)anthracene (116-1\*\*, 116-3, and 116-4\*\*);
- benzo(a)pyrene (116-1\*\*, 116-3\*\*, and 116-4\*\*);
- benzo(b)fluoranthene (116-1\*\*, 116-3, and 116-4\*\*);
- benzo(k)fluoranthene (116-1 and 116-3);
- chrysene (116-1, 116-3, and 116-4);
- dibenzo(a,h)anthracene (116-1\*\*, 116-3\*, and 116-4\*\*);
- indeno(1,2,3-cd)pyrene (116-1\*\*, 116-3, and 116-4\*\*);
- naphthalene (116-4);
- total barium (116-3\*);
- total copper (116-1);
- total lead (116-1, 116-3, and 116-4);
- total zinc (116-1); and
- PCBs (116-1\* and 116-4).

At AOI 46, metals were detected above USCOs in the following parameters:



- total manganese (114-1);
- total zinc (114-1); and
- total silver (114-4).

At AOI 47, VOCs, SVOCs, metals, and PCBs were detected above USCOs in the following parameters:

- acetone (113-3);
- benzo(a)anthracene (113-1\*\* and 113-2);
- benzo(a)pyrene (113-1\*\*);
- benzo(b)fluoranthene (113-1\*\* and 113-2);
- benzo(k)fluoranthene (113-1);
- chrysene (113-1 and 113-2);
- dibenzo(a,h)anthracene (113-1\*\*);
- indeno(1,2,3-cd)pyrene (113-1\*\* and 113-2);
- total copper (113-1);
- total lead (113-1);
- total zinc (113-1); and
- PCBs (113-1).

At AOI 48, VOCs and SVOCs were detected above USCOs in the following parameters:

- acetone (GS-D and GS-F);
- acenaphthene (GS-D);
- benzo(a)pyrene (GS-D\*\*);
- benzo(b)fluoranthene (GS-D);
- benzo(k)fluoranthene (GS-D);
- chrysene (GS-D); and
- indeno(1,2,3-cd)pyrene (GS-D).

No parameters were detected above USCOs at AOI 49.

## 4.2

### ***GROUND WATER INVESTIGATION RESULTS***

A summary of concentrations in ground water is presented in Table 4. Monitoring well locations and ground water results exceeding NYSDEC Ambient Water Quality Standards and Guidance Values listed in the Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS

1.1.1) are presented in Figure 7. Copies of laboratory analytical reports are included in Appendix D. The ground water investigation commenced with the sampling of four of the pre-existing "TK" and Building 6 monitoring wells at the site. Previous ground water sampling events of the TK wells were discussed in section 1.2.

Prior to sampling both sets of wells, ERM collected a round of ground water level measurements using an interface probe. ERM monitored for the initial presence of VOCs in each well casing using a calibrated PID upon removal of each well cap. The two wells from each location with the highest PID readings were sampled. If no PID reading was recorded, then the wells immediately down-gradient of the source area were sampled.

The locations of the Building 6 monitoring wells are shown on Figure 3. At building 6, MW-6-F-1 and MW-6-F-5 were inspected based on the PID readings and a sheen was observed on the surface of the water during purging of both wells. MW-6-F-6 also had a high PID reading, but was not sampled due to the presence of a 0.01-foot layer of product on the surface of the ground water. The bulleted list of results below may include results with the following notes: results noted with a "D" indicate that the compound was identified in the analysis at the second dilution factor; results noted with a "J" indicate an estimated value; and results noted with a "B" indicate the analyte was found in a sample and associated blank. Concentrations of the following VOCs exceed the TOGS 1.1.1 in MW-6-F-1:

- benzene (33 µg/L);
- ethylbenzene (1,500 D µg/L);
- isopropylbenzene (91 µg/L);
- toluene (23 µg/L); and
- total xylenes (7,400 D µg/L).

In monitoring well MW-6-F-5 at Building 6, concentrations of VOCs, SVOCs, and metals exceed the standards and guidance values listed in TOGS 1.1.1. The following VOCs in MW-6-F-5 exceed the standards and guidance values listed in TOGS 1.1.1:

- benzene (800 D µg/L);
- ethylbenzene (3,800 D µg/L);
- isopropylbenzene (130 D µg/L);
- toluene (1,200 D µg/L); and

- total xylenes (14,000 D  $\mu\text{g/L}$ ).

The following SVOCs in MW-6-F-5 were detected above the standards and guidance values listed in TOGS 1.1.1:

- 2,4-dimethylphenol (210 D  $\mu\text{g/L}$ ); and
- 4-methylphenol (1,300 D  $\mu\text{g/L}$ ).

In MW-6-F-5, the following metals were detected at concentrations exceeding the standards and guidance values listed in TOGS 1.1.1:

- total arsenic (40  $\mu\text{g/L}$ );
- total copper (650  $\mu\text{g/L}$ );
- total iron (22,400  $\mu\text{g/L}$ );
- total lead (58  $\mu\text{g/L}$ );
- total manganese (570  $\mu\text{g/L}$ );
- total sodium (512,000  $\mu\text{g/L}$ ); and
- total zinc (512,000  $\mu\text{g/L}$ ).

The locations of the TK monitoring wells are shown on Figure 5. In the two TK monitoring wells that were sampled (TK-4 and TK-6), total sodium at 436,000  $\mu\text{g/L}$  was detected in TK-4 above the standards and guidance values listed in TOGS 1.1.1.

ERM installed five bedrock monitoring wells as part of the FI activities:

- MW-7-A-6;
- MW-7-C-2;
- MW-7-P-1;
- MW-8-03-B; and
- MW-9-101-A.

In MW-7-A-6, the following VOCs were detected at concentrations above the standards and guidance values listed in TOGS 1.1.1:

- 1,1-dichloroethene (270 J  $\mu\text{g/L}$ );
- cis-1,2-dichloroethene (2,600  $\mu\text{g/L}$ );
- methylene chloride (300 BJ  $\mu\text{g/L}$ );
- tetrachloroethene (150,000 D  $\mu\text{g/L}$ );
- 1,1,2-trichloroethane (220 J  $\mu\text{g/L}$ );
- trichloroethene (38,000 D  $\mu\text{g/L}$ ); and

- vinyl chloride (2,500 µg/L).

The SVOC analysis detected chrysene at 0.3 J µg/L in MW-7-A-6, which exceeds the standards and guidance values listed in TOGS 1.1.1.

In MW-7-C-2, total sulfate (972,000 µg/L) was detected above the standards and guidance values listed in TOGS 1.1.1. Concentrations of cis-1,2-dichloroethene (120 D µg/L), barium (14,400 µg/L), and vinyl chloride (22 µg/L) in MW-7-P-1 exceed the standards and guidance values listed in TOGS 1.1.1.

Concentrations of the following VOCs in MW-8-03-B exceed the standards and guidance values listed in TOGS 1.1.1:

- 1,1-dichloroethene (2.4 µg/L);
- cis-1,2-dichloroethene (630 D µg/L);
- tetrachloroethene (970 BD µg/L);
- trichloroethene (390 D µg/L); and
- vinyl chloride (91 µg/L).

SVOC and metal concentrations were not detected above the standards and guidance values listed in TOGS 1.1.1 in MW-8-03-B.

In MW-9-101-A, benzene (1.1 µg/L) and tetrachloroethene (1.7 µg/L) were detected at concentrations exceeding the standards and guidance values listed in TOGS 1.1.1. SVOC and metal concentrations were not detected above the standards and guidance values listed in TOGS 1.1.1 in MW-9-101-A.

Fifty AOIs were investigated at the site by collecting soil sediment, and groundwater samples. Data collected were compared to screening criteria based on NYS Part 375 Soil Cleanup Objectives and NYS Water Quality Standards. Based on initial screening of the data collected during the field investigation activities, further evaluation of the following is warranted:

***LNAPL***

1. Building 6 current and historic USTs located along the eastern side (exterior) of the building (AOI 6);
2. Building 7 northeastern area, indoor former coal pile area (AOI 14);
3. Building 7 northwestern area, former train well and machine presses (AOI 17);
4. Building 8 historic press operations in the northeastern corner of building (AOI 23); and
5. Building 9 southwestern corner, former spill and sump location (AOIs 30, 31, 32).

***Chlorinated solvents in groundwater***

1. Building 7 south-central wall, acid flux room – former sumps used for liquid flux storage (AOI 15); and
2. Building 7 former tank farm area, outdoors area west of building 7, (AOI 8). Note: possible DNAPL in this area.

***Chlorinated solvents in soil***

1. Building 7 former tank farm area, outdoors area west of building 7 (AOI 8);
2. Building 7 former degreaser areas, northwestern area of building (AOI 12);
3. Building 8 former degreaser areas including a former degreaser with a separator pit, southeastern area of the building (AOI 22); and
4. Building 10 sump area excavation, north-central area of the building (AOI 37).

### *Metals in soil*

1. Building 10 south dock, former underground storage areas (AOI 34);
2. Building 10 western-central wall, historic interior painting operations (AOI 36);
3. Building 6 brine vault, northwestern exterior area of the building (AOI 1);
4. Building 10 western-central exterior equipment storage area (AOI 35);
5. Building 9 southwestern (former USTs) and southeastern corners (former spill and existing sump of the building);
6. Building 7 northeastern area interior and exterior of the building, historical coal pile storage area (AOI 10);
7. Building 8 former degreaser areas including a former degreaser with a separator pit, southeastern area of the building (AOI 22);
8. Building 8 northwest corner, former chrome sump (AOI 18);
9. Sediment along the Gulf, between Roads 2 and 3, former spills and recent observations of stains and oil sheens (AOI 44, 46); and
10. Eastern lawn area, northeast of Building 7 and south of Road 2, former lead air emissions from Building 7 (AOI 11).

### *PAHs in soil*

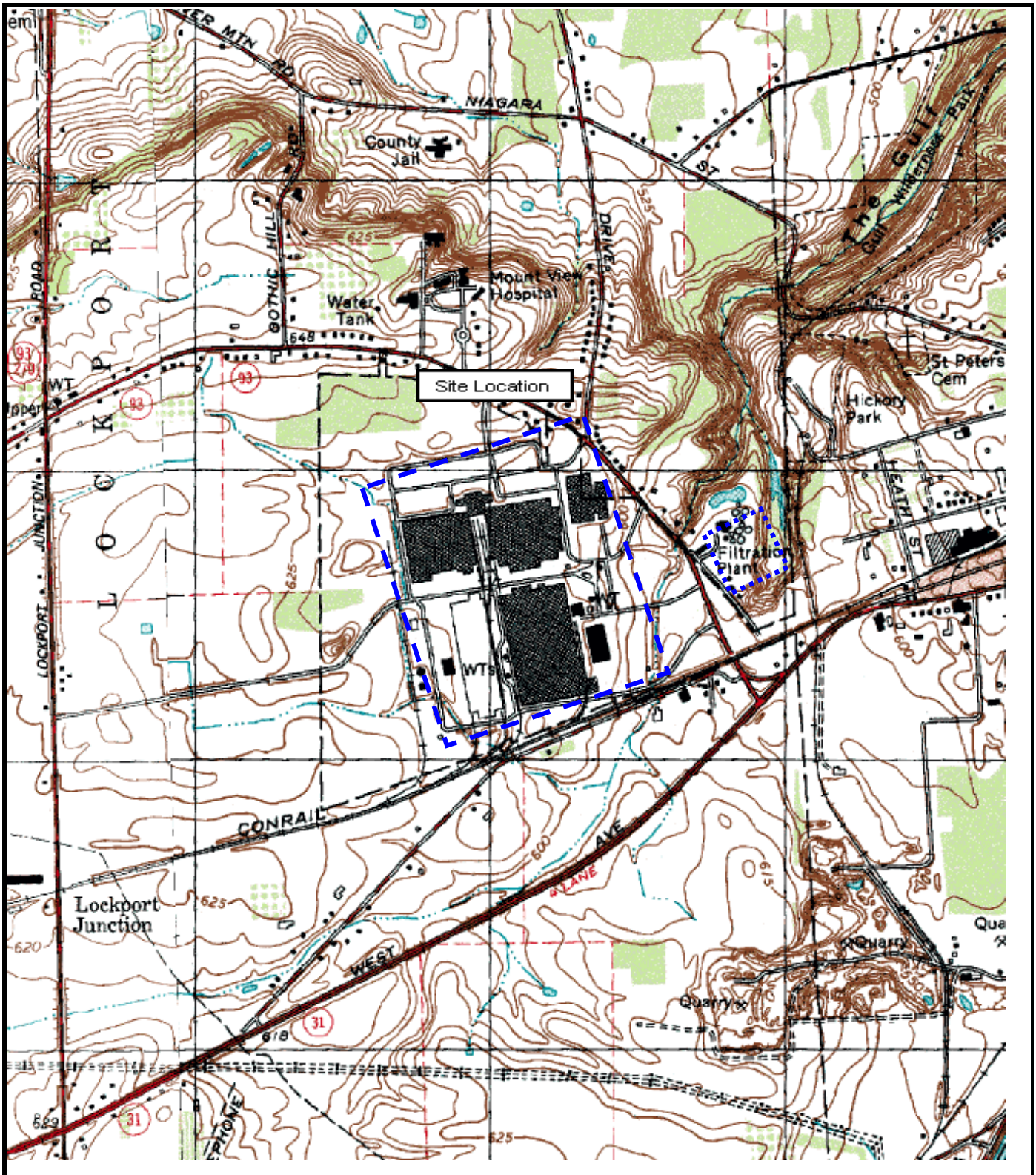
1. Building 10 south dock, former underground storage areas (AOI 34);
2. Building 6 brine vault, northwestern exterior area of the building (AOI 1);
3. Sediment along the Gulf, between Roads 2 and 3, former spills and recent observations of stains and oil sheens (AOI 44, 46);
4. Building 7 northeastern area interior and exterior of the building, historical coal pile storage area (AOI 10); and
5. Building 8 former degreaser areas including a former degreaser with a separator pit, southeastern area of the building (AOI 22).

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- Haley & Aldrich of New York, 2002. Phase I Environmental Assessment. January 2002.
- Higgins, Bradford M. et al., Soil Survey of Niagara County, New York., Puglia, et al; 1972.
- <http://www.city-data.com/city/Lockport-New-York.html>
- NYSDEC, 2006. Draft Part 375-6.8(b): Soil Cleanup Objectives for Unrestricted and Restricted Uses. June 2006.
- NYSDEC, 2005. Record of Decision. Delphi Harrison Thermal Systems Site. Lockport, Niagara County, New York. Site Number 9-32-113. March 2005.
- NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Ground Water Effluent Limitations. NYSDEC Division of Water Technical and Operational Guidance Series Memorandum Number 1.1.1., June 1998 (latest amendment April 2000).

## *Figures*

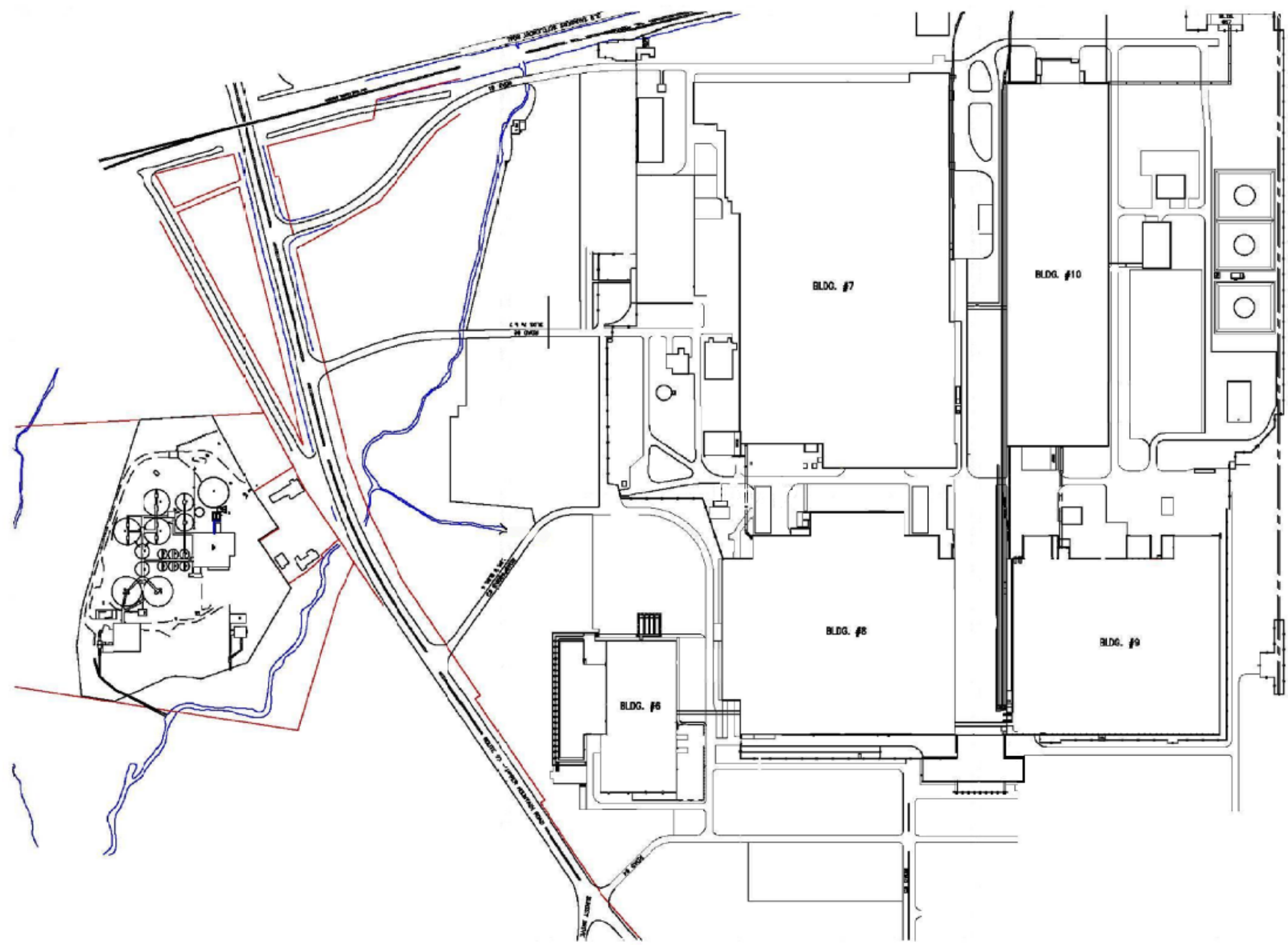




5788 Widewaters Parkway, Dewitt, NY 13214

Site Location Map  
 200 Upper Mountain Road  
 Lockport, New York

Figure



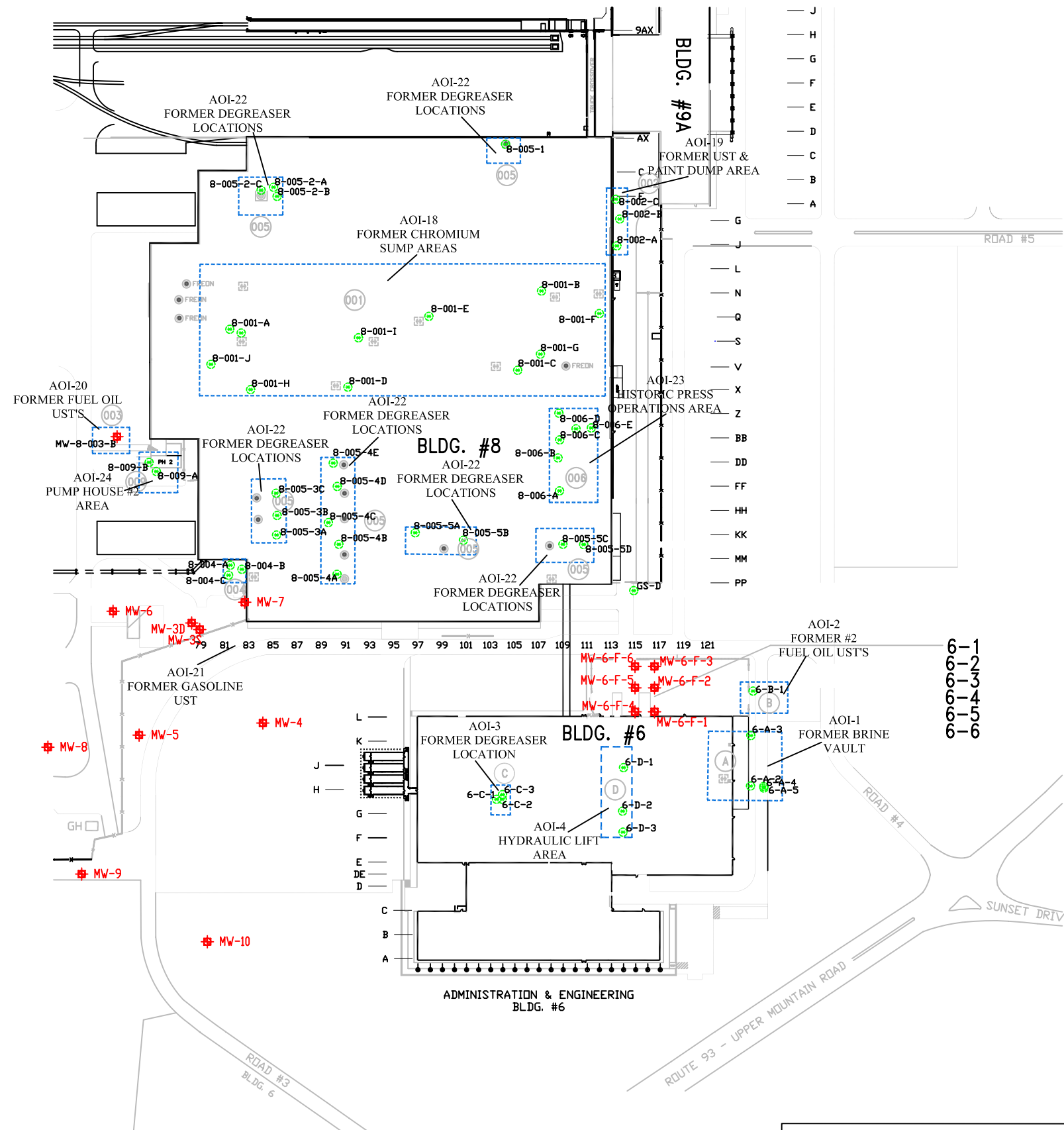
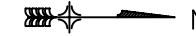
NOTES:  
FIGURE MODIFIED WITH PERMISSION FROM  
BASE MAP PROVIDED BY DELPHI THERMAL

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THERMAL AND INTERIOR SYSTEMS

FIGURE 2 - 2006 FIELD INVESTIGATION  
LOCKPORT, NY  
GENERAL SITE LAYOUT  
DELPHI FACILITY







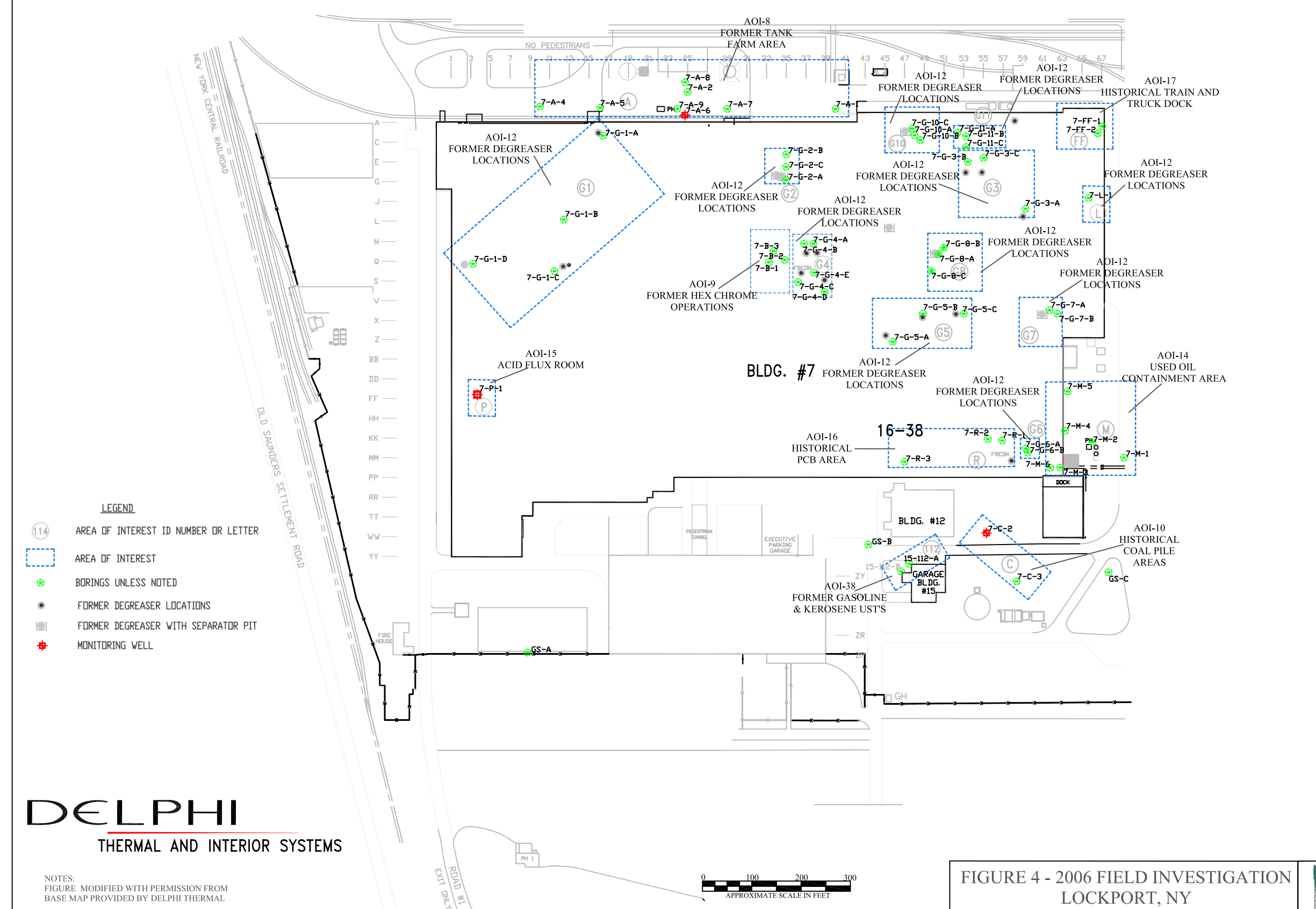
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  - ▭ AREA OF INTEREST
  - BORINGS UNLESS NOTED
  - ☐ FORMER CHROME SUMP
  - ✚ MONITORING WELL
  - FORMER DEGREASER LOCATIONS
  - ☐ FORMER DEGREASER WITH SEPARATOR PIT

NOTES:  
 FIGURE MODIFIED WITH PERMISSION FROM  
 BASE MAP PROVIDED BY DELPHI THERMAL



**FIGURE 3 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 BORING LOCATIONS  
 BUILDINGS 6 & 8**





- LEGEND**
- 114 AREA OF INTEREST ID NUMBER OR LETTER
  - AREA OF INTEREST
  - BORINGS UNLESS NOTED
  - FORMER DEGREASER LOCATIONS
  - G1 FORMER DEGREASER WITH SEPARATOR PIT
  - ⊕ MONITORING WELL

# DELPHI

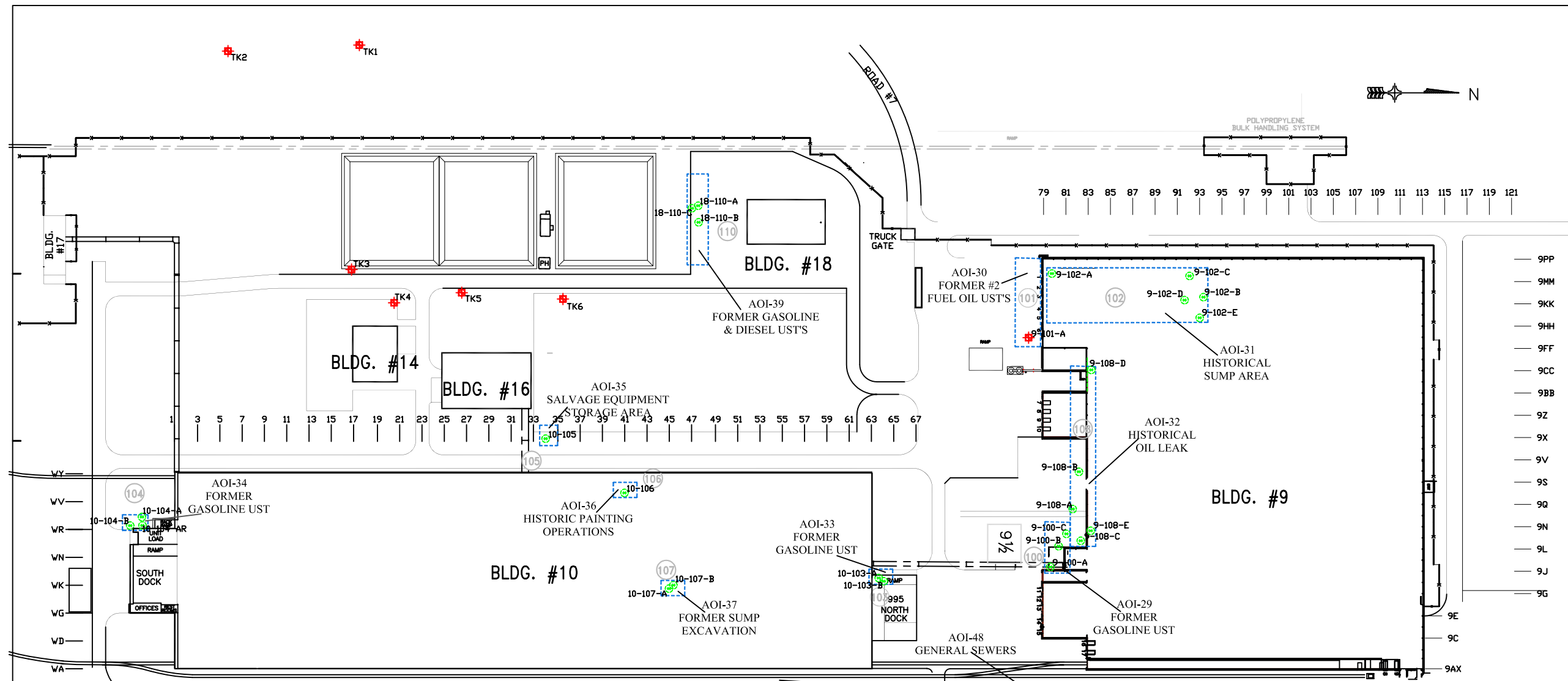
THERMAL AND INTERIOR SYSTEMS

NOTES:  
 FIGURE MODIFIED WITH PERMISSION FROM  
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**FIGURE 4 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 BORING LOCATIONS  
 BUILDING 7 & WEST COURTYARD**





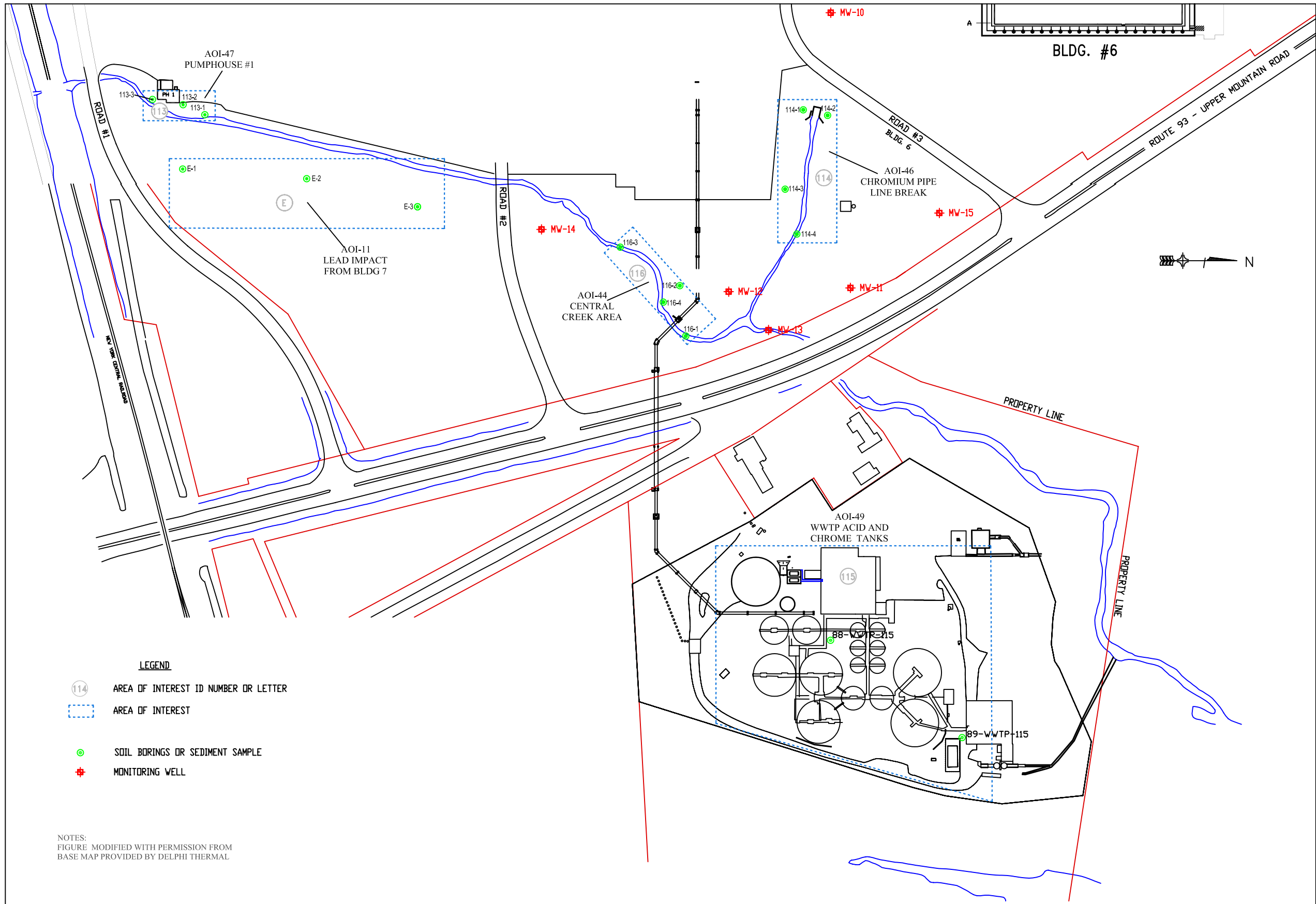
- LEGEND**
- 114 AREA OF INTEREST ID NUMBER OR LETTER
  - AREA OF INTEREST
  - ⊕ BORINGS UNLESS NOTED
  - ✕ MONITORING WELL

NOTES:  
 -TK WELLS ARE AT APPROXIMATED LOCATIONS  
 -FIGURE MODIFIED WITH PERMISSION FROM  
 BASE MAP PROVIDED BY DELPHI THERMAL



FIGURE 5 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 BORING LOCATIONS  
 BUILDINGS 9 & 10





- LEGEND**
- 114 AREA OF INTEREST ID NUMBER OR LETTER
  - AREA OF INTEREST
  - SOIL BORINGS OR SEDIMENT SAMPLE
  - ⊕ MONITORING WELL

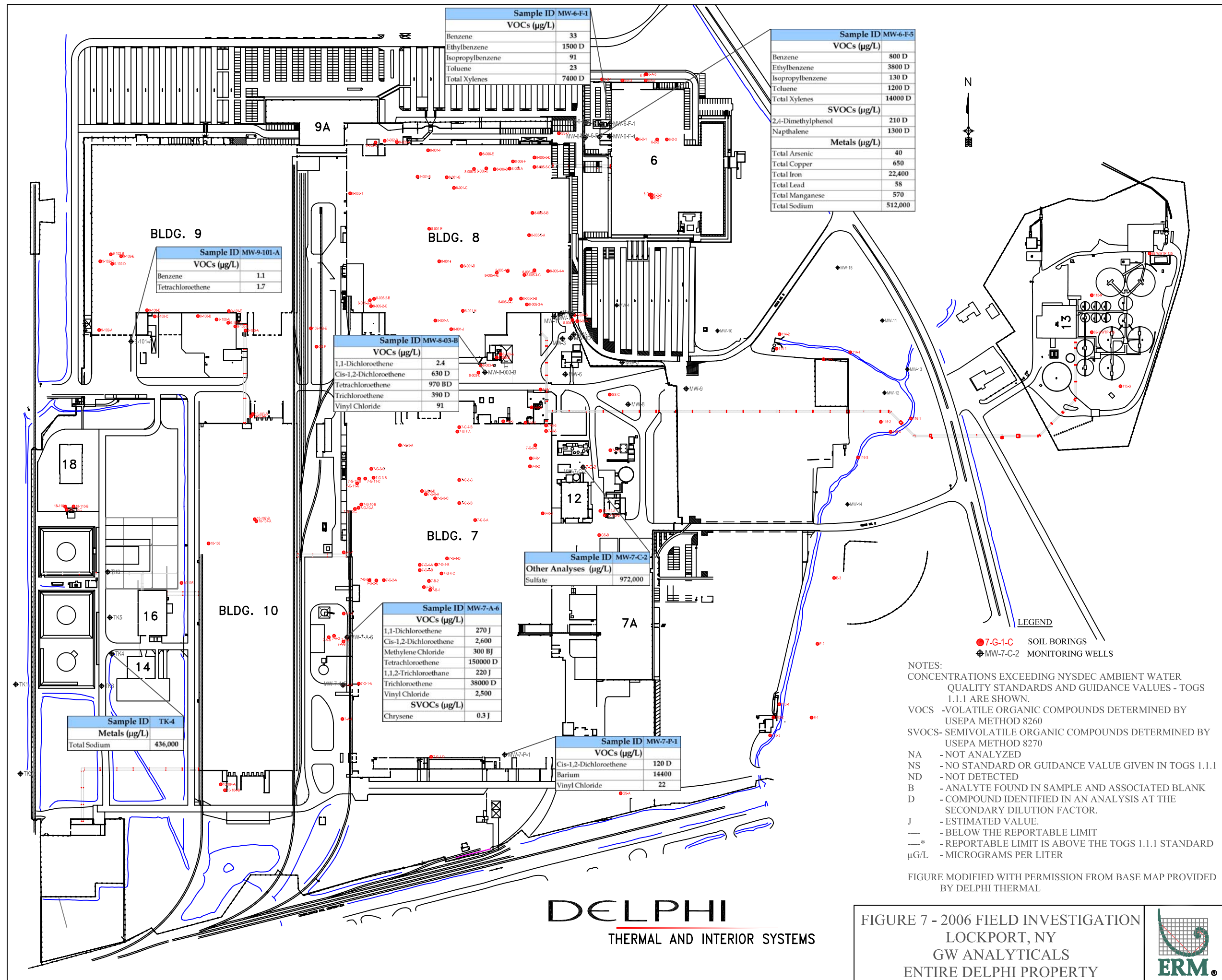
NOTES:  
 FIGURE MODIFIED WITH PERMISSION FROM  
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FIGURE 6 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 BORING LOCATIONS  
 CREEK AND WWTP AREAS



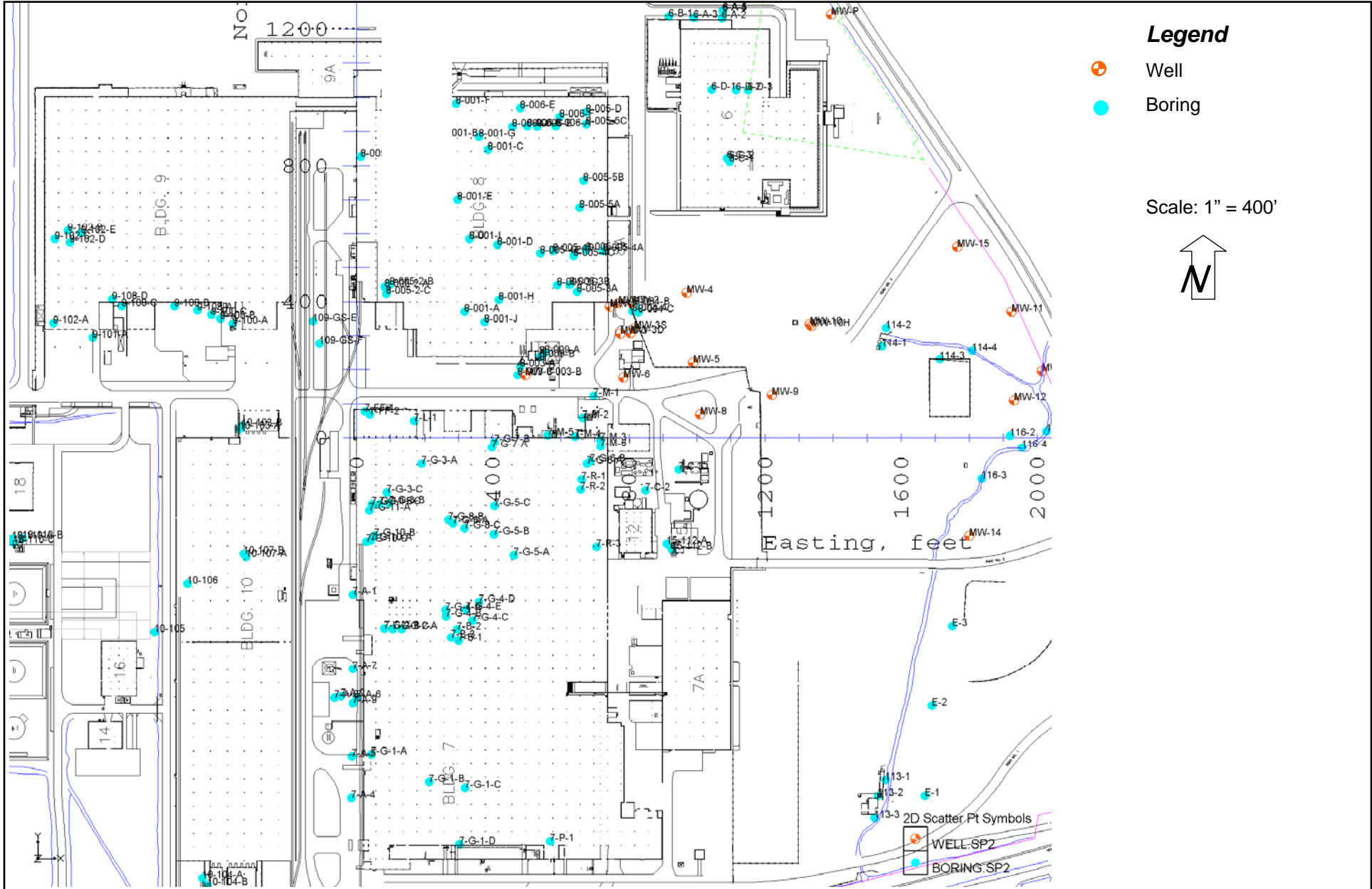




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FIGURE 7 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 GW ANALYTICALS  
 ENTIRE DELPHI PROPERTY



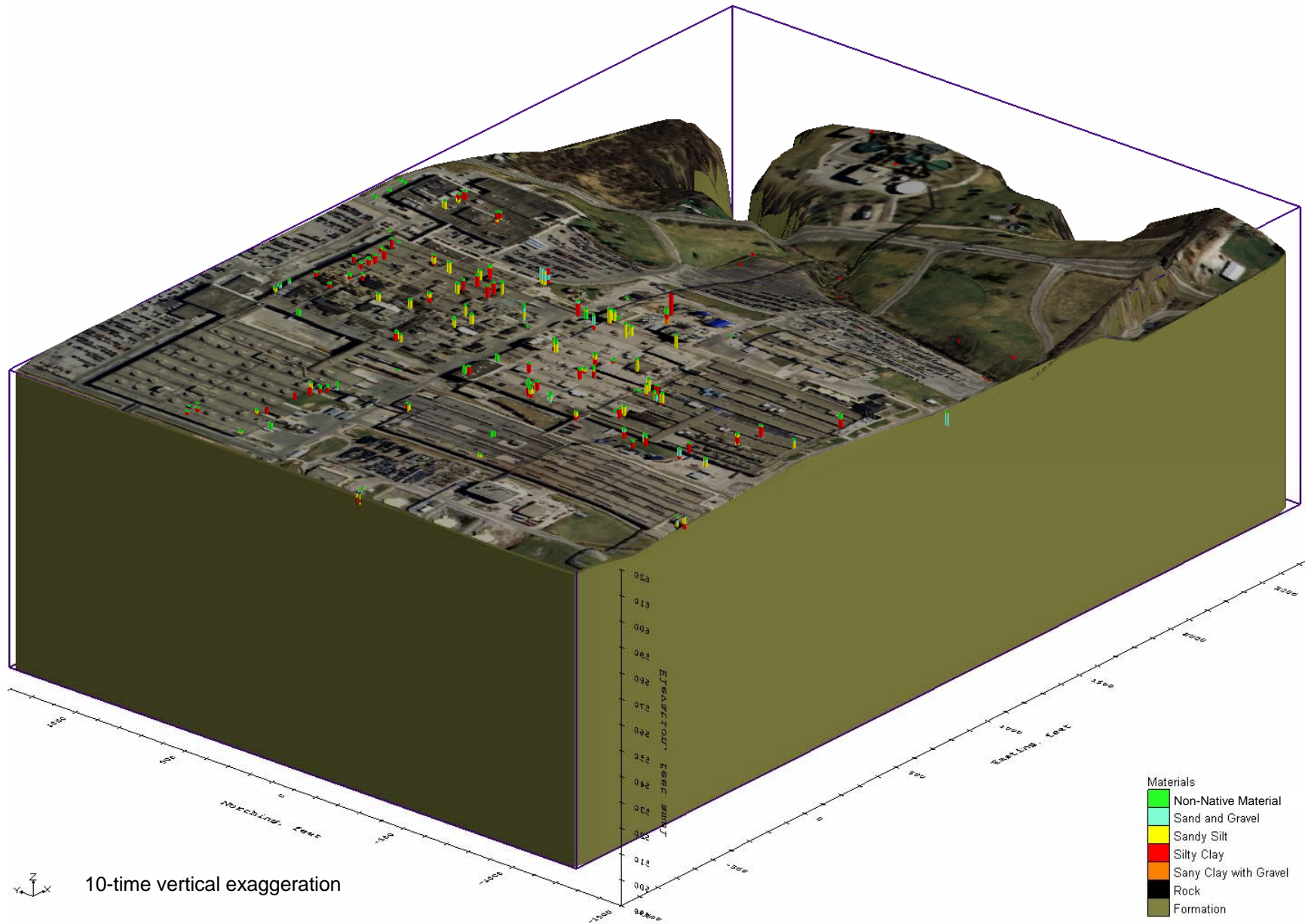


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Site Map, Soil Boring, and Well Locations  
 Delphi Thermal and Interior System, Inc.  
 Lockport, New York

Figure 8a

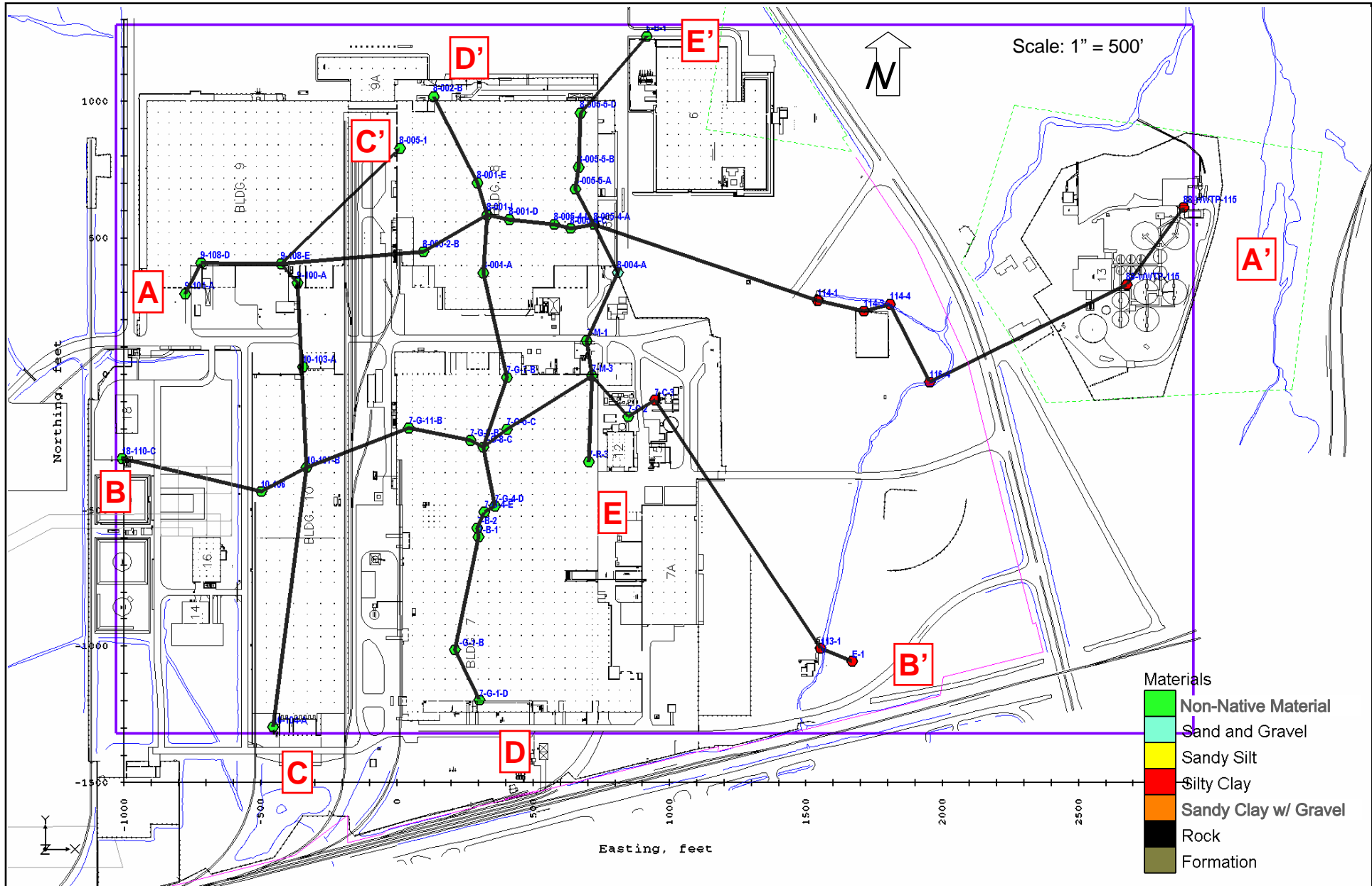




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 Dewitt, NY 13214  
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3-D Display of Site Topography and Soil Boring Locations  
 Delphi Thermal and Interior System, Inc.  
 Lockport, New York

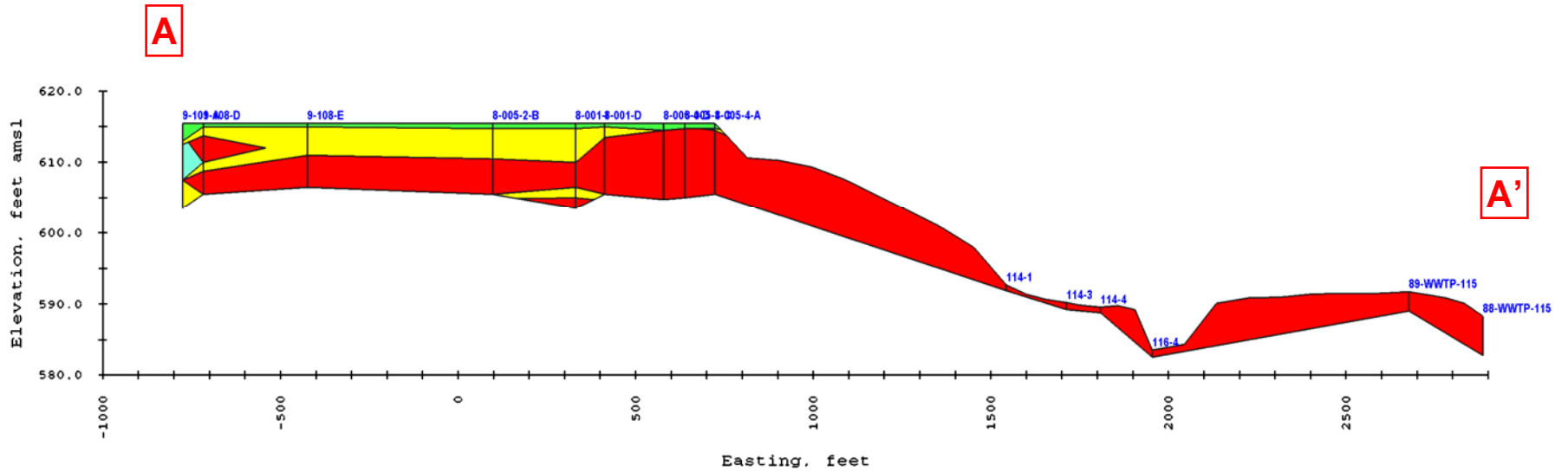
Figure 8b



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Geologic Cross-Section Locations  
 Delphi Thermal and Interior System, Inc.  
 Lockport, New York

Figure 8c



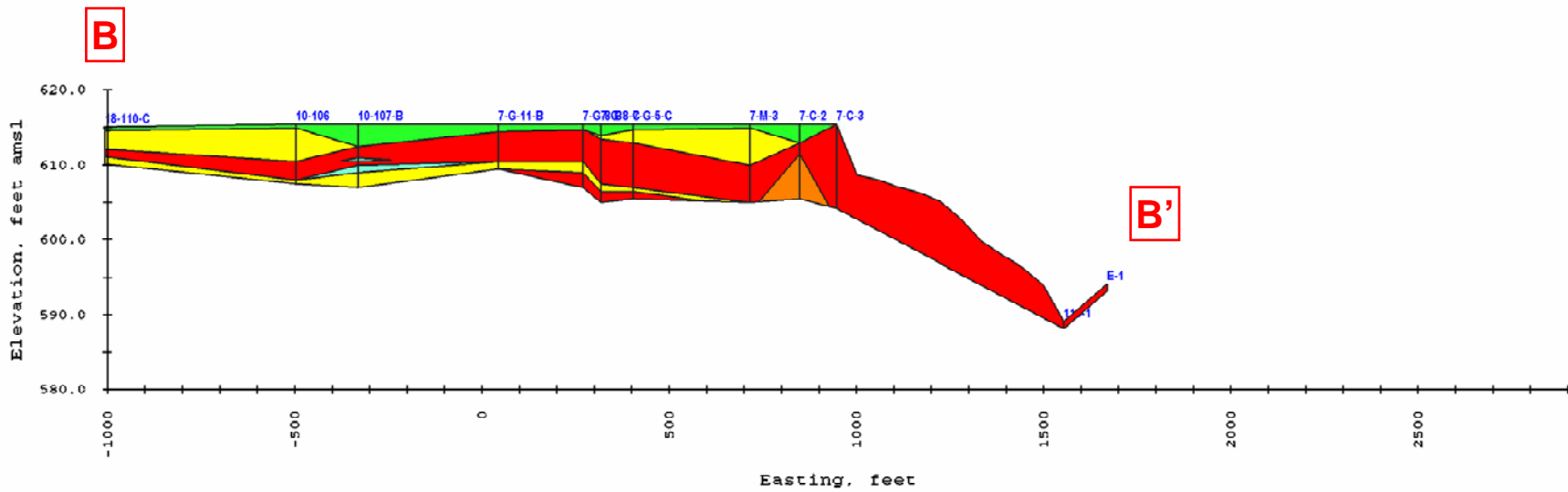
- Materials
- Non-Native Material
  - Sand and Gravel
  - Sandy Silt
  - Silty Clay
  - Sandy Clay with Gravel
  - Rock
  - Formation



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Cross-Section A-A'  
 Delphi Thermal and Interior System, Inc.  
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Figure 8d



- Materials
- Non-Native Material
  - Sand and Gravel
  - Sandy Silt
  - Silty Clay
  - Sany Clay with Gravel
  - Rock
  - Formation



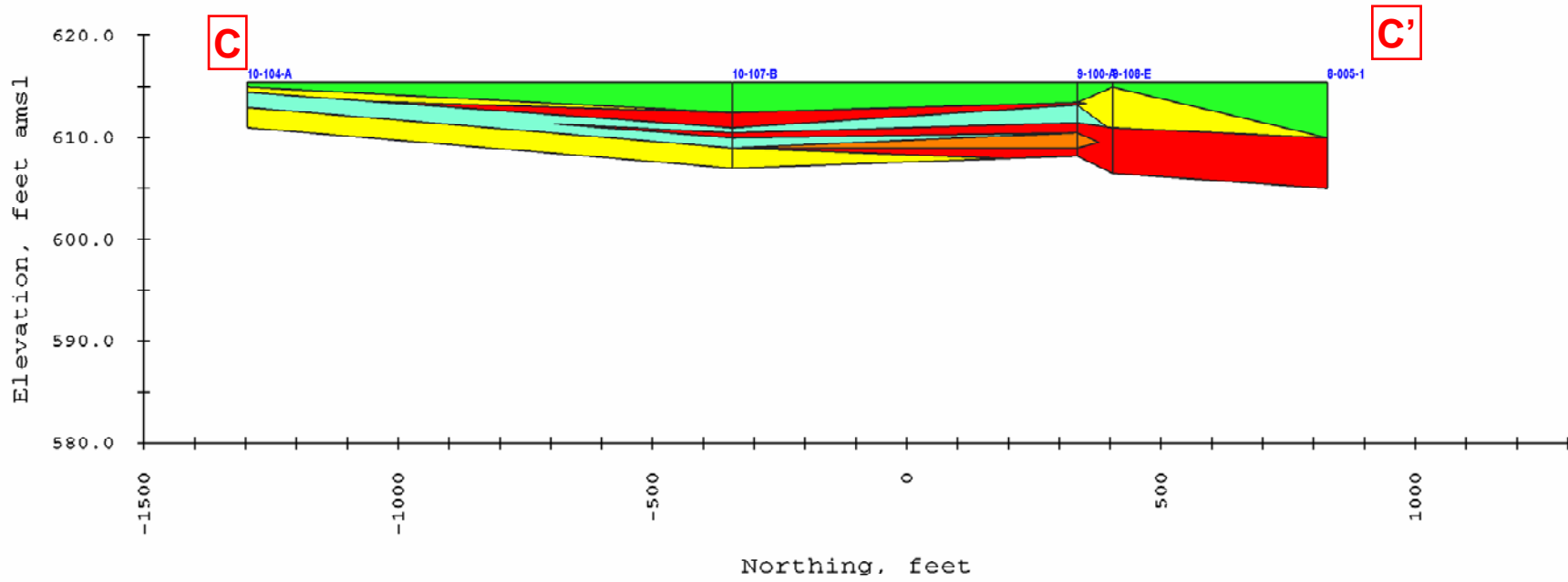
20-time vertical exaggeration



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Cross-Section B-B'  
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Figure 8e



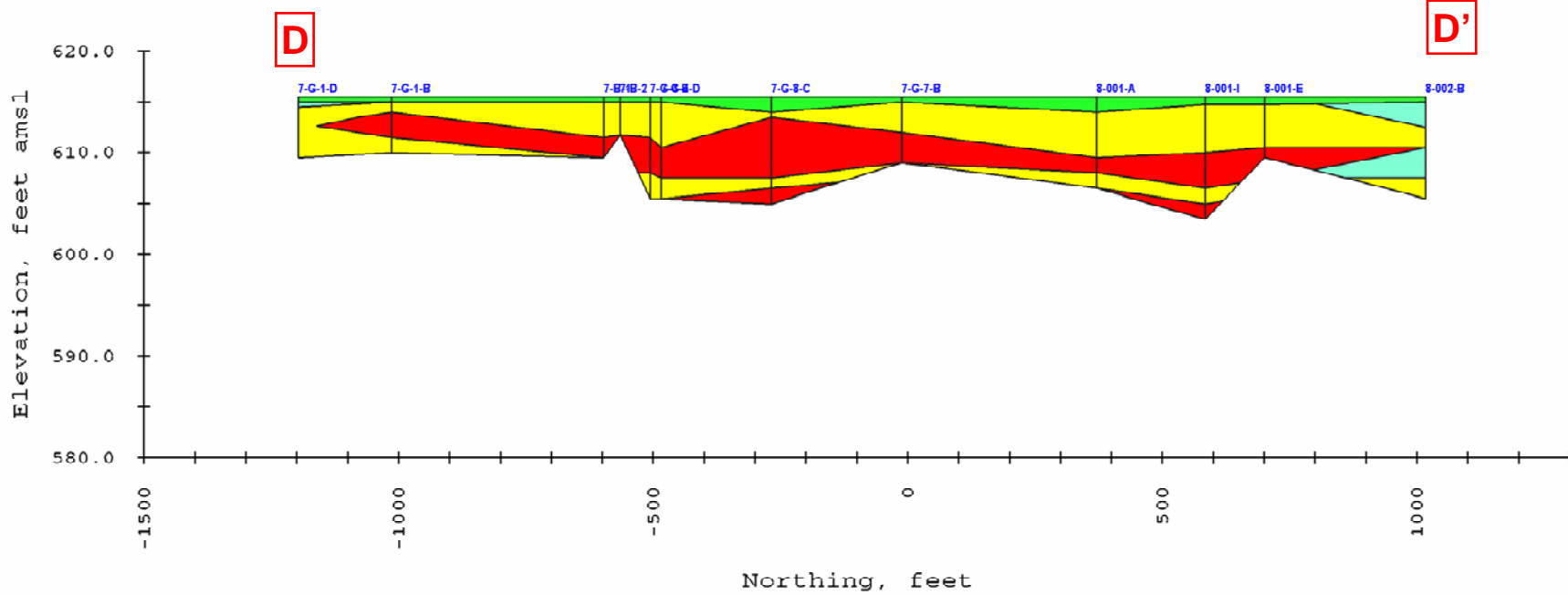
- Materials
- Non-Native Material
  - Sand and Gravel
  - Sandy Silt
  - Silty Clay
  - Sany Clay with Gravel
  - Rock
  - Formation



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Cross-Section C-C'  
 Delphi Thermal and Interior System, Inc.  
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Figure 8f



- Materials
- Non-Native Material
  - Sand and Gravel
  - Sandy Silt
  - Silty Clay
  - Sany Clay with Gravel
  - Rock
  - Formation



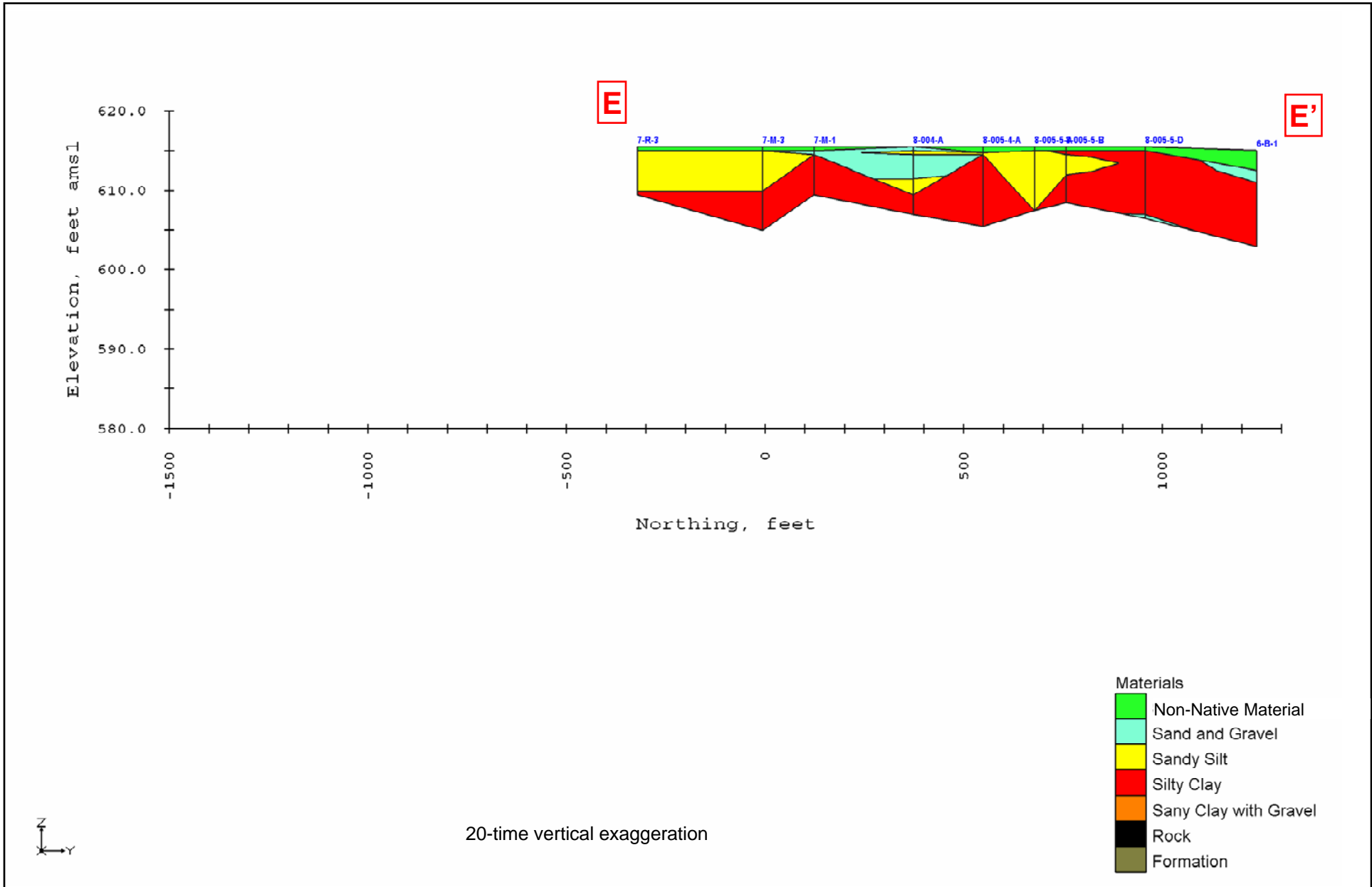
20-time vertical exaggeration

Cross-Section D-D'  
 Delphi Thermal and Interior System, Inc.  
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Figure 8g



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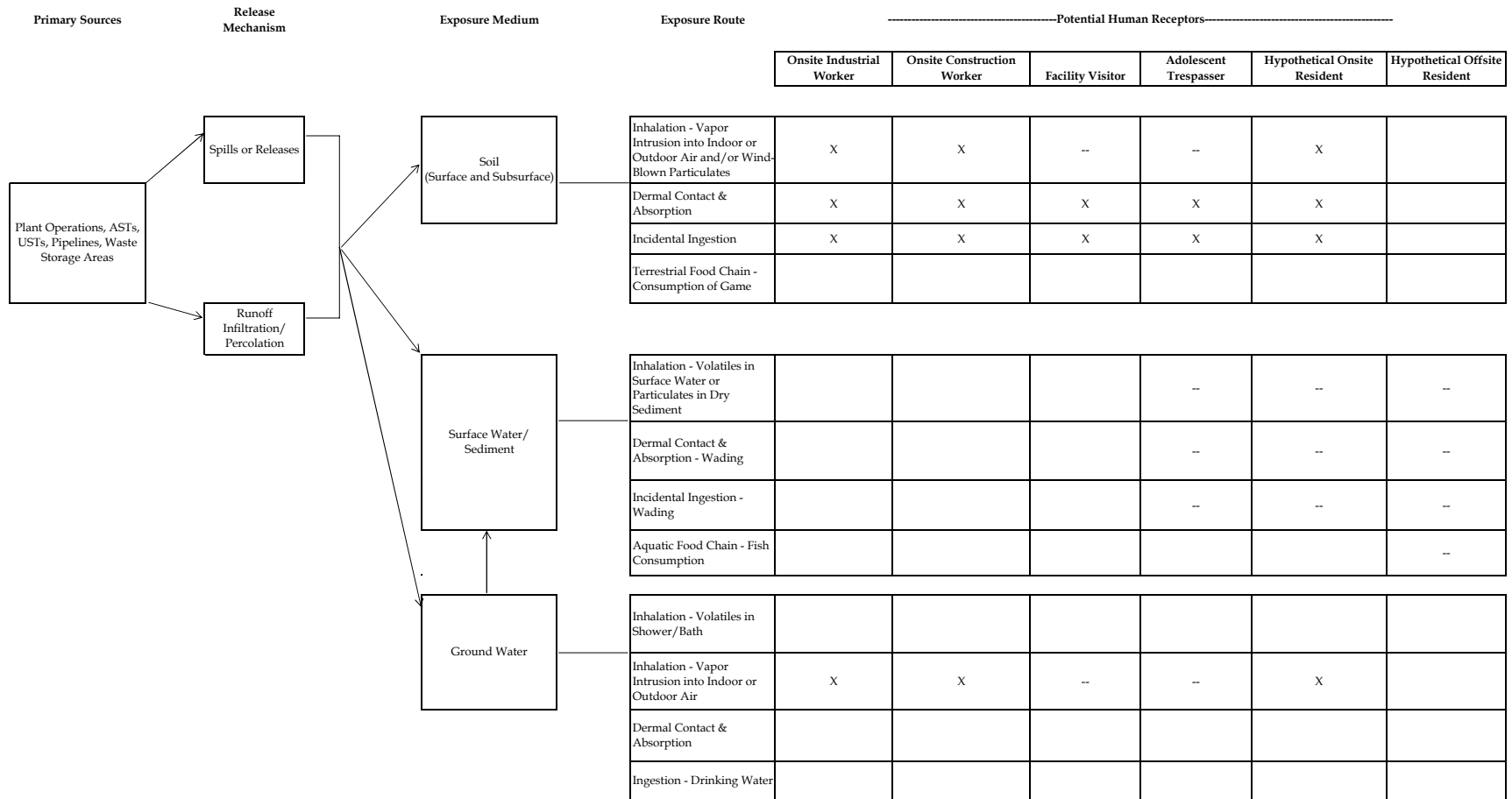


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Cross-Section E-E'  
 Delphi Thermal and Interior System, Inc.  
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Figure 8h

Figure 9: Human Health Conceptual Site Model

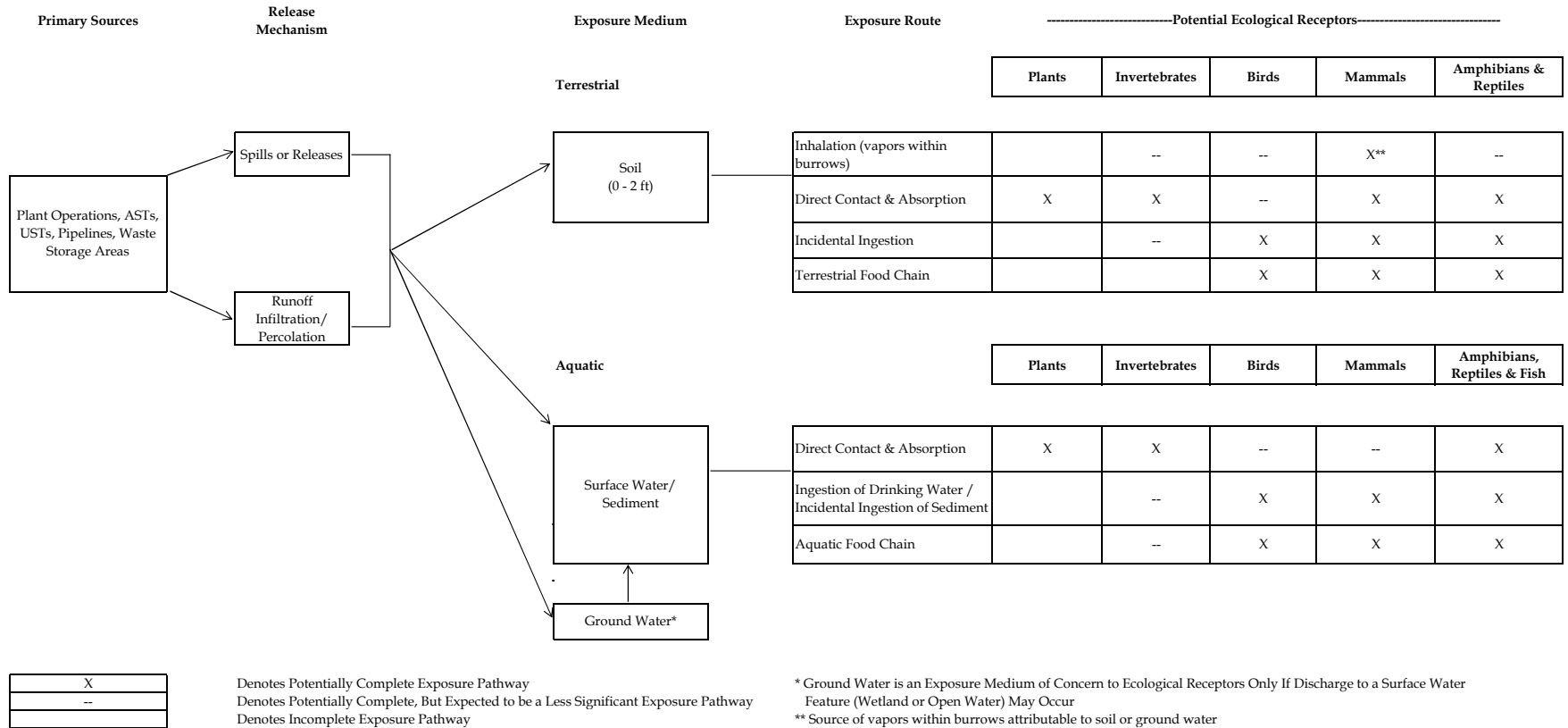


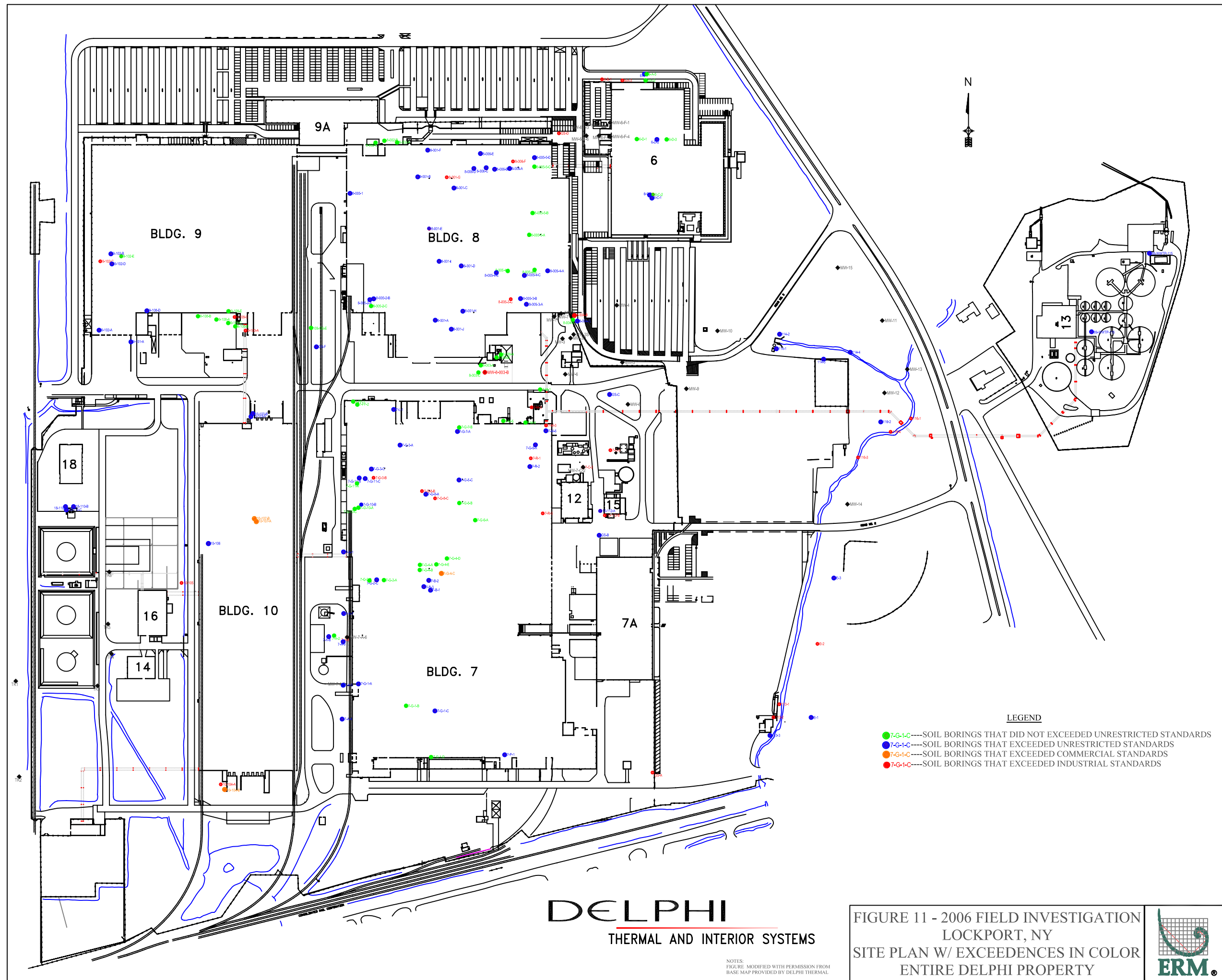
X
--

X Denotes Potentially Complete Exposure Pathway  
 -- Denotes Potentially Complete, But Expected to be a Less Significant Exposure Pathway  
 Denotes Incomplete Exposure Pathway



Figure 10: Ecological Conceptual Site Model





# DELPHI

THERMAL AND INTERIOR SYSTEMS

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FIGURE 11 - 2006 FIELD INVESTIGATION  
LOCKPORT, NY  
SITE PLAN W/ EXCEEDENCES IN COLOR  
ENTIRE DELPHI PROPERTY





Sample ID	Parameter	Result	Unrestricted Standard
<b>VOCs</b>			
6-C-1 (0-2)	1,2-Dichloroethane	0.027 U	0.02
6-C-1 (0-2)	Acetone	0.059 J	0.05
6-C-1 (0-2)	Benzene	0.14 U	0.06
6-C-1 (0-2)	Methylene chloride	0.15 D	0.05
6-C-1 (0-2)	Tetrachloroethene	2.1 D	1.3
6-C-1 (0-2)	Vinyl chloride	0.054 U	0.02
6-C-1 (2-3.5)	1,2-Dichloroethane	0.027 U	0.02
6-C-1 (2-3.5)	Vinyl chloride	0.055 U	0.02
6-C-1 (2-3.5)	Methylene chloride	0.056 D	0.05
<b>Metals</b>			
6-C-1 (0-2)	Hexavalent Chromium - Total	1.8 U	1
6-C-1 (2-3.5)	Hexavalent Chromium - Total	1.6 U	1

Sample ID	Parameter	Result	Unrestricted Standard
<b>VOCs</b>			
6-A-3 (4-6)	1,2-Dichlorobenzene	3.6 U	1.1
6-A-3 (4-6)	1,3-Dichlorobenzene	3.6 U	2.4
6-A-3 (4-6)	1,4-Dichlorobenzene	3.6 U	1.8
6-A-3 (4-6)	Acetone	0.056 J	0.05
6-A-3 (4-6)	Hexachlorobenzene	3.6 U	0.33
6-A-3 (4-6)	Methylene chloride	0.053	0.05
<b>SVOCs</b>			
6-A-3 (4-6)	Benzo(k)fluoranthene	3.6 U	0.8
6-A-3 (4-6)	Dibenzo(a,h)anthracene	3.6 U	0.33
6-A-3 (4-6)	Pentachlorophenol	17 U	0.8
6-A-3 (4-6)	Phenol	3.6 U	0.33
6-A-3 (4-6)	Manganese	1680	1600

Sample ID	Parameter	Result	Unrestricted Standard
<b>VOCs</b>			
6-B-1 (4-6)	Acetone	0.11	0.05
6-B-1 (8-10)	1,2-Dichlorobenzene	7 U	1.1
6-B-1 (8-10)	1,3-Dichlorobenzene	7 U	2.4
6-B-1 (8-10)	1,4-Dichlorobenzene	7 U	1.8
6-B-1 (8-10)	Acetone	0.07	0.05
6-B-1 (8-10)	Hexachlorobenzene	7 U	0.33
<b>SVOCs</b>			
6-B-1 (4-6)	Benzo(a)anthracene	1.9 U	1
6-B-1 (4-6)	Benzo(a)pyrene	1.9 U	1
6-B-1 (4-6)	Benzo(b)fluoranthene	1.9 U	1
6-B-1 (4-6)	Benzo(k)fluoranthene	1.9 U	0.8
6-B-1 (4-6)	Chrysene	1.9 U	1
6-B-1 (4-6)	Dibenzo(a,h)anthracene	1.9 U	0.33
6-B-1 (4-6)	Indeno(1,2,3-cd)pyrene	1.9 U	0.5
6-B-1 (8-10)	Benzo(b)fluoranthene	1.4 J	1
6-B-1 (8-10)	Dibenzo(a,h)anthracene	7 U	0.33
6-B-1 (8-10)	Indeno(1,2,3-cd)pyrene	0.92 J	0.5
6-B-1 (8-10)	Pentachlorophenol	34 U	0.8
6-B-1 (8-10)	Phenol	7 U	0.33
<b>Metals</b>			
6-B-1 (8-10)	Cadmium - Total	39.1	2.5
6-B-1 (8-10)	Zinc - Total	9240	105

Sample ID	Parameter	Result	Unrestricted Standard
<b>Metals</b>			
6-A-4 (4-6)	Selenium - Total	5 U	3.9
6-A-4 (6-8)	Selenium - Total	5.5 U	3.9

Sample ID	Parameter	Result	Unrestricted Standard
<b>VOCs</b>			
6-C-2 (0-2.5)	1,2-Dichloroethane	0.028 U	0.02
6-C-2 (0-2.5)	Acetone	1.7 D	0.05
6-C-2 (0-2.5)	Benzene	0.14 U	0.06
6-C-2 (0-2.5)	Methylene chloride	0.14 D	0.05
6-C-2 (0-2.5)	Tetrachloroethene	8.1 D	1.3
6-C-2 (0-2.5)	Vinyl chloride	0.28 U	0.02
<b>SVOCs</b>			
6-C-2 (0-2.5)	Pentachlorophenol	1.8 U	0.8
<b>Metals</b>			
6-C-2 (0-2.5)	Hexavalent Chromium - Total	1.8 U	1

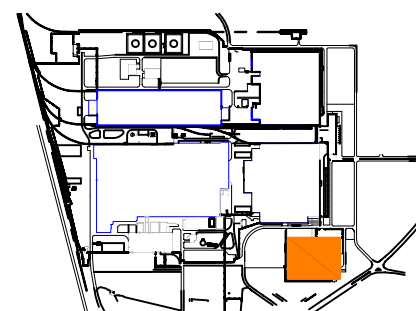
Sample ID	Parameter	Result	Unrestricted Standard
<b>VOCs</b>			
6-C-3 (0-2)	1,2-Dichloroethane	0.025 U	0.02
6-C-3 (0-2)	Benzene	0.15 U	0.06
6-C-3 (0-2)	Tetrachloroethene	1.9 D	1.3
6-C-3 (0-2)	Vinyl chloride	0.051 U	0.02
<b>Metals</b>			
6-C-3 (0-2)	Hexavalent Chromium - Total	1.8 U	1
6-C-3 (2-4)	Hexavalent Chromium - Total	1.6 U	1

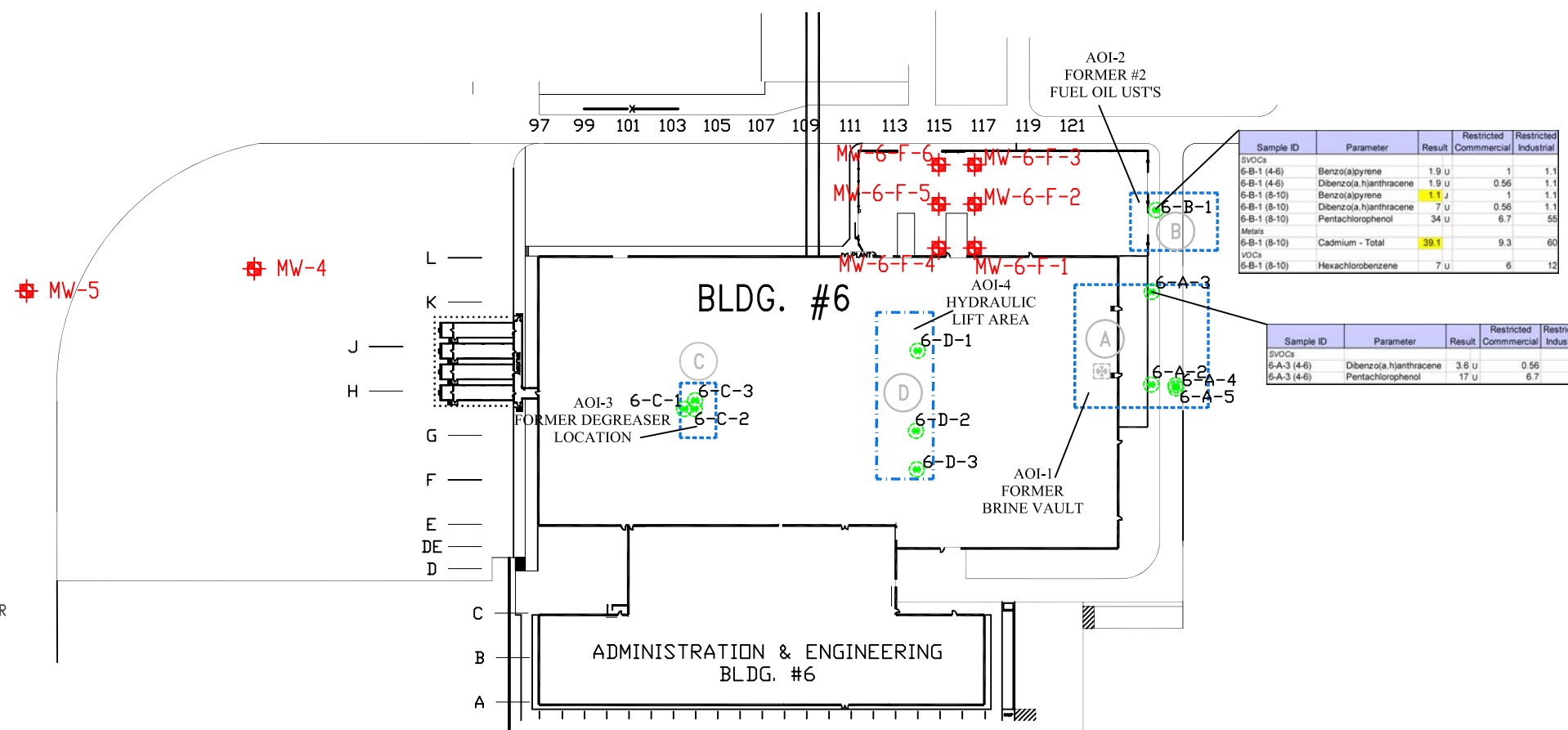
Sample ID	Parameter	Result	Unrestricted Standard
<b>Metals</b>			
6-D-2 (4-6)	Hexavalent Chromium - Total	1.6 U	1
<b>SVOCs</b>			
6-D-2 (4-6)	Pentachlorophenol	1.7 U	0.8

- LEGEND**
- 114 AREA OF INTEREST ID NUMBER OR LETTER
  - AREA OF INTEREST
  - BORINGS UNLESS NOTED
  - FORMER DEGREASER LOCATIONS
  - FORMER DEGREASER WITH SEPARATOR PIT
  - MONITORING WELL
  - 1.1 RESULT EXCEEDED SCREENING CRITERIA

**NOTES:**  
 RESULTS ARE IN MG/KG  
 U - INDICATES COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED AT OR ABOVE REPORTING LIMIT. HOWEVER ONLY RESULTS REPORTED AS A "NONDETECT" THAT HAVE A REPORTING LIMIT 25% ABOVE THE UNRESTRICTED CRITERIA ARE SHOWN.  
 B - INDICATES THAT THE ANALYTE WAS FOUND IN THE ASSOCIATED BLANK, AS WELL AS IN THE SAMPLE  
 J - INDICATES AN ESTIMATED VALUE.  
 D - INDICATES COMPOUNDS IDENTIFIED IN AN ANALYSIS AT A SECONDARY DILUTION FACTOR.

FIGURE MODIFIED WITH PERMISSION FROM BASE MAP PROVIDED BY DELPHI THERMAL

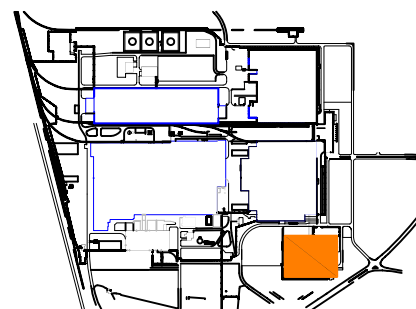




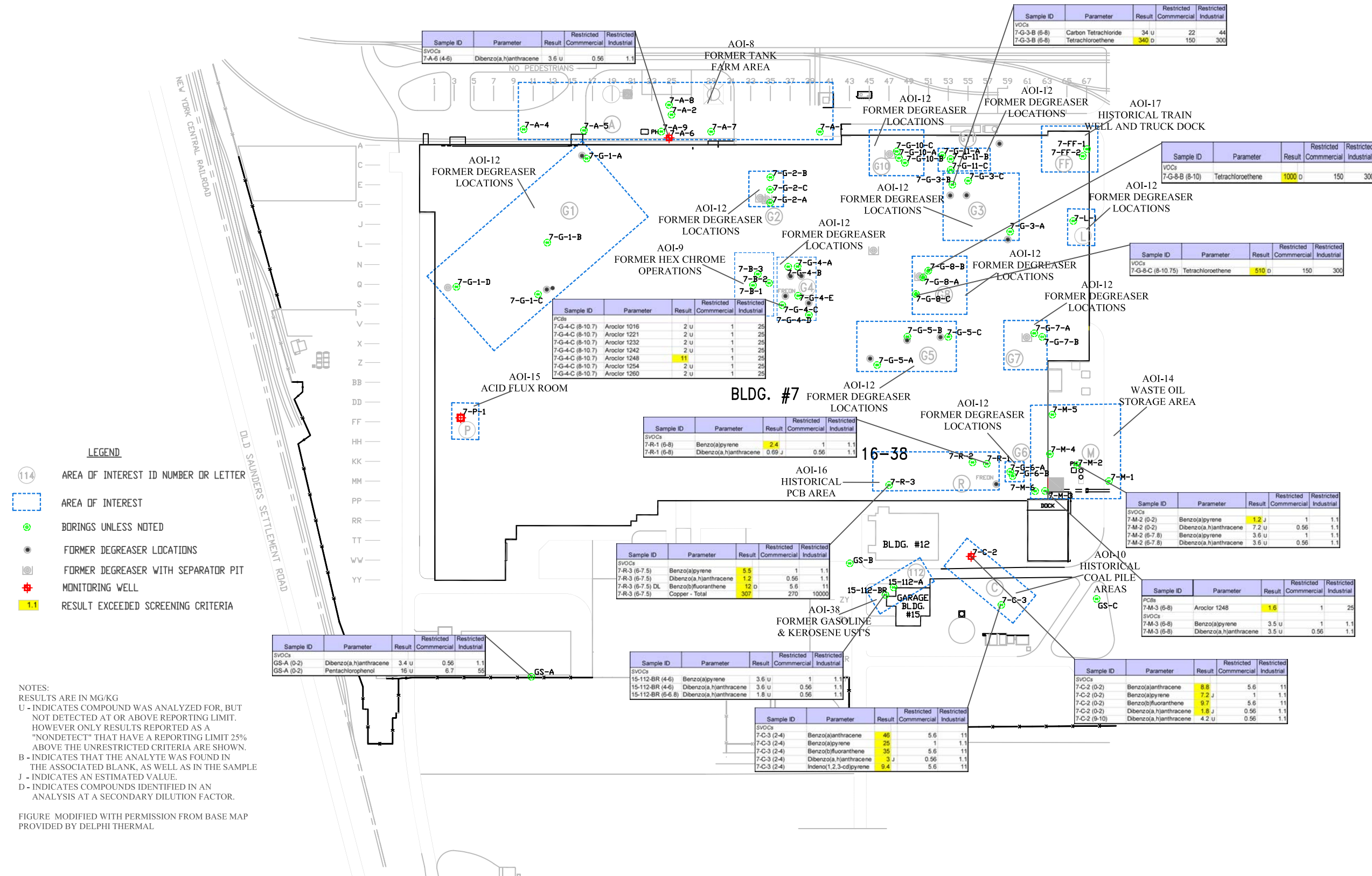
- LEGEND**
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FIGURE MODIFIED WITH PERMISSION FROM BASE MAP PROVIDED BY DELPHI THERMAL







Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-A-6 (4-6)	Dibenzo(a,h)anthracene	3.6 u	0.56	1.1

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-G-3-B (6-8)	Carbon Tetrachloride	34 u	22	44
7-G-3-B (6-8)	Tetrachloroethene	340 d	150	300

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-G-8-B (8-10)	Tetrachloroethene	1000 d	150	300

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-G-8-C (8-10 75)	Tetrachloroethene	510 d	150	300

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-G-4-C (8-10 7)	Aroclor 1016	2 u	1	25
7-G-4-C (8-10 7)	Aroclor 1221	2 u	1	25
7-G-4-C (8-10 7)	Aroclor 1232	2 u	1	25
7-G-4-C (8-10 7)	Aroclor 1242	2 u	1	25
7-G-4-C (8-10 7)	Aroclor 1248	2 u	1	25
7-G-4-C (8-10 7)	Aroclor 1254	2 u	1	25
7-G-4-C (8-10 7)	Aroclor 1260	2 u	1	25

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-R-1 (6-8)	Benzo(a)pyrene	2.4	1	1.1
7-R-1 (6-8)	Dibenzo(a,h)anthracene	0.69 j	0.56	1.1

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-R-3 (6-7.5)	Benzo(a)pyrene	5.5	1	1.1
7-R-3 (6-7.5)	Dibenzo(a,h)anthracene	1.2	0.56	1.1
7-R-3 (6-7.5) DL	Benzo(b)fluoranthene	12 d	5.6	11
7-R-3 (6-7.5)	Copper - Total	307	270	10000

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-M-2 (0-2)	Benzo(a)pyrene	1.2 j	1	1.1
7-M-2 (0-2)	Dibenzo(a,h)anthracene	7.2 u	0.56	1.1
7-M-2 (6-7.8)	Benzo(a)pyrene	3.6 u	1	1.1
7-M-2 (6-7.8)	Dibenzo(a,h)anthracene	3.6 u	0.56	1.1

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-M-3 (6-8)	Aroclor 1248	1.6	1	25
7-M-3 (6-8)	Benzo(a)pyrene	3.5 u	1	1.1
7-M-3 (6-8)	Dibenzo(a,h)anthracene	3.5 u	0.56	1.1

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
GS-A (0-2)	Dibenzo(a,h)anthracene	3.4 u	0.56	1.1
GS-A (0-2)	Pentachlorophenol	16 u	6.7	55

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
15-112-BR (4-6)	Benzo(a)pyrene	3.6 u	1	1.1
15-112-BR (4-6)	Dibenzo(a,h)anthracene	3.6 u	0.56	1.1
15-112-BR (6-6.8)	Dibenzo(a,h)anthracene	1.8 u	0.56	1.1

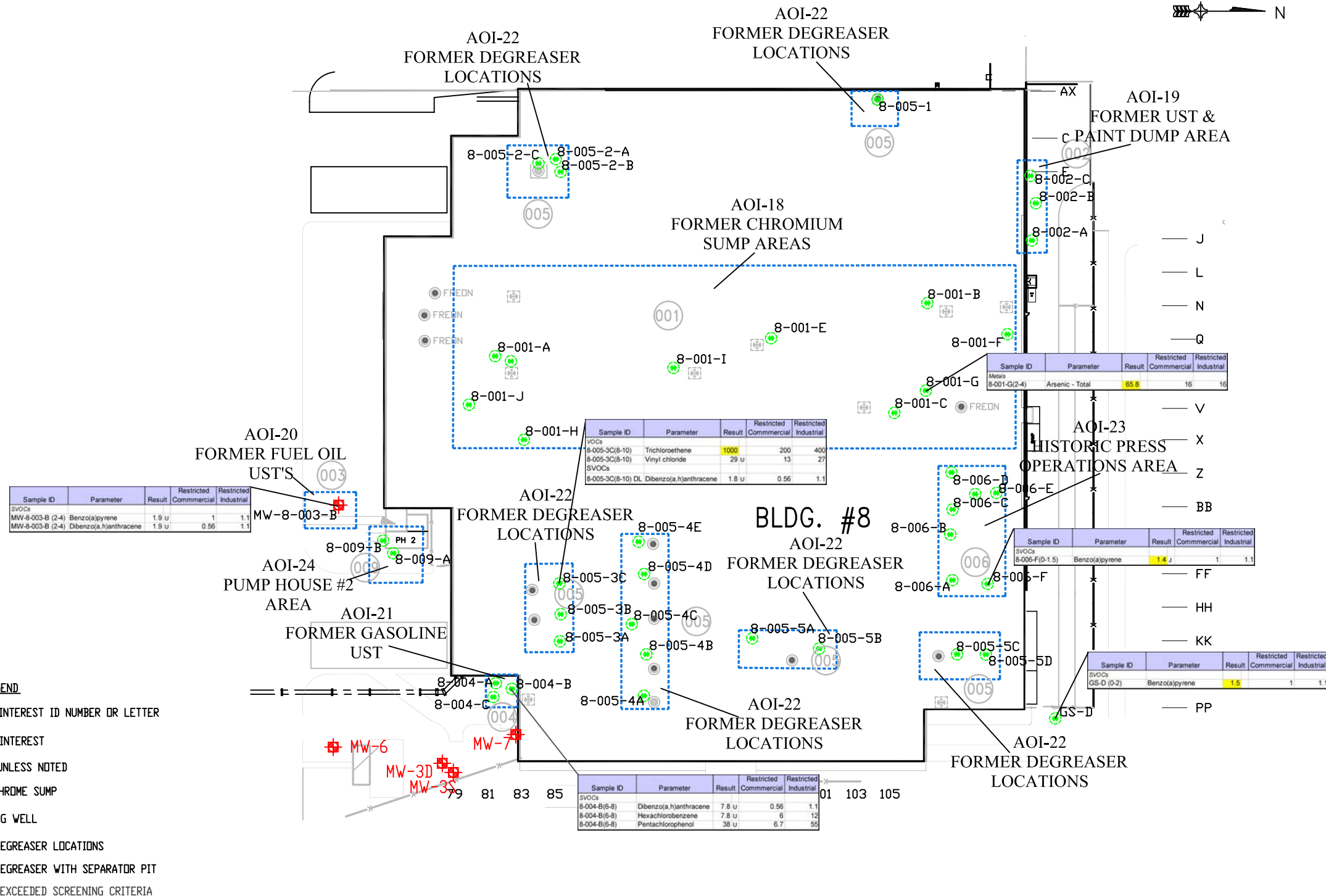
Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-C-3 (2-4)	Benzo(a)anthracene	46	5.6	11
7-C-3 (2-4)	Benzo(a)pyrene	25	1	1.1
7-C-3 (2-4)	Benzo(b)fluoranthene	35	5.6	11
7-C-3 (2-4)	Dibenzo(a,h)anthracene	3 j	0.56	1.1
7-C-3 (2-4)	Indeno(1,2,3-cd)pyrene	9.4	5.6	11

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
7-C-2 (0-2)	Benzo(a)anthracene	8.8	5.6	11
7-C-2 (0-2)	Benzo(a)pyrene	7.2 j	1	1.1
7-C-2 (0-2)	Benzo(b)fluoranthene	9.7	5.6	11
7-C-2 (0-2)	Dibenzo(a,h)anthracene	1.8 j	0.56	1.1
7-C-2 (6-10)	Dibenzo(a,h)anthracene	4.2 u	0.56	1.1



FIGURE 13 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 ANALYTICAL RESULTS  
 BUILDING 7 & WEST COURTYARD





- LEGEND**
- ① AREA OF INTEREST ID NUMBER OR LETTER
  - ▭ AREA OF INTEREST
  - BORINGS UNLESS NOTED
  - ☒ FORMER CHROME SUMP
  - ⊕ MONITORING WELL
  - FORMER DEGREASER LOCATIONS
  - ☒ FORMER DEGREASER WITH SEPARATOR PIT
  - 1.1 RESULTS EXCEEDED SCREENING CRITERIA

**NOTES:**  
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FIGURE MODIFIED WITH PERMISSION FROM BASE MAP PROVIDED BY DELPHI THERMAL

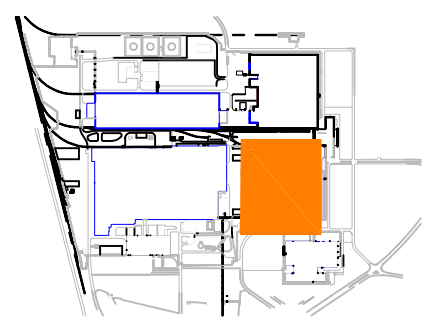
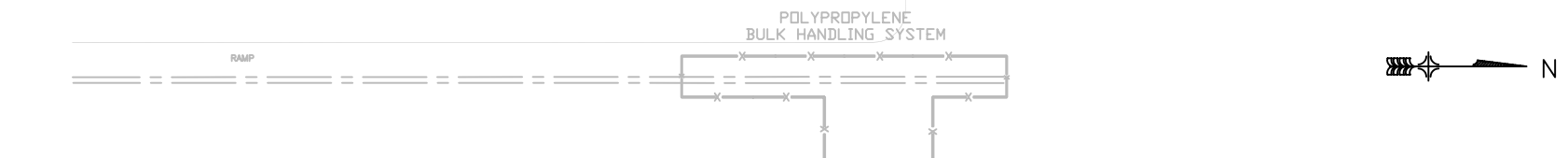
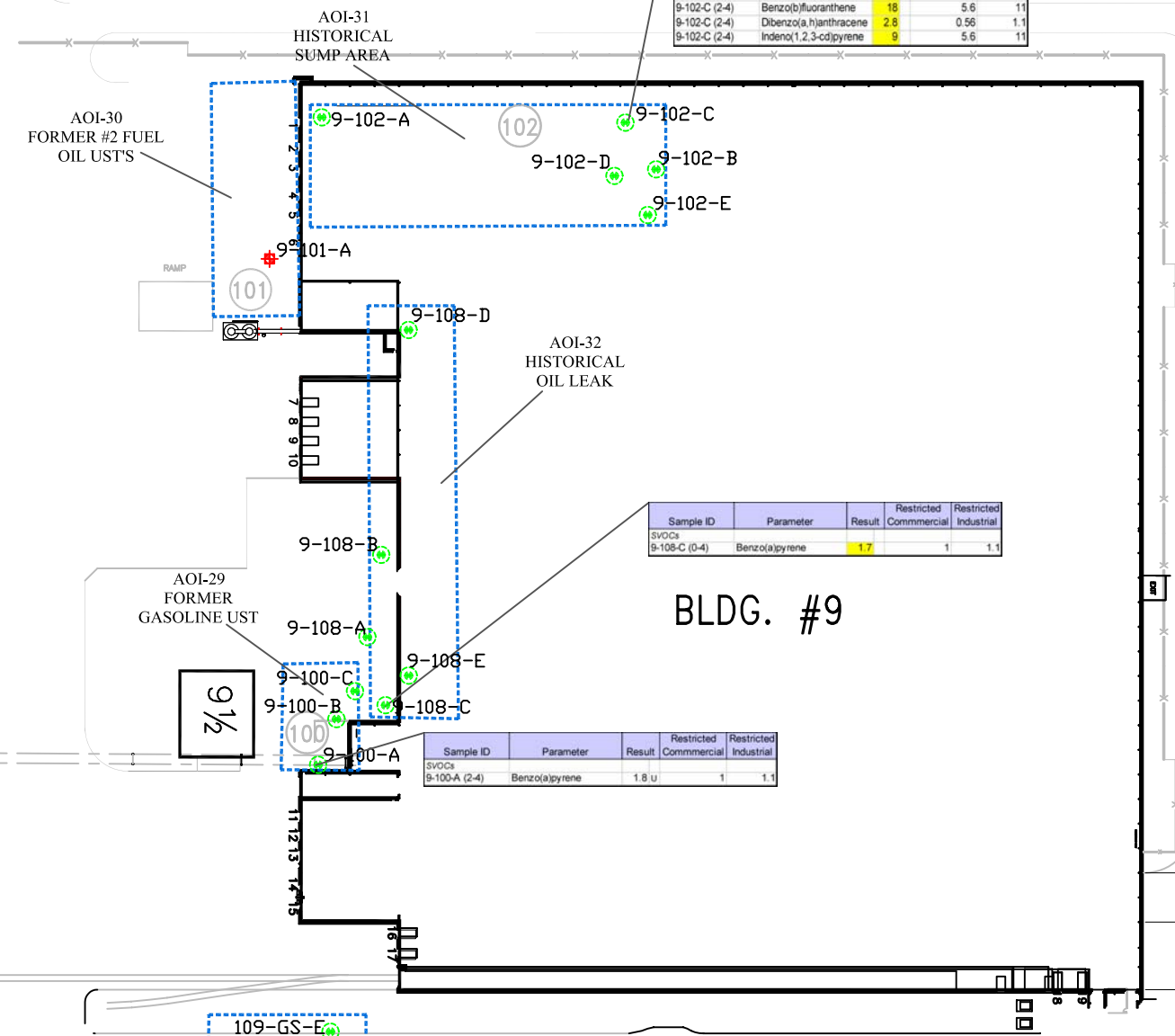


FIGURE 14 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 ANALYTICAL RESULTS  
 BUILDING 8





Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
SVOCs				
9-102-C (2-4)	Benzo(a)anthracene	18	5.6	11
9-102-C (2-4)	Benzo(a)pyrene	15	1	1.1
9-102-C (2-4)	Benzo(b)fluoranthene	18	5.6	11
9-102-C (2-4)	Dibenzo(a,h)anthracene	2.8	0.56	1.1
9-102-C (2-4)	Indeno(1,2,3-cd)pyrene	9	5.6	11



Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
SVOCs				
9-108-C (0-4)	Benzo(a)pyrene	1.7	1	1.1

Sample ID	Parameter	Result	Restricted Commercial	Restricted Industrial
SVOCs				
9-100-A (2-4)	Benzo(a)pyrene	1.8 u	1	1.1

- 9PP
- 9MM
- 9KK
- 9HH
- 9FF
- 9CC
- 9BB
- 9Z
- 9X
- 9V
- 9S
- 9Q
- 9N
- 9L
- 9J
- 9G

- LEGEND**
- ① 114 AREA OF INTEREST ID NUMBER OR LETTER
  - ▭ AREA OF INTEREST
  - ⊙ BORINGS UNLESS NOTED
  - ⊞ FORMER CHROME SUMP
  - ⊕ MONITORING WELL
  - FORMER DEGREASER LOCATIONS
  - ⊞ FORMER DEGREASER WITH SEPARATOR PIT
  - 1.1 RESULT EXCEEDED SCREENING CRITERIA

**NOTES:**  
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FIGURE MODIFIED WITH PERMISSION FROM BASE MAP PROVIDED BY DELPHI THERMAL

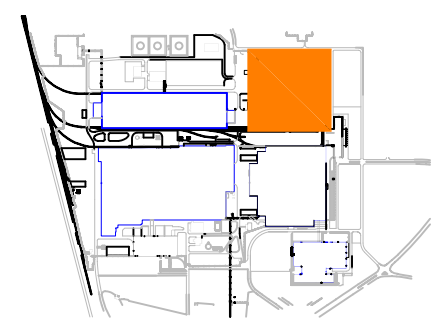
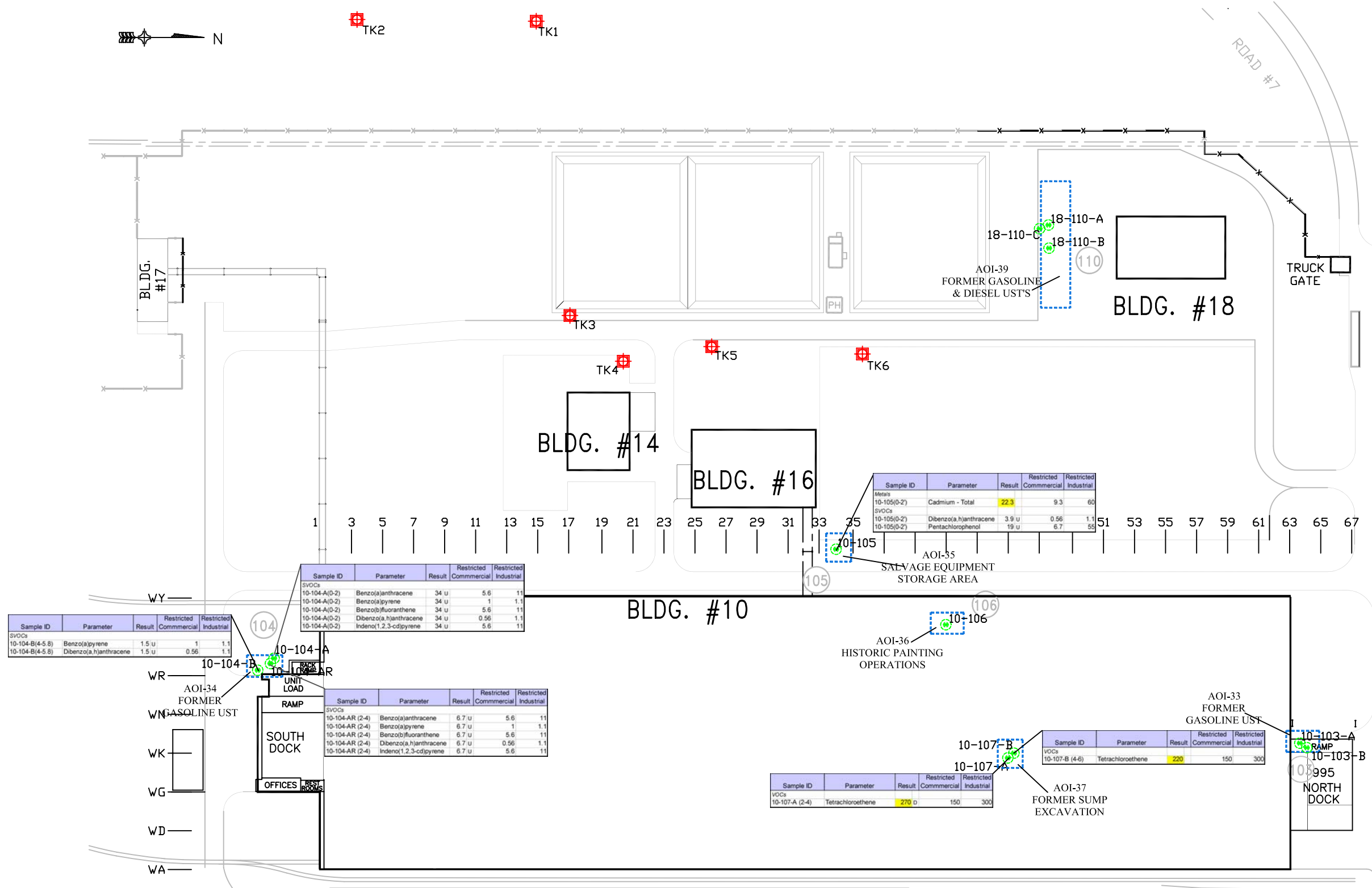


FIGURE 15 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 ANALYTICAL RESULTS  
 BUILDING 9



NOTES:  
 RESULTS ARE IN MG/KG  
 U - INDICATES COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED AT OR ABOVE REPORTING LIMIT. HOWEVER ONLY RESULTS REPORTED AS A "NONDETECT" THAT HAVE A REPORTING LIMIT 25% ABOVE THE UNRESTRICTED CRITERIA ARE SHOWN.  
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FIGURE MODIFIED WITH PERMISSION FROM BASE MAP PROVIDED BY DELPHI THERMAL

- LEGEND**
- 114 AREA OF INTEREST ID NUMBER OR LETTER
  - AREA OF INTEREST
  - ⊕ BORINGS UNLESS NOTED
  - ⊕ MONITORING WELL
  - 1.1 RESULT EXCEEDED SCREENING CRITERIA





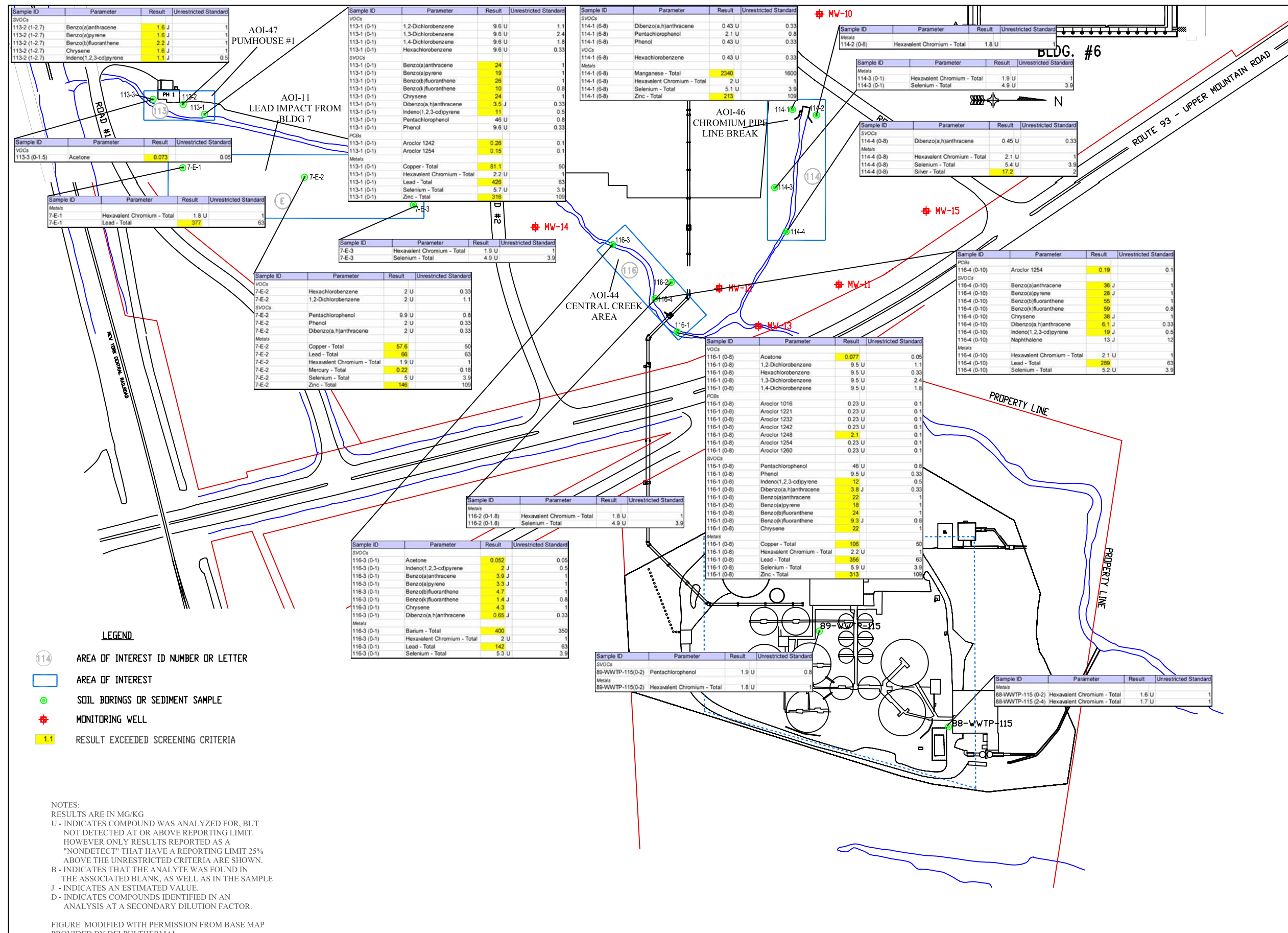
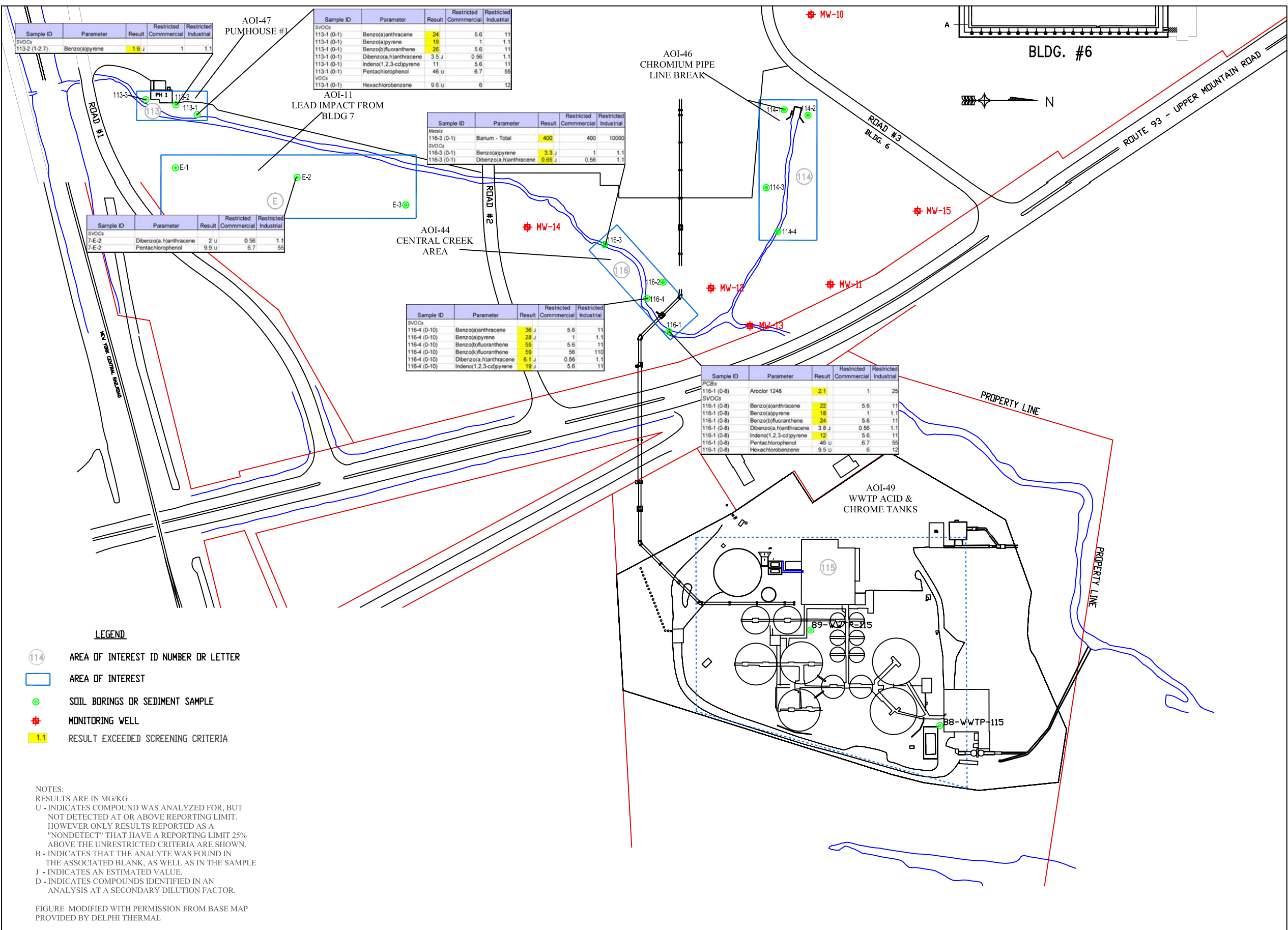


FIGURE 17A - 2006 FIELD INVESTIGATION  
LOCKPORT, NY  
ANALYTICAL RESULTS  
CREEK & WWTP





- LEGEND**
- ①①④ AREA OF INTEREST ID NUMBER OR LETTER
  - AREA OF INTEREST
  - ⊙ SOIL BORINGS OR SEDIMENT SAMPLE
  - ⊕ MONITORING WELL
  - 1.1 RESULT EXCEEDED SCREENING CRITERIA

**NOTES:**  
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FIGURE MODIFIED WITH PERMISSION FROM BASE MAP PROVIDED BY DELPHI THERMAL



FIGURE 17 - 2006 FIELD INVESTIGATION  
 LOCKPORT, NY  
 ANALYTICAL RESULTS  
 CREEK & WWTP



## *Tables*

**TABLE 1  
SUMMARY OF SAMPLE LOCATIONS AND ANALYTICAL TESTS  
DELPHI THERMAL, LOCKPORT, NEW YORK**

AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyranide	Sulfate	Iron	pH			
1	6-A-1**	o Outdoors, along northwestern corner. o Outdoors, northwestern corner. o Indoors, north central area. o Chrome sump, outdoors along northeastern area.	o Temporary tank for brine storage tank overflowed into ground. o Drainage tile around basement brine vault connected to sump inside. Potential for brine with hex chrome to be forced outside when sump pump failed. o Prior to drainage in tunnel, area permitted discharge of hex chrome/brine to stormwater Outfall 002. o Potential historic contamination, chrome sump outdoors along northeastern area.	JK	-	18'N	Soil												
	6-A-2			JK	-	38' W of NE corner of brine vault, 2' from wall	Soil												
	6-A-2 (2-4)			JK	-	38' W of NE corner of brine vault, 2' from wall	Soil						X						
	6-A-2 (12-14)			JK	-	38' W of NE corner of brine vault, 2' from wall	Soil						X						
	6-A-3			JK	-	32' E of NW corner of brine vault, 2' from wall	Soil												
	6-A-3 (4-6)			JK	-	32' E of NW corner of brine vault, 2' from wall	Soil	X											
	6-A-3 (12-14)			JK	-	32' E of NW corner of brine vault, 2' from wall	Soil						X						
	6-A-4			JK	-	23'N of 6-A-2	Soil							X					
	6-A-4 (4-6)			JK	-	23'N of 6-A-2	Soil							X					
6-A-4 (6-8)	JK	-	23'N of 6-A-2	Soil							X								
2	6-B-1	o Outdoors, along northwestern corner.	o Two 20,000-gallon underground storage tanks, No. 2 fuel oil were removed in the mid-1980s. The USTs were shown on a 1966 map.	-	-	7'N and 41'W of NW corner of the brine vault; ~ 4' off edge of road	Soil												
	6-B-1			-	-	7'N and 41'W of NW corner of the brine vault; ~ 4' off edge of road	Soil	X											
	6-B-1 (4-6)			-	-	7'N and 41'W of NW corner of the brine vault; ~ 4' off edge of road	Soil		X	X									
3	6-C-1	o Indoors, south central area.	o Historical location of model shop PCE degreaser, spill to sanitary sewer- contaminated city STP 9/24/1992.	G	11	9.5'N, 24'W	Soil												
	6-C-1 (0-2)			G	11	9.5'N, 24'W	Soil		X	X	X								
	6-C-1 (2-3.5)			G	11	9.5'N, 24'W	Soil		X	X	X								
	6-C-2			G	11	19'N, 24'W	Soil												
	6-C-2 (0-2.5)			G	11	19'N, 24'W	Soil	X											
	6-C-3			G	11	19'N, 32'W	Soil												
	6-C-3 (0-2)			G	11	19'N, 32'W	Soil		X	X	X								
	6-C-3 (2-4)			G	11	19'N, 32'W	Soil		X	X	X								
4	6-D-1	o Indoors, Hydraulic Lifts	o Hydraulic lifts without containment.	J	5	20'S, 4'E	Soil												
	6-D-1 (2-4)			J	5	20'S, 4'E	Soil			X		X							
	6-D-1 (6-7)			J	5	20'S, 4'E	Soil				X		X						
	6-D-2			G	5	22'S, 4'W	Soil					X		X					
	6-D-2 (0-2)			G	5	22'S, 4'W	Soil							X					
	6-D-2 (4-6)			G	5	22'S, 4'W	Soil	X											
	6-D-3			F	5	21'S, 9.5'W	Soil												
	6-D-3 (0-4.3)			F	5	21'S, 9.5'W	Soil					X		X					
5*	6E	o Dyno sumps, indoor central area	o Staining on floors, potential historic contamination. Visual Inspection Only.																
6	MW-6-F-1	o West of Building 6	o Historic and current USTs	-	-	Outside Northwest of Buidling 6	GW												
	MW-6-F-1 (110806)			-	-	Outside Northwest of Buidling 6	GW		X	X	X								
	MW-6-F-5			-	-	Outside Northwest of Buidling 6	GW												
	MW-6-F-5 (110806)			-	-	Outside Northwest of Buidling 6	GW	X											
7*	6Z	o Southern area of Bldg. 6.	o Vapor Intrusion study at Bldg. 6. No further investigation necessary per NYSDEC NFA.																
8	7-A-1	o Central (Btwn bldg. 7 & 10) outside area - former Tank Farm	o Former Tank Farm Area with 8 horizontal tanks, removed by Harrison Personnel. No confirmation closure samples. In area of grassy knoll.	A	39	27'W and 20'N of A39	Soil, GW												
	7-A-2			A	25	60'W of A25	Soil, GW												
	7-A-4	o Outdoors, western central area in former tank farm area.	o Approximately 4,300-gallons of PCE pumped into tank farm pumphouse through abandoned fill line. Majority entered treated sewer and contaminated sewers and WWTP 2/10/1983.	A	9	20'N and 30'W of A9	Soil, GW												
	7-A-4 (0-2)			A	9	20'N and 30'W of A9	Soil, GW		X	X	X								
	7-A-4 (6-8)	o Outdoors, western central area near former tanks farm area.	o PCE & breakdown products identified in monitoring well.	A	9	20'N and 30'W of A9	Soil, GW		X	X	X								
	7-A-5			o Outdoors, along southwestern area.	o PCE identified when underground abandoned pipe was broken during 1/3/2005 excavation	A	16	30'W and 1.5'N of A16	Soil, GW										
	7-A-5 (0-2)	A	16			30'W and 1.5'N of A16	Soil, GW		X	X	X								
	7-A-5 (4-6)	o Contaminated soil near truck docks near column A-33 on w. side of bldg.	o Perc detected at .2 ppm in soils removed during construction of truck docks on west side of bldg. Source not identified and no previous investigation was completed. Perc was historically stored in AST and UST (previous to AST) north and south of truck dock.	A	16	30'W and 1.5'N of A16	Soil, GW	X											
	7-A-6			A	25	5'S and 15'W of A25	Soil, GW												
	7-A-6 (4-6)			A	25	5'S and 15'W of A25	Soil, GW		X	X	X								
	7-A-6 (6-8)			A	25	5'S and 15'W of A25	Soil, GW		X	X	X								
	MW-7-A-6			A	25	5'S and 15'W of A25	Soil, GW												
	MW-7-A-6 (111006)			A	25	5'S and 15'W of A25	Soil, GW		X	X	X								

**TABLE 1  
SUMMARY OF SAMPLE LOCATIONS AND ANALYTICAL TESTS  
DELPHI THERMAL, LOCKPORT, NEW YORK**

AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyranide	Sulfate	Iron	pH		
	7-A-7			A	29	28'W of A29	Soil, GW											
	7-A-7 (4-6)			A	29	28'W of A29	Soil, GW		X	X	X							
	7-A-7 (6-8)			A	29	28'W of A29	Soil, GW		X	X	X							
	7-A-8			A	25	5'S and 82'W of A25	Soil, GW											
	7-A-8 (0-2)			A	25	5'S and 82'W of A25	Soil, GW		X	X	X							
	7-A-8 (2-4)			A	25	5'S and 82'W of A25	Soil, GW		X	X	X							
	7-A-9			A	24	28' W of A24	Soil, GW											
	7-A-9 (8-10)			A	24	28' W of A24	Soil, GW		X									
9	7-B-1	o Indoors, western central area of building.	o Limited hex chrome use, alum vacuum brazing operations, military heat exchangers.	Q	33	5'N, 2'E	Soil											
	7-B-1 (6-8)			Q	33	5'N, 2'E	Soil				X							
	7-B-1 (8-9.4)			Q	33	5'N, 2'E	Soil	X										
	7-B-2			Q	35	2.75'S, 3'W	Soil											
	7-B-2 (0-3.8)			Q	35	2.75'S, 3'W	Soil						X					
	7-B-3			Q	35	25'S, 21'W	Soil											
	7-B-3 (0-3)			Q	35	25'S, 21'W	Soil						X					
10	7-C-2	o Indoors, northeastern area of building	o Historical Coal Pile Areas	-	-	32' S of SE corner of N2 plant	Soil											
	7-C-2 (0-2)			-	-	32' S of SE corner of N2 plant	Soil			X	X		X	X	X			
	7-C-2 (9-10)	o Outdoors, northeastern area of building		-	-	32' S of SE corner of N2 plant	Soil			X	X		X	X	X			
	7-C-2 111006)			-	-	32' S of SE corner of N2 plant	Soil			X	X							
	7-C-3			-	-	59'W and 25'N of NW Corner of Cooling Tower #2	Soil											
	7-C-3 (2-4)			-	-	59'W and 25'N of NW Corner of Cooling Tower #2	Soil			X	X		X	X	X			
	7-C-3 (8-10)			-	-	59'W and 25'N of NW Corner of Cooling Tower #2	Soil			X	X							
11	7-E-1	o Outdoors, southern area of building	o Extensive use of lead solder for decades.	-	-	Located by GPS & Staked - See Figure	Soil											
	7-E-1			-	-	Located by GPS & Staked - See Figure	Soil				X					X		
	7-E-2			-	-	Located by GPS & Staked - See Figure	Soil											
	7-E-2			-	-	Located by GPS & Staked - See Figure	Soil	X										
	7-E-3			-	-	Located by GPS & Staked - See Figure	Soil											
	7-E-3			-	-	Located by GPS & Staked - See Figure	Soil						X					X
	7-G-1-A	o Degreasers located indoors along southwestern to south-central area of building.	o Historical PCE & TCE degreasers located in the building, with a history of leaks and spills.	C	17	12'S, 13'W	Soil											
	7-G-1-A (0-2)			C	17	12'S, 13'W	Soil		X									
	7-G-1-A (2-4)			C	17	12'S, 13'W	Soil		X									
	7-G-1-B	o Degreasers located indoors along western-central area.	o Historical PCE & TCE degreasers with separator pits.	L	13	12'S, 3'W	Soil											
	7-G-1-B (2-4)			L	13	12'S, 3'W	Soil		X									
	7-G-1-B (4-6)			L	13	12'S, 3'W	Soil		X									
	7-G-1-C	o Degreasers located indoors along northwestern area of building.	o Historical concerns with spills/releases.	Q	13	20'E, 30'S	Soil											
	7-G-1-C (6-8)			Q	13	20'E, 30'S	Soil		X									
	7-G-1-C (8-9.6)			Q	13	20'E, 30'S	Soil	X										
	7-G-1-D	o Degreasers located indoors along central to central eastern area of building.	o Former degreaser.	Q	3	5'N, 5'E	Soil											
	7-G-1-D (0-2)			Q	3	5'N, 5'E	Soil		X									
	7-G-1-D (2-4)			Q	3	5'N, 5'E	Soil		X									
	7-G-2-A	o Chrome sump, center of bldg. Q-35	o Former degreaser with separator pit.	G	35	4'W	Soil											
	7-G-2-A (2-4)			G	35	4'W	Soil		X									
	7-G-2-A (4-6.8)			G	35	4'W	Soil		X									
	7-G-2-B	o Degreasers located indoors along north central area of building.	o D-400 PCE Spill from Degreaser	E	35	15'W	Soil											
	7-G-2-B (0-1.5)			E	35	15'W	Soil		X									
	7-G-2-C			E	35	10'E	Soil											
	7-G-2-C (6-8)	E	35	10'E	Soil	X												
	7-G-2-C (8-9.5)	E	35	10'E	Soil			X										
	7-G-3-A	o Indoors, south-central area.		J	59	15'E, 5'N	Soil											
	7-G-3-A (2-4)			J	59	15'E, 5'N	Soil		X									
	7-G-3-A (4-6.5)			J	59	15'E, 5'N	Soil	X										
	7-G-3-B	o Former degreaser with separator pit.		E	53	8'N	Soil											
	7-G-3-B (2-4)			E	53	8'N	Soil		X									
	7-G-3-B (6-8)			E	53	8'N	Soil		X									
	7-G-3-C			E	55	8'W	Soil											
	7-G-3-C (0-2)			E	55	8'W	Soil		X									
	7-G-3-C (4-6)			E	55	8'W	Soil		X									



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DELPHI THERMAL, LOCKPORT, NEW YORK**

AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyranide	Sulfate	Iron	pH	
12	7-G-4-A			N	37	15'N, 4'E	Soil										
	7-G-4-A (0-2)			N	37	15'N, 4'E	Soil		X								
	7-G-4-A (2-3.5)			N	37	15'N, 4'E	Soil		X								
	7-G-4-B			N	37	4'S, 4'E	Soil										
	7-G-4-B (0-2)			N	37	4'S, 4'E	Soil		X								
	7-G-4-B (2-4.2)			N	37	4'S, 4'E	Soil		X								
	7-G-4-C			S	37	16'S, 2'E	Soil										
	7-G-4-C (0-2)			S	37	16'S, 2'E	Soil		X								
	7-G-4-C (8-10.7)			S	37	16'S, 2'E	Soil	X									
	7-G-4-D			V	39	18'W, 2'S	Soil										
	7-G-4-D (4-6)			V	39	18'W, 2'S	Soil		X								
	7-G-4-D (6-8)			V	39	18'W, 2'S	Soil		X								
	7-G-4-E			S	37	17'W, 16'N	Soil										
	7-G-4-E (4-6)			S	37	17'W, 16'N	Soil		X								
	7-G-4-E (6-8)			S	37	17'W, 16'N	Soil		X								
	7-G-5-A			Z	45	16'N, 5'E	Soil										
	7-G-5-A (8-10)			Z	45	16'N, 5'E	Soil		X								
	7-G-5-A (10-12)			Z	45	16'N, 5'E	Soil		X								
	7-G-5-B			X	49	14'W, 3'S	Soil										
	7-G-5-B (0-1.9)			X	49	14'W, 3'S	Soil		X								
	7-G-5-C			X	53	14'W	Soil										
	7-G-5-C (6-8)			X	53	14'W	Soil		X								
	7-G-5-C (10-11.7)			X	53	14'W	Soil	X									
	7-G-6-A			MM	59	5'N, 20'W	Soil										
	7-G-6-A (0-2)			MM	59	5'N, 20'W	Soil		X								
	7-G-6-A (2-3.75)			MM	59	5'N, 20'W	Soil	X									
	7-G-6-B			MM	59	10'N, 10'W	Soil										
	7-G-6-B (0-2)			MM	59	10'N, 10'W	Soil		X								
	7-G-6-B (2-3.75)			MM	59	10'N, 10'W	Soil		X								
	7-G-6-DUP (102606)			MM	59	10'N, 10'W	Soil		X								
	7-G-7-A			X	61	21'W, 14'N	Soil										
	7-G-7-A (6-8)			X	61	21'W, 14'N	Soil		X								
	7-G-7-B (8-10.7)			X	61	30'N, 14'W	Soil	X									
	7-G-7-B			X	61	30'N, 14'W	Soil										
	7-G-7-B (4-6)			X	61	30'N, 14'W	Soil		X								
	7-G-7-B (6-7.8)			X	61	30'N, 14'W	Soil		X								
	7-G-8-A			Q	51	11'S, 14'W	Soil										
	7-G-8-A (0-2.5)			Q	51	11'S, 14'W	Soil		X								
	7-G-8-B			N	51	12'E	Soil										
	7-G-8-B (6-8)			N	51	12'E	Soil		X								
	7-G-8-B (8-10)			N	51	12'E	Soil	X									
	7-G-8-C			Q	49	14'N, 20'E	Soil										
	7-G-8-C (6-8)			Q	49	14'N, 20'E	Soil		X								
	7-G-8-C (8-10.75)			Q	49	14'N, 20'E	Soil		X								
	7-G-10-A			Ax	48	26'E	Soil										
	7-G-10-A (0-2)			Ax	48	26'E	Soil		X								
	7-G-10-A (4-7.9)			Ax	48	26'E	Soil		X								
	7-G-10-B			C	49	8'S, 4'W	Soil										
	7-G-10-B (2-4)			C	49	8'S, 4'W	Soil		X								
	7-G-10-B (4-6)			C	49	8'S, 4'W	Soil	X									
7-G-10-C			Ax	48	12'E, 4'S	Soil											
7-G-10-C (0-1.5)			Ax	48	12'E, 4'S	Soil		X									
7-G-11-A			C	53	12'S, 20'W	Soil											
7-G-11-A (2-4)			C	53	12'S, 20'W	Soil		X									
7-G-11-A (4-6)			C	53	12'S, 20'W	Soil		X									
7-G-11-B			C	53	5'N, 12'W	Soil											
7-G-11-B (2-4)			C	53	5'N, 12'W	Soil		X									
7-G-11-B (4-6.5)			C	53	5'N, 12'W	Soil		X									

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AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyanide	Sulfate	Iron	pH		
	7-G-11-C			C	53	5'N, 10'E	Soil											
	7-G-11-C (2-4)			C	53	5'N, 10'E	Soil	X										
	7-G-11-C (4-5.5)			C	53	5'N, 10'E	Soil		X									
13	7-L-1	o Outdoors, in northeastern corner of building - April 19, 1996	o UST found during audit in mid-1995, tank closed prior to 1982, not registered, no odors, no visual staining, materials pumped out and backfilled. See PLT-1480 Sheet, Task 2.	J	66	12'S, 4'W	Soil											
	7-L-1 (0-3.5)			J	66	12'S, 4'W	Soil	X										
14	7-M-1	o Used Oil Containment Area- outdoors along northeastern corner of bldg north of tanks 7-11 and 7-12  o Outdoors, northeastern corner of bldg. Evidence of leakage from oil collection sewer  o Outdoors, northeastern area Mg brazing shed and former use of oils.  o Rolling Mill Reclaiming Tanks & Pump House  o Central area, indoors.	o Low concentrations of PCBs and VOCs was found in waste oil storage area during 1995 reconstruction of the drain system and containment pad of 2 waste oil ASTs.  o Outdoors, northeastern corner of bldg. Evidence of leakage from oil collection sewer discovered when installing oil tank containment.  o Outdoors, northeastern area Mg brazing shed and former use of oils.  o Rolling Mill Reclaiming Tanks & Pump House	PP	63	40'W and 125'N of PP63	Soil											
	7-M-1(2-4)			PP	63	40'W and 125'N of PP63	Soil	X										
	7-M-1 (5-7)			PP	63	40'W and 125'N of PP63	Soil	X										
	7-M-2			PP	63	72'W and 60'N of PP63 column	Soil											
	7-M-2 (0-2)			PP	63	72'W and 60'N of PP63 column	Soil	X										
	7-M-2 (6-7.8)			PP	63	72'W and 60'N of PP63 column	Soil	X										
	7-M-3			PP	63	20'W, 4'S	Soil											
	7-M-3 (6-8)			PP	63	20'W, 4'S	Soil	X										
	7-M-3 (10-11.7)			PP	63	20'W, 4'S	Soil	X										
	7-M-4			PP	63	95'W and 5'N of PP63	Soil											
	7-M-4 (4-6)			PP	63	95'W and 5'N of PP63	Soil	X										
	7-M-4 (6-8.4)			PP	63	95'W and 5'N of PP63	Soil	X										
	7-M-5			PP	63	10'N and 15'W of FF63	Soil											
	7-M-5 (0-2.6)			PP	63	10'N and 15'W of FF63	Soil	X										
	7-M-5 (4-7)			PP	63	10'N and 15'W of FF63	Soil	X										
	7-M-6			PP	63	20'W, 24'S	Soil											
7-M-6 (2-4)	PP	63	20'W, 24'S	Soil	X													
7-M-6 (4-4.75)	PP	63	20'W, 24'S	Soil	X													
15	7-P-1	o Acid flux room, south end of Bldg. 7	o Tin and zinc contamination detected in soil beneath the floor of the bldg., identified as being associated with releases from former sumps used for liquid flux storage. Extent of soil contamination has been identified. No groundwater investigation completed.	FF	3	14'N,9'W	GW											
	MW-7-P-1			FF	3	14'N,9'W	GW											
	MW-7-P-1 (111406)			FF	3	14'N,9'W	GW		X			X						
16	7-R-1	o Bldg. 7 summer of 1998 Delphi installed 2 press machines, excavated around manhole for an inactive sealed oil collection sewer  o Die storage rack, 10' east of Column KK55 in Bldg. 7, cracks and seams that run north to south  o On 6/5/1998 Delphi found through analytical testing of liquids in a manhole near column MM53, from an inactive oil collection system that PCBs were present.	o Testing of liquids found PCBs.  o Employee complained that when use of forklift over area, oil "oozes" out from floor beneath.  o PCBs found in liquid in manhole of inactive oil collection system	KK	57	5'E, 2'S	Soil											
	7-R-1 (0-2)			KK	57	5'E, 2'S	Soil			X		X						
	7-R-1 (6-8)			KK	57	5'E, 2'S	Soil				X		X					
	7-R-2			KK	55	9'N, 2'E	Soil											
	7-R-2 (2-4)			KK	55	9'N, 2'E	Soil				X		X					
	7-R-2 (4-4.8)			KK	55	9'N, 2'E	Soil				X		X					
	7-R-3			MM	47	8'E	Soil											
	7-R-3 (2-4)			MM	47	8'E	Soil				X		X					
7-R-3 (6-7.5)	MM	47	8'E	Soil	X													
17	7-FF-1	o Northwestern corner of bldg. (indoors). Well - oil leaked through (train well) oil seep.  o Along northeastern corner of building (indoors) - D-466 Presses	o Northwestern corner of bldg. Train well - oil leaked through.  o Oil from D-466 presses entered from storm sewer via buried drains in old train and truck docks, oil recovery system was installed.	Ax	67	7'E	Soil											
	7-FF-1 (0-3.3)			Ax	67	7'E	Soil	X										
	7-FF-2			C	67	8'S, 18'W	Soil											
	7-FF-2 (0-4)			C	67	8'S, 18'W	Soil				X		X					
	7-FF-2 (4-5.6)			C	67	8'S, 18'W	Soil				X		X					
	7-FF-3			E	63	16'N, 1'E	Soil											
8-001-A	8-001-A	o Chromate system trench repair -columns L-81 to S-83  o Former condenser lines 1 & 2 (columns N-103 - 113)  o 8 former chrome sumps	o A breached spill containment trench was repaired in 2000. Soil samples were collected before repairs in areas where the concrete had been degraded and results indicated chromium concentrations up to 2,600 ppm. 16 tons of chromium contaminated debris (primarily concrete) was disposed off-site.  o Degraded sewers were found when the condenser lines were decommissioned in 1999, contaminated soil was found and removed during demolition of containment features, sumps, sewers in 2000.	S	81	20'W, 7'N	Soil					X						
	8-001-A (6-8)			S	81	20'W, 7'N	Soil											
	8-001-A (8-10.2)			S	81	20'W, 7'N	Soil	X										
	8-001-B			N	107	4.5'N, 2.5'W	Soil											
	8-001-B (6-8)			N	107	4.5'N, 2.5'W	Soil						X					
	8-001-B (8-10)			N	107	4.5'N, 2.5'W	Soil						X					
	8-001-C			V	105	5'N, 5'E	Soil											
	8-001-C (2-4)			V	105	5'N, 5'E	Soil						X					

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18	8-001-C (4-6)		Approx. 60 tons of chromium contaminated debris was disposed off-site.  o 8 former chrome sumps -7 locations found on maps; however, 6 boring locations were determined to be representative areas of former sumps.	V	105	5'N, 5'E	Soil				X						
	8-001-D			X	91	4'N, 4'W	Soil										
	8-001-D (0-2)			X	91	4'N, 4'W	Soil					X					
	8-001-D (2-4)			X	91	4'N, 4'W	Soil					X					
	8-001-E			Q	99	23'S, 2'W	Soil										
	8-001-E (0-2)			Q	99	23'S, 2'W	Soil						X				
	8-001-E (2-4)			Q	99	23'S, 2'W	Soil						X				
	8-001-F			Q	113	20'S, 6'W	Soil										
	8-001-F (0-2)			Q	113	20'S, 6'W	Soil						X				
	8-001-F (2-4)			Q	113	20'S, 6'W	Soil						X				
	8-001-G			S	103	21'E, 4'N	Soil										
	8-001-G (10-11)			S	103	21'E, 4'N	Soil						X				
	8-001-G (2-4)			S	103	21'E, 4'N	Soil						X				
	8-001-H			X	83	4'N	Soil										
	8-001-H (0-2)			X	83	4'N	Soil						X				
	8-001-H (8-9.6)			X	83	4'N	Soil						X				
	8-001-I			S	93	20'S, 3'W	Soil										
	8-001-I (4-6)			S	93	20'S, 3'W	Soil						X				
8-001-I (6-8)	S	93	20'S, 3'W	Soil						X							
8-001-J	V	81	23'S, 3'W	Soil													
8-001-J (0-2)	V	81	23'S, 3'W	Soil							X						
8-001-J (2-4)	V	81	23'S, 3'W	Soil							X						
19	8-002-A	o Outdoors, along north western corner.	o Three underground tanks (8,000-gal, naphtha 8,000-gal, paint surge, 4,000-gal paint dump) removed in the area of columns C/E-(exterior to) 11/113	-	-	From east side of stairwell outside building just west of G113; 42E along wall and 5' out from wall	Soil										
	8-002-A (0-8)	o North central area, outdoors, emergency dump tank with floor drains in paint booth.	o Underground Paint Dump (or solvent) tank discovered during HTC installation. UST removed.	-	-	From east side of stairwell outside building just west of G113; 42E along wall and 5' out from wall	Soil		X	X	X						
	8-002-A (8-8.5)			-	-	From east side of stairwell outside building just west of G113; 42E along wall and 5' out from wall	Soil		X	X	X						
	8-002-B			-	-	From lowest step of stairs (same as for 8-002-A); 2 feet west along wall and then 10' out from wall.	Soil										
	8-002-B (2-8)			-	-	From lowest step of stairs (same as for 8-002-A); 2 feet west along wall and then 10' out from wall.	Soil	X									
	8-002-B (8-10)			-	-	From lowest step of stairs (same as for 8-002-A); 2 feet west along wall and then 10' out from wall.	Soil		X	X	X						
	8-002-C			-	-	Stairwell near E113; 6'W of west side of stairwell, and 3'N from the building wall.	Soil										
	8-002-C (1.5-4)			-	-	Stairwell near E113; 6'W of west side of stairwell, and 3'N from the building wall.	Soil		X		X						
	8-002-C (4-6)			-	-	Stairwell near E113; 6'W of west side of stairwell, and 3'N from the building wall.	Soil		X		X						
20	8-003-A	o Outdoors, south - southeastern area (due southwest of pumphouse #2).	o Two 20,000-gallon underground fuel oil tanks removed.	-	-	28'S and 20'W of reference point RP to top of rock	Soil, GW										
	8-003-B			-	-	53'S and 5'W of RP	Soil, GW										
	MW-8-003-B			-	-	53'S and 5'W of RP	Soil, GW										
	MW-8-003-B (111006)			-	-	53'S and 5'W of RP	Soil, GW		X	X	X						
	8-003-C			-	-	53'S and 27'W of RP (must go below concrete anchor pad)	Soil, GW										
21	8-004-A	o Outdoors, southeastern corner	o Underground storage tank -1,000-gal gasoline removed	-	-	From outside corner closest to MM83; 25'S and 8'E	Soil										
	8-004-A (6-8)			-	-	From outside corner closest to MM83; 25'S and 8'E	Soil		X								
	8-004-A (8-10)			-	-	From outside corner closest to MM83; 25'S and 8'E	Soil		X								
	8-004-B			-	-	From outside corner closest to MM83; 6'S and 15'E	Soil										
	8-004-B (4-6)			-	-	From outside corner closest to MM83; 6'S and 15'E	Soil		X								
	8-004-B (6-8)			-	-	From outside corner closest to MM83; 6'S and 15'E	Soil	X									
	8-004-C			-	-	From outside corner closest to MM83; 28'S and 25'E	Soil										
	8-004-C (6-8)			-	-	From outside corner closest to MM83; 28'S and 25'E	Soil		X								



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DELPHI THERMAL, LOCKPORT, NEW YORK**

AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyranide	Sulfate	Iron	pH		
	8-004-C (8-9.7)			-	-	From outside corner closest to MM83; 28'S and 25'E	Soil		X									
22	8-005-1	o Indoors throughout building.	o Historical solvent degreasers located in this building.	AX	105	15'S, 10'E	Soil											
	8-005-1 (10-11.6)			AX	105	15'S, 10'E	Soil	X										
	8-005-1 (6-8)	o Indoors, southwestern corner of building.	o Approximate historical location of D-868 TCE degreaser. Solvent odors present during floor replacement.	AX	105	15'S, 10'E	Soil		X	X	X	X						
	8-005-2-A			E	85	15'W	Soil											
	8-005-2-A (4-6)	o Indoors, eastern - central area.	o Approximate historical location of D-861 TCE degreaser#6, release to sewer 10/16/1987.	E	85	15'W	Soil		X									
	8-005-2-A (6-8)			E	85	15'W	Soil	X										
	8-005-2-B			E	85	6'N	Soil											
	8-005-2-B (0-2)	o Indoors. Northeastern area.	o Historical solvent degreasers located in this building.	E	85	6'N	Soil		X									
	8-005-2-B (2-4)			E	85	6'N	Soil		X									
	8-005-2-C			E	85	10'W, 20'S	Soil											
	8-005-2-C (2-4)			E	85	10'W, 20'S	Soil			X								
	8-005-2-C (4-6)			E	85	10'W, 20'S	Soil			X								
	8-005-3A			KK	85	5'N	Soil											
	8-005-3A (6-8)			KK	85	5'N	Soil			X								
	8-005-3A (8-10)			KK	85	5'N	Soil			X								
	8-005-3B			HH	85	2'N, 8.5'E	Soil											
	8-005-3B (6-8)			HH	85	2'N, 8.5'E	Soil			X								
	8-005-3B (8-9)	HH	85	2'N, 8.5'E	Soil			X										
	8-005-3C	FF	85	3'N, 11'E	Soil													
	8-005-3C (4-6)	FF	85	3'N, 11'E	Soil			X										
	8-005-3C (8-10)	FF	85	3'N, 11'E	Soil			X										
	8-005-4A	PP	91	15'W, 15'S	Soil													
	8-005-4A (10-12)	PP	91	15'W, 15'S	Soil				X									
	8-005-4A (6-8)	PP	91	15'W, 15'S	Soil				X									
	8-005-4B	MM	91	24'W, 12'S	Soil													
	8-005-4B (2-4)	MM	91	24'W, 12'S	Soil				X									
	8-005-4B (4-4.5)	MM	91	24'W, 12'S	Soil				X									
	8-005-4C	KK	91	20'W, 30'S	Soil													
	8-005-4C (6-8)	KK	91	20'W, 30'S	Soil				X									
	8-005-4C (8-10)	KK	91	20'W, 30'S	Soil				X									
	8-005-4D	FF	91	15'S	Soil													
	8-005-4D (2-4)	FF	91	15'S	Soil				X									
	8-005-4D (8-10)	FF	91	15'S	Soil				X									
	8-005-4E	DD	91	20'S, 2'E	Soil													
	8-005-4E (2-4)	DD	91	20'S, 2'E	Soil				X									
	8-005-4E (4-6)	DD	91	20'S, 2'E	Soil				X									
	8-005-4E (2-4)	DD	91	20'S, 2'E	Soil				X									
	8-005-5A	KK	97	5'S, 3'W	Soil													
	8-005-5A (2-4)	KK	97	5'S, 3'W	Soil				X									
	8-005-5A (4-6)	KK	97	5'S, 3'W	Soil				X									
8-005-5B	KK	101	5'S, 9'E	Soil														
8-005-5B (2-4)	KK	101	5'S, 9'E	Soil				X										
8-005-5B (4-6)	KK	101	5'S, 9'E	Soil				X										
8-005-5C	KK	109	16'E	Soil														
8-005-5C (0-2)	KK	109	16'E	Soil				X										
8-005-5D	KK	109	16'E, 35'N	Soil														
8-005-5D (4-6)	KK	109	16'E, 35'N	Soil				X										
8-005-5D (6-8)	KK	109	16'E, 35'N	Soil				X										
8-005-5D (6-8)	KK	109	16'E, 35'N	Soil				X										
8-006-A	FF	o Northeast corner- indoors - historic press operations	o Northeast corner- indoors - historic press operations	FF	109	7.5'S, 7.5'E	Soil											
8-006-A (4-6)	FF			109	7.5'S, 7.5'E	Soil						X						
8-006-A (8-10.5)	FF			FF	109	7.5'S, 7.5'E	Soil				X							
8-006-B	DD			DD	109	8'S,7'W	Soil											
8-006-B (6-8)	DD			DD	109	8'S,7'W	Soil				X							
8-006-B (8-8.8)	DD			DD	109	8'S,7'W	Soil	X										
8-006-C	BB			BB	109	7'S,3'E	Soil											
8-006-C (2-4)	BB			BB	109	7'S,3'E	Soil		X	X	X	X						

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AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyranide	Sulfate	Iron	pH		
23	8-006-C (4-6)			BB	109	7'S,3'E	Soil		X	X	X	X						
	8-006-D			Z	109	7'S,1'W	Soil											
	8-006-D (2-4)			Z	109	7'S,1'W	Soil		X	X	X	X						
	8-006-D (6-8)			Z	109	7'S,1'W	Soil		X	X	X	X						
	8-006-E			BB	111	7'N,17'W	Soil											
	8-006-E (2-4)			BB	111	7'N,17'W	Soil		X	X	X	X						
	8-006-E (8-10)			BB	111	7'N,17'W	Soil		X	X	X	X						
	8-006-F			HH	111	20'S,20'W	Soil											
	8-006-F (0-1.5)			HH	111	20'S,20'W	Soil		X	X	X	X						
	8-006-F (1.5-2.7)			HH	111	20'S,20'W	Soil		X	X	X	X						
24	8-009-A	o Southeastern corner - outdoors - OWS	o Southeastern corner in pumphouse #2- indoors - has OWS - may be historic issues	-	-	10'N and 5'E of SE corner of Pumphouse # 2	Soil											
	8-009-A (0-2)			-	-	10'N and 5'E of SE corner of Pumphouse # 2	Soil		X	X	X	X						
	8-009-A (2-3.6)			-	-	10'N and 5'E of SE corner of Pumphouse # 2	Soil		X	X	X	X						
	8-009-B			-	-	10'W and 2'S of SE corner of Pumphouse # 2	Soil											
	8-009-B (0-2)			-	-	10'W and 2'S of SE corner of Pumphouse # 2	Soil		X	X	X	X						
	8-009-B (4-6.7)			-	-	10'W and 2'S of SE corner of Pumphouse # 2	Soil	X										
25*	8-010	o Southwest corner, indoors- oil contamination at scrap dock	o Southwest corner, indoors- oil contamination at scrap dock															
26*	8-011	o Southeastern corner- catch basin, outdoors	o Southeastern corner- catch basin, outdoors															
27*	--	o Outdoors, southeastern corner of building	o TCE detected in soil 11/16/94 during an excavation to repair sprinkler lines. Site of historical aboveground TCE storage tanks															
28*	--	o Outdoors, southeastern corner	o Removal of tank -10,000-gallon TCE aboveground tank (8-18) disturbed and moved due to line break 11/1994															
29	9-100-A	o Outdoors along southeastern area of building, near column 9J-81.	o Underground gasoline tank closed in place 2,000-gal. gasoline.	-	-	10'W and 12'N of SW corner loading dock, interior column 9J79	Soil											
	9-100-A (2-4)			-	-	10'W and 12'N of SW corner loading dock, interior column 9J79	Soil	X										
	9-100-A (6-7.3)			-	-	10'W and 12'N of SW corner loading dock, interior column 9J79	Soil		X		X							
	9-100-B			-	-	2'W and 10'S of SW corner of SW loading dock	Soil											
	9-100-B (2-4)			-	-	2'W and 10'S of SW corner of SW loading dock	Soil		X		X							
	9-100-B (6-6.9)			-	-	2'W and 10'S of SW corner of SW loading dock	Soil		X		X							
	9-100-C			-	-	23'W and 1.5'N of SW corner of SE loading dock	Soil											
	9-100-C (0-2)			-	-	23'W and 1.5'N of SW corner of SE loading dock	Soil		X		X							
	9-100-C (4-6)			-	-	23'W and 1.5'N of SW corner of SE loading dock	Soil		X		X							
30	9-101-A	o Outdoors along southwestern area of building.	o Two 20,000-gallon underground fuel 9-21 & 9-22. Removed on 12/1990.	-	-	19'W and 24'S of SW corner of Bldg. 9, exterior adjacent to column 9DD79	Soil, GW											
	MW-9-101-A			-	-	19'W and 24'S of SW corner of Bldg. 9, exterior adjacent to column 9DD79	Soil, GW											
	MW-9-101-A (10-12')			-	-	19'W and 24'S of SW corner of Bldg. 9, exterior adjacent to column 9DD79	Soil, GW		X	X	X							
	MW-9-101-A (8-10)			-	-	19'W and 24'S of SW corner of Bldg. 9, exterior adjacent to column 9DD79	Soil, GW	X										
31	9-102-A	o Historic oil spill at 9KK - 9MM	o Historic oil spill at column 93.	MM	79	15.5'W,12'N	Soil											
	9-102-A (0-4)			MM	79	15.5'W,12'N	Soil	X										
	9-102-B	o Sump beneath oil tanks at loading dock along southwestern corner	o Sump beneath oil tanks at loading dock along southwestern corner	KK	93	7'N,12'W	Soil											
	9-102-B (0-2)			KK	93	7'N,12'W	Soil		X	X		X						
	9-102-B (2-3.6)			KK	93	7'N,12'W	Soil		X	X		X						
	9-102-C			MM	93	18'S,10'W	Soil											
	9-102-C (0-2)			MM	93	18'S,10'W	Soil		X	X		X						
	9-102-C (2-4)			MM	93	18'S,10'W	Soil		X	X		X						
	9-102-D			KK	91	13'N, 6.5'W	Soil											
	9-102-D (0-2)			KK	91	13'N, 6.5'W	Soil		X	X		X		X				

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	9-102-D (2-4)			KK	91	13'N, 6.5'W	Soil		X	X		X						
	9-102-E			HH	93	15'E	Soil											
	9-102-E (0-4)			HH	93	15'E	Soil		X	X			X					
32	9-108-A	o Southern Portion of Bldg.	o Oil leaked from non-treated sewer in 1994, southern portion of bldg. partially outside and in dock.	RP	108	70'W and 12.5'S of RP108	Soil											
	9-108-A (0-4)			RP	108	70'W and 12.5'S of RP108	Soil		X	X	X	X						
	9-108-A (4-8)			RP	108	70'W and 12.5'S of RP108	Soil		X	X	X	X						
	9-108-B			RP	108	135'W and 12.5'S of RP108	Soil											
	9-108-B (0-4)			RP	108	135'W and 12.5'S of RP108	Soil		X	X	X	X						
	9-108-B (4-8)			RP	108	135'W and 12.5'S of RP108	Soil		X	X	X	X						
	9-108-C			RP	108	12.5S and 9'W of RP108-A	Soil											
	9-108-C (0-4)			RP	108	12.5S and 9'W of RP108-A	Soil		X	X	X	X						
	9-108-C (4-8)			RP	108	12.5S and 9'W of RP108-A	Soil		X	X	X	X						
	9-108-D			9DD	83	5'N, 12'E	Soil											
	9-108-D (6-8)			9DD	83	5'N, 12'E	Soil		X									
	9-108-D (8-10)			9DD	83	5'N, 12'E	Soil		X	X	X	X						
	9-108-E			9N	83	5'N, 12'E	Soil											
	9-108-E (0-2)			9N	83	5'N, 12'E	Soil		X	X	X	X						
	9-108-E (8-10.7)			9N	83	5'N, 12'E	Soil		X	X	X	X						
33	10-103-A	o Outdoors along northwestern corner of building.	o 1000-gallon underground gasoline tank, 10-25, filled in place with concrete on 12/1986	-	-	11'N and 12'W of inside corner closest to WL63	Soil											
	10-103-A (0-2)			-	-	11'N and 12'W of inside corner closest to WL63	Soil		X	X	X							
	10-103-A (4-4.3)			-	-	11'N and 12'W of inside corner closest to WL63	Soil		X	X	X							
	10-103-B			-	-	20'N and 6'W of inside corner closest to WL63	Soil											
	10-103-B (2-4)			-	-	20'N and 6'W of inside corner closest to WL63	Soil		X						X			
	10-103-B (4-5.1)			-	-	20'N and 6'W of inside corner closest to WL63	Soil		X	X	X	X						
34	10-104-A	o Outdoors along southwestern corner of building.	o Underground gas tank 10-1 2,000-gal gasoline.	-	-	17'N and 20'W of outside corner closest to WR45	Soil											
	10-104-A (0-2)			-	-	17'N and 20'W of outside corner closest to WR45	Soil		X	X	X			X				
	10-104-B			-	-	4'S and 4'W of outside corner closest to WR45	Soil											
35	10-105	o Outdoors, west central area.	o Evidence of soil staining - salvage equipment storage --- runoff.	WY	34	45'W of building wall at location of column WY34/ 10'E of treated industrial- center of manhole	Soil											
	10-105 (0-2')			WY	34	45'W of building wall at location of column WY34/ 10'E of treated industrial- center of manhole	Soil		X									
36	10-106	o Painting operations w/hex chromate	o Historic painting operations.	WV	41	16'W	Soil											
	10-106 (4-6)			WV	41	16'W	Soil		X									
	10-106 (8-9.3)			WV	41	16'W	Soil			X			X					
37	10-107-A	o Soil excavation for sump- indoors near WK45	o Soil excavation for sump- indoors near WK45 revealed PCE and naphthalene in soils.	WK	45	6'E	Soil											
	10-107-A (2-4)			WK	45	6'E	Soil		X									
	10-107-A (6-8)			WK	45	6'E	Soil						X					
	10-107B			WK	45	7.5', 0.5'W	Soil											
	10-107B (2-4)			WK	45	7.5', 0.5'W	Soil						X					
	10-107B (4-6)			WK	45	7.5', 0.5'W	Soil						X					
38	15-112-A	o Outdoors southwestern corner of building.	o Underground gasoline (15-49) and kerosene tanks closed in place.	-	-	4'S of western SW corner of Bldg. 15	Soil											
	15-112-B			-	-	20'S and 10'E of west, SW corner of Bldg. 15	Soil											
	18-110-A	o Tanks 18-39 and 18-40-	o Gasoline and Diesel USTs removed.	-	-	88'S and 12'E of SW corner of Bldg. 18	Soil											

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39	18-110-A (4-6)	5,000-gal and 2,000-gal diesel USTs removed in 8/1990.		-	-	88'S and 12'E of SW corner of Bldg. 18	Soil		X	X	X							
	18-110-A (6-7.4)			-	-	88'S and 12'E of SW corner of Bldg. 18	Soil		X	X	X							
	18-110-B			-	-	40'E and 85'S of SW corner of Bldg. 18	Soil											
	18-110-B (2-4)			-	-	40'E and 85'S of SW corner of Bldg. 18	Soil			X	X	X						
	18-110-B (4-6)			-	-	40'E and 85'S of SW corner of Bldg. 18	Soil			X	X	X						
	18-110-C			-	-	98'S and 16'E of SE corner of Bldg. 18	Soil											
	18-110-C (6-8)			-	-	98'S and 16'E of SE corner of Bldg. 18	Soil			X	X	X						
	18-110-C 8-10.2)			-	-	98'S and 16'E of SE corner of Bldg. 18	Soil		X									
40*	18	o North central area	o Vehicle steam cleaning booth															
41*	18	o Oil spill to storm ditch north of bldg.	o Hydraulic oil (vol. not recorded) was spilled from scrap equipment to the pavement north of bldg. then flowed to drainage ditch. Oil was found in absorbent booms.															
42*	All Bldgs.	o All Bldgs. All contiguous area of wood block.																
43*	10,14,16,17	Western side of property.	o Miscellaneous drain pipes go out to creek.															
44	116-1	o Central Creek Area		-	-	Located by GPS & Staked - See Figure	Soil											
	116-1 (0-8)			-	-	Located by GPS & Staked - See Figure	Soil	X										
	116-2			-	-	85'E and 49'N of Surveyed BM	Soil											
	116-2 (0-1.8)			-	-	85'E and 49'N of Surveyed BM	Soil			X	X	X	X					
	116-3			-	-	Located by GPS & Staked - See Figure	Soil											
	116-3 (0-1)			-	-	Located by GPS & Staked - See Figure	Soil			X	X	X	X					
	116-4			-	-	Located by GPS & Staked - See Figure	Soil											
	116-4 (0-10)			-	-	Located by GPS & Staked - See Figure	Soil			X	X	X	X					
45*	TK-6	o Existing GW conditions site wide o Area associated with western bulk storage petroleum tanks	o Area associated with western bulk storage petroleum tanks	-	-	Near bulk storage petroleum tanks along western area property	GW											
	TK-6 (110806)			-	-	Near bulk storage petroleum tanks along western area property	GW		X	X	X							
	TK-4			-	-	Near bulk storage petroleum tanks along western area property	GW											
	TK-4 (110806)			-	-	Near bulk storage petroleum tanks along western area property	GW	X										
46	114-1	o Near Outfall 002 o Outfall 002 o Underground pipe leak from the chrome collection system btwn. Pumphouse #2 and Road #3 stormwater outfall	o Sheen and staining in areas. o Underground chrome line - to stream bank. May be historical issues. o Wooden floor blocks uncovered during excavation of stormwater outfall 002 on 10/13/1989. o Chrome was detected at the WWTP equalization tank, positive results for chrome @ SW outfall at Road 3, yellow water was discovered coming from ground at several locations w/ 60 foot area east of cooling towers #7-1.	-	-	Located by GPS & Staked - See Figure	Soil											
	114-1 (6-8)			-	-	Located by GPS & Staked - See Figure	Soil	X										
	114-2			-	-	Located by GPS & Staked - See Figure	Soil											
	114-2 (0-8)			-	-	Located by GPS & Staked - See Figure	Soil			X	X	X	X					
	114-3			-	-	Located by GPS & Staked - See Figure	Soil											
	114-3 (0-1)			-	-	Located by GPS & Staked - See Figure	Soil						X					
	114-4			-	-	Located by GPS & Staked - See Figure	Soil											
	114-4 (0-8)			-	-	Located by GPS & Staked - See Figure	Soil			X	X	X	X					
47	113-1	o Pumphouse #1	o Pumphouse I analytical results	-	-	Located by GPS & Staked - See Figure	Soil											
	113-1 (0-1)			-	-	Located by GPS & Staked - See Figure	Soil	X										
	113-2			-	-	9'E and 47'N of NE Corner of Pump House #1	Soil											
	113-2 (1-2.7)			-	-	9'E and 47'N of NE Corner of Pump House #1	Soil			X	X		X					
	113-3			-	-	Located by GPS & Staked - See Figure	Soil											
	113-3 (0-1.5)			-	-	Located by GPS & Staked - See Figure	Soil			X	X		X					
48	GS-A	o General Sewers. Identified in CCS as AOI 109.	o General Sewers.	-	-	123'S of SE corner of Bldg. #7A	Soil											
	GS-A (0-2)			-	-	123'S of SE corner of Bldg. #7A	Soil	X										
	GS-A (4-6)			-	-	123'S of SE corner of Bldg. #7A	Soil		X	X	X	X						
	GS-B			-	-	60'S and 40'E of SE corner of Bldg. 12	Soil											
	GS-B (2-4)			-	-	60'S and 40'E of SE corner of Bldg. 12	Soil			X	X	X	X					
	GS-B (4-5.1)			-	-	60'S and 40'E of SE corner of Bldg. 12	Soil			X	X	X	X					
	GS-C			-	-	249'S and 145'E of SE corner of Bldg. 8	Soil											
	GS-C (0-2)			-	-	249'S and 145'E of SE corner of Bldg. 8	Soil			X	X	X	X					
	GS-C (2-4)			-	-	249'S and 145'E of SE corner of Bldg. 8	Soil			X	X	X	X					
	GS-D			-	-	40'N and 25'E of NE corner of Bldg. 8	Soil											

**TABLE 1  
SUMMARY OF SAMPLE LOCATIONS AND ANALYTICAL TESTS  
DELPHI THERMAL, LOCKPORT, NEW YORK**

AOI #	Well \ Boring #	AOI Location	AOI Description	Column Ref.	Col. No.	Location	Matrix	TCL VOCs/ TCL SVOCs/TAL Metals/Cr6/PCBs	TCL VOCs	SVOCS (PAHs)	RCRA Metals & Cr6	PCBs	Cyranide	Sulfate	Iron	pH		
	GS-D (0-2)			-	-	40'N and 25'E of NE corner of Bldg. 8	Soil		X	X	X	X						
	GS-D (2-4)			-	-	40'N and 25'E of NE corner of Bldg. 8	Soil		X	X	X	X						
	GS-F			-	-	49'N and 3'W of D 3-7 Fire Line PIV	Soil											
	GS-F (0-2)			-	-	49'N and 3'W of D 3-7 Fire Line PIV	Soil			X	X	X	X					
	GS-F (2-3.8)			-	-	49'N and 3'W of D 3-7 Fire Line PIV	Soil			X	X	X	X					
49	WWTP-115	o Northern area of WWTP	o Acid Tank	-	-	TBD	Soil											
	88-WWTP-115 (0-2)	o Eastern-central area of WWTP	o Acid tank and fuel oil tank	-	-	TBD	Soil		X	X	X					X		
	88-WWTP-115 (2-4)	o Chrome tank had a pinhole leak.	o Chrome tank had a pinhole leak.	-	-	TBD	Soil		X	X	X							
	89-WWTP-115 (0-2)	o Northern area of WWTP- historical wastewater lagoon	o Northern area of WWTP- historical wastewater lagoon	-	-	TBD	Soil	X										
50*	--	o Area associated with former sludge drying beds along west side of facility	o Unlined drying beds for drying WWTP sludge. Closure conducted under consent order w/NYSDEC. Removed off state registry in 1996.	-	-													
				-	-													
				-	-													
				-	-													

**Notes:** \* Indicates that no sampling was conducted with this specific AOI due to either existing data, NYSDEC closure, and/or a visual inspection was conducted .  
 \*\* No sample taken due to boring refusal  
 -- Indicates no associated sampling ID  
 - Indicates not applicable  
 The first sample I.D. i.e 6-B-1 does not have associated analysis marked with an "X" because the specific depth intervals indicate which parameters were selected for analysis.

**TABLE 2**  
**SUMMARY OF GROUNDWATER DEVELOPMENT PARAMETERS**  
**FIELD DATA**  
**DELPHI CORPORATION - WEST LOCKPORT COMPLEX, LOCKPORT, NY**  
**ERM PROJECT NUMBER 0056607**

sample designation	SAMPLE DESIGNATION									
	MW-6-F-1	MW-6-F-5	TK-4	TK-6	MW-7-A-6	MW-7-C-2	MW-7-P-1	MW-8-03-B	MW-9-101-A	
date	11/8/2006	11/8/2006	11/8/2006	11/8/2006	11/10/2006	11/10/2006	11/14/2006	11/11/2006	11/10/2006	
Field Data										
Temperature (Degrees Celcius)	15.13	15.55	13.81	14.86	15.27	14.05	21.52	13.90	13.42	
pH (standard units)	6.83	7.66	8.28	7.88	9.32	7.73	6.46	7.69	10.79	
Conductivity (mS/cm)	2.103	0.012	1.104	0.540	1.521	1.300	8.710	1.772	1.273	
Dissolved Oxygen (mg/L)	6.39	4.26	7.70	7.70	6.70	8.28	6.33	7.56	10.10	
Oxygen Reduction Potential (mV)	-157.8	-126.6	9.5	30.6	-2.8	22.1	67.5	4.7	-137.6	
Turbidity (NTU)	6.29	6.72	0.80	6.35	48.5	13.9	36.0	5.45	44.1	
Total Volume Purged (Gallons)	24	20	17	7	9	8.5	1	6.5	6.5	

**NOTES:**

- mS/cm - MilliSiemens per Centimeter
- mg/L - Milligrams per Liter
- mV - Millivolt
- NTU - Nephelometric Turbidity Units







TABLE 3  
SUMMARY OF EXCEEDANCES IN SOIL -DELPHI THERMAL- LOCKPORT, NY

Table with 47 columns (Sample\_ID, 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloroethene (Total), 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Acetone, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Hexachlorobenzene, Methylene chloride, Tetrachloroethene, Toluene, Total Xylenes, Trichloroethene, Vinyl chloride, Acenaphthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Pentachlorophenol, Phenanthrene, Phenol, Pyrene, Arsenic - Total, Barium - Total, Cadmium - Total, Copper - Total, Hexavalent Chromium - Total, Lead - Total, Manganese - Total, Mercury - Total, Nickel - Total, Selenium - Total, Silver - Total, Zinc - Total, Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260). Rows include Unrestricted, Commercial, Industrial, and various sample IDs (e.g., 7-E-1, 7-E-2, 7-E-3, 7-G-10-B, 7-G-11-B, 7-G-11-C, 7-G-11-A, 7-G-1-C, 7-G-2-A, 7-G-2-C, 7-G-3-A, 7-G-3-B, 7-G-3-C, 7-G-4-C, 7-G-4-D, 7-G-5-C, 7-G-6-A, 7-G-7-A, 7-G-7-B, 7-G-8-A, 7-G-8-B, 7-G-8-C, 7-G-8-D) with numerical values indicating exceedance levels.



TABLE 3
SUMMARY OF EXCEEDANCES IN SOIL -DELPHI THERMAL- LOCKPORT, NY




Table with 49 columns (Sample\_ID, 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane (Total), 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Acetone, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroform, Ethylbenzene, Hexachlorobenzene, Methylene chloride, Tetrachloroethane, Toluene, Total Xylenes, Trichloroethene, Vinyl chloride, Acenaphthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Pentachlorophenol, Phenanthrene, Phenol, Pyrene, Arsenic - Total, Barium - Total, Cadmium - Total, Copper - Total, Hexavalent Chromium - Total, Lead - Total, Manganese - Total, Mercury - Total, Nickel - Total, Selenium - Total, Silver - Total, Zinc - Total, Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260). Rows include Unrestricted, Commercial, Industrial, and various sample IDs with numerical data.



**TABLE 3**  
SUMMARY OF EXCEEDANCES IN SOIL -DELPHI THERMAL- LOCKPORT, NY

Sample_ID	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (Total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Acetone	Benzene	Carbon Tetrachloride	Chlorobenzene	Chloroform	Ethylbenzene	Hexachlorobenzene	Methylene chloride	Tetrachloroethene	Toluene	Total Xylenes	Trichloroethene	Vinyl chloride	Acenaphthene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Arsenic - Total	Barium - Total	Cadmium - Total	Copper - Total	Hexavalent Chromium - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Unrestricted	0.68	0.27	0.33	1.1	0.02	0.44	2.4	1.8	0.05	0.06	0.76	1.1	0.37	1	0.33	0.05	1.3	0.7	.26	0.47	0.02	20	1	1	1	0.8	1	0.33	100	30	0.5	12	0.8	100	0.33	100	13	350	2.5	50	1	63	1600	0.2	30	3.9	2	109	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Commercial	500	240	500	500	30	1000	280	130	500	44	22	500	350	390	6	500	150	500	500	200	13	500	5.6	1	5.6	56	56	0.56	500	500	5.6	500	6.7	500	500	500	16	400	9.3	270	400	1000	10000	2.8	310	1500	1500	10000	1	1	1	1	1	1	1
Industrial	1000	480	1000	1000	60	2000	560	250	1000	89	44	1000	700	780	12	1000	300	1000	1000	400	27	1000	11	1.1	11	110	110	1.1	1000	1000	11	1000	55	1000	1000	1000	16	10000	60	10000	800	3900	10000	5.7	10000	6800	6800	10000	25	25	25	25	25	25	25
All units in Mg/Kg																																																							

Notes:

- Results reported in this table exceeded New York State Part 375-6.8 (b) Unrestricted Soil Cleanup Objectives:
-  Indicates result did not exceed Unrestricted Cleanup Standard or parameter was not analyzed for this particular sample. See Table 6, Summary of AOIs and selected Analytical Parameter
-  Results above New York State Part 375-6.8 (b) Restricted Industrial Soil Cleanup Objective
-  Results above New York State Part 375-6.8 (b) Restricted Commercial Soil Cleanup Objective
- ND or U Indicates compound was analyzed for, but not detected at or above the reporting limi
- J Indicates an estimated value. This flag is used when estimating a concentration for tentatively ideneified compounds where a 1:1 response is assumed or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero
- B This flag is used when the analyte is found in the associated blank, as well as in the sample
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor

**TABLE 4**  
**SUMMARY OF GROUND WATER INVESTIGATION ANALYTICAL RESULTS**  
**ALL GROUND WATER DATA**  
**DELPHI CORPORATION - WEST LOCKPORT COMPLEX, LOCKPORT, NY**  
**ERM PROJECT NUMBER 0056607**

sample designation date	SAMPLE DESIGNATION									NYSDEC Ambient Water Quality Standards and Guidance Values TOGS 1.1.1 (µg/L)
	MW-6-F-1 11/8/2006	MW-6-F-5 11/8/2006	TK-4 11/8/2006	TK-6 11/8/2006	MW-7-A-6 11/10/2006	MW-7-C-2 11/10/2006	MW-7-P-1 11/14/2006	MW-8-03-B 11/11/2006	MW-9-101-A 11/10/2006	
<b>VOCs (µg/L)</b>										
Acetone	39	20	----	----	----	NA	11	----	16	50.0
Benzene	<b>33</b>	<b>800 D</b>	----	----	----	NA	----	----	<b>1.1</b>	1.0
2-Butanone	5.5	11	----	----	----	NA	8.5	----	----	NS
Carbon Disulfide	----	----	----	----	----	NA	0.62 J	----	----	NS
Chloroform	----	----	----	----	----	NA	----	----	0.53 J	7.0
Cyclohexane	----	31	----	----	----	NA	----	----	1.8	NS
1,1-Dichloroethane	----	----	----	----	----	NA	0.85 J	----	----	5.0
1,1-Dichloroethene	----	----	----	----	<b>270 J</b>	NA	----	<b>2.4</b>	----	0.7
Cis-1,2-Dichloroethene	----	----	----	----	<b>2,600</b>	NA	<b>120 D</b>	<b>630 D</b>	1.3	5.0
Trans-1,2-Dichloroethene	----	----	----	----	----	NA	4.9	4.8	----	5.0
Ethylbenzene	<b>1500 D</b>	<b>3800 D</b>	----	----	----	NA	----	----	1.8	5.0
Isopropylbenzene	<b>91</b>	<b>130 D</b>	----	----	----	NA	----	----	1.3	5.0
Methylcyclohexane	33	12	----	----	----	NA	----	----	1.0	NS
Methylene Chloride	----	----	----	----	<b>300 BJ</b>	NA	----	----	0.78 BJ	5.0
Methyl tert-butyl ether	16.0	6000 D	----	----	----	NA	----	----	----	NS
Tetrachloroethene	----	----	----	----	<b>150000 D</b>	NA	----	<b>970 BD</b>	<b>1.7</b>	0.7
Toluene	<b>23</b>	<b>1200 D</b>	----	----	----	NA	----	----	1.6	5.0
1,1,2-Trichloroethane	----	----	----	----	<b>220 J</b>	NA	----	----	----	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	----	----	----	2.2	----	NA	----	----	----	5.0
Trichloroethene	----	----	----	----	<b>38000 D</b>	NA	2.1	<b>390 D</b>	0.74 J	5.0
Vinyl Chloride	----	----	----	----	<b>2,500</b>	NA	<b>22</b>	<b>91</b>	----	2.0
Total Xylenes	<b>7400 D</b>	<b>14000 D</b>	----	----	----	NA	----	----	1.8 J	5.0
<b>SVOCs (µg/L)</b>										
Acenaphthene	----	4 J	----	----	0.4 J	----	NA	0.3 J	2 J	20.0
Acenaphthylene	----	----	----	----	----	----	NA	----	0.4 J	NS
Anthracene	----	----	----	----	0.3 J	----	NA	----	0.4 J	50.0
Benzo (a) anthracene	----	----	----	----	0.4 J	----	NA	----	----	0.002
Benzo (a) pyrene	----	----	----	----	0.2 J	----	NA	----	----	ND
Chrysene	----	----	----	----	<b>0.3 J</b>	----	NA	----	----	0.002
2,4-Dimethylphenol	----	<b>210 D</b>	----	----	----	----	NA	----	----	50.0
Di-n-octyl phthalate	----	0.6 BJ	0.5 BJ	----	----	----	NA	----	----	50.0
Fluoranthene	----	0.5 J	----	----	0.5 J	----	NA	----	0.5 J	50.0
Fluorene	----	----	----	----	----	----	NA	----	2 J	50.0
2-Methylnaphthalene	----	320 D	----	----	2 J	----	NA	----	4 J	NS
2-Methylphenol	----	8 J	----	----	----	----	NA	----	----	NS
4-Methylphenol	----	59	----	----	----	----	NA	----	----	NS
Naphthalene	----	<b>1300 D</b>	----	----	4 J	----	NA	----	6 J	10.0
Phenanthrene	----	2 J	----	----	0.9 J	----	NA	----	2 J	50.0
Pyrene	----	----	----	----	0.4 J	----	NA	----	0.4 J	50.0
<b>Metals (µg/L)</b>										
Total Arsenic	12	<b>40</b>	----	----	----	----	----	----	----	25
Total Barium	180	510	51	30	840	13	<b>14,400</b>	100	81	1,000
Total Calcium	----	115,000	93,100	NA	NA	NA	NA	NA	NA	NS
Total Chromium	----	----	----	----	----	----	7.9	----	----	50
Total Copper	----	<b>650</b>	----	NA	NA	NA	NA	NA	NA	200
Total Hexavalent Chromium	----	----	----	----	----	----	----	----	----	50
Total Iron	----	<b>22,400</b>	----	NA	NA	220	NA	NA	NA	300
Total Lead	----	<b>58</b>	----	----	----	----	----	----	5.1	25
Total Magnesium	----	14,200	27,300	NA	NA	NA	NA	NA	NA	35,000
Total Manganese	----	<b>570</b>	27	NA	NA	NA	NA	NA	NA	300
Total Nickel	----	37	----	NA	NA	NA	NA	NA	NA	100
Total Potassium	----	7,900	----	NA	NA	NA	NA	NA	NA	NS
Total Sodium	----	<b>512,000</b>	<b>436,000</b>	NA	NA	NA	NA	NA	NA	20,000
Total Zinc	----	420	----	NA	NA	NA	NA	NA	NA	2,000
<b>Other Analyses (µg/L)</b>										
Sulfate	NA	NA	NA	NA	NA	<b>972,000</b>	NA	NA	NA	250,000
PCBs	NA	----	----	NA	NA	NA	NA	NA	NA	0.09

**NOTES:**

- NYSDEC Ambient Water Quality Standards and Guidance Values - TOGS 1.1.1  
VOCs - Volatile organic compounds determined by USEPA Method 8260  
SVOCs - Semivolatile organic compounds determined by USEPA Method 8270  
NA - Not Analyzed  
NS - No Standard or Guidance Value given in TOGS 1.1.1  
ND - Not Detected  
BJ - Estimated value and analyte found in sample and associated blank.  
D - Compound identified in an analysis at the secondary dilution factor.  
J - Estimated value.  
---- - Below the Reportable Limit  
----\* - Reportable Limit is Above the TOGS 1.1.1 Standard  
µg/L - Micrograms per Liter  
**BOLD** - Concentrations above the NYDEC Ambient Water Quality Standards and Guidance Values.

*Appendix A*  
*Soil Boring Logs*

*Appendix B*  
*Monitoring Well Construction Logs*



# ERM

WELL : 7-A-5

5788 Widewaters Parkway, Dewitt, NY 13214 (315) 445-2554

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Lockport Phase II</b>		Project No. <b>56607</b>		Water Level(s) <i>(ft below top of PVC casing)</i>		Site Elevation Datum (feet)	
Drilling Company <b>Nothnagle</b>		Foreman		Date	Time	Level (feet)	Ground Elevation (feet)
Surveyor		Geologist <b>Jeremy Wolf</b>					Top of Protective Steel Cap Elevation (feet)
Date and Time of Completion <b>27 Oct 2006 1130</b>		Geologist <b>Jeremy Wolf</b>				Top of Riser Pipe Elevation (feet)	

Generalized Soil Description

\*Elevation

\*\*Depth

**CONSTRUCTION DETAILS**

REMARKS	Abandoned Boring

\* Elevation (feet) above mean sea level unless noted      \*\* Depth in feet below ground surface

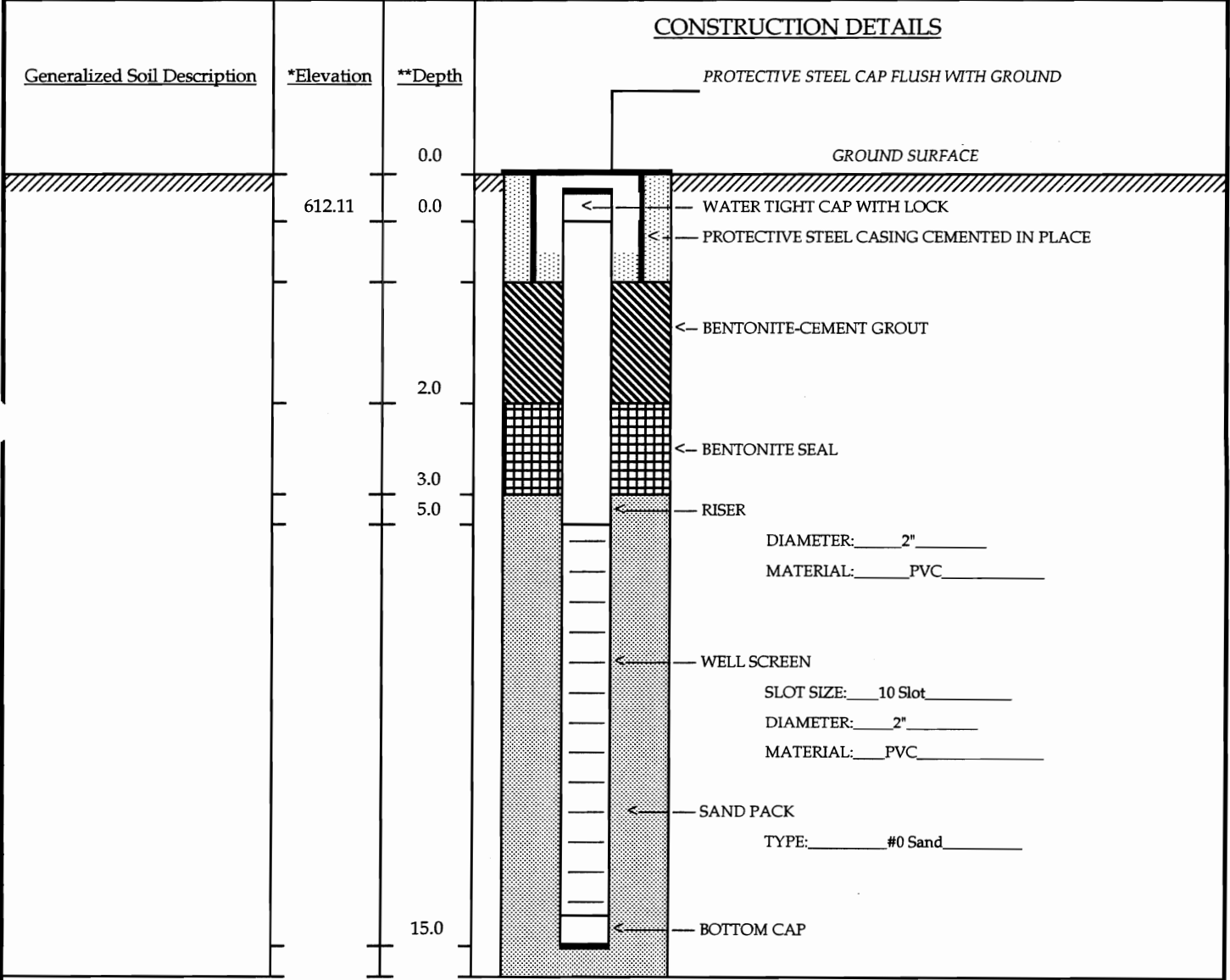
# ERM

WELL : MW-7-A-6

5788 Widewaters Parkway, Dewitt, NY 13214 (315) 445-2554

## MONITORING WELL CONSTRUCTION LOG

<b>Project Name &amp; Location</b> Lockport Phase II	<b>Project No.</b> 56607	<b>Water Level(s)</b> (ft below top of PVC casing)		<b>Site Elevation Datum (feet)</b>
<b>Drilling Company</b> Nothnagle	<b>Foreman</b> Jeremy Wolf	<b>Date</b>	<b>Time</b>	<b>Level</b> (feet)
<b>Surveyor</b>				
<b>Date and Time of Completion</b> 30 Oct 2006 1300				<b>Ground Elevation (feet)</b>
				<b>Top of Protective Steel Cap Elevation (feet)</b>
				<b>Top of Riser Pipe Elevation (feet)</b>



REMARKS Well Sandpacked from -3 to -15 bgs.

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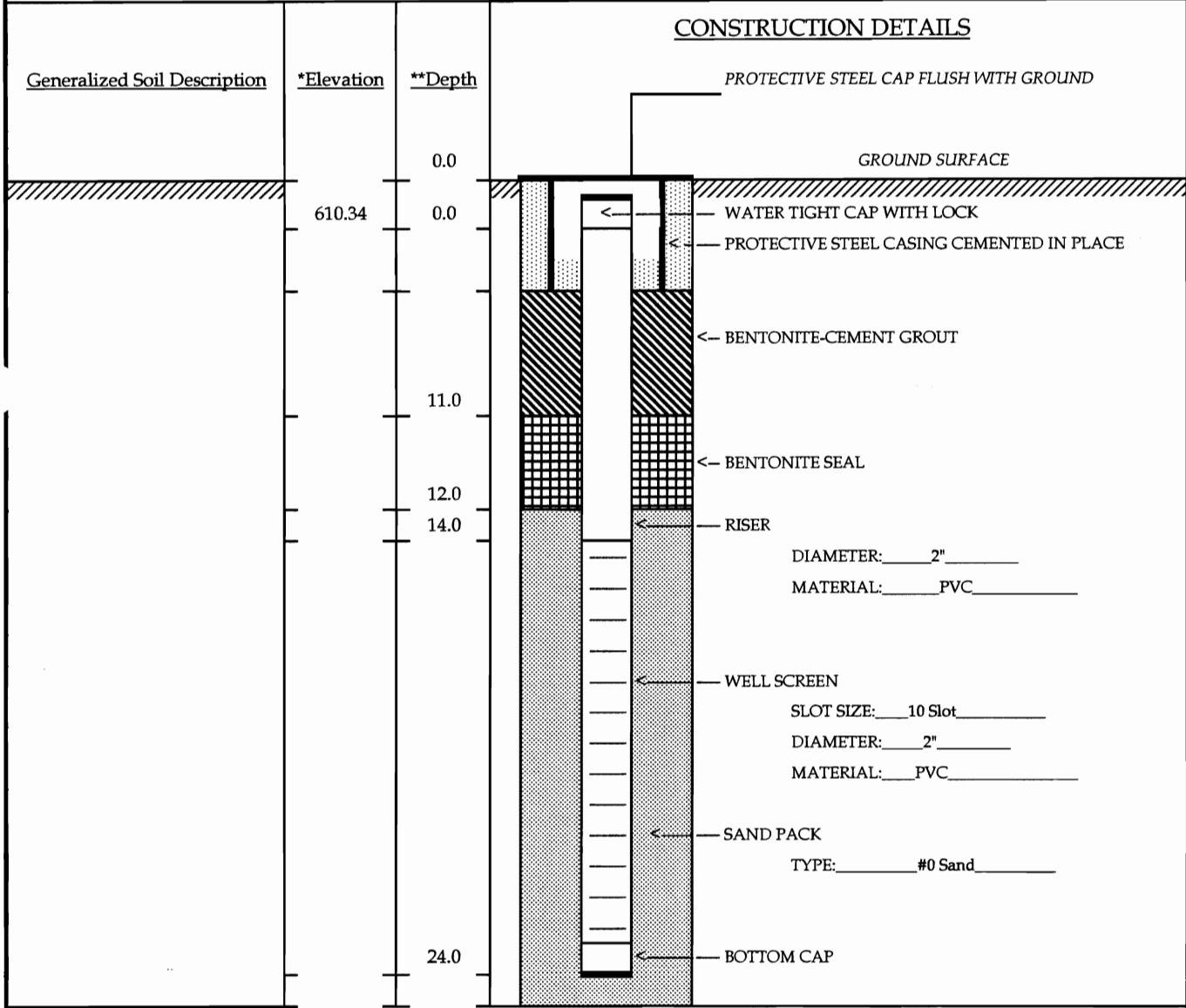


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\* Elevation (feet) above mean sea level unless noted      \*\* Depth in feet below ground surface

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Lockport Phase II</b>	Project No. <b>56607</b>	Water Level(s) <i>(ft below top of PVC casing)</i>		Site Elevation Datum (feet)
Drilling Company <b>Nothnagle</b>	Foreman	Date	Time	Level (feet)
Surveyor				
Date and Time of Completion <b>27 Oct 2006 1450</b>		Geologist <b>Jeremy Wolf</b>		Ground Elevation (feet)
				Top of Protective Steel Cap Elevation (feet)
				Top of Riser Pipe Elevation (feet)



REMARKS \_\_\_\_\_

\_\_\_\_\_

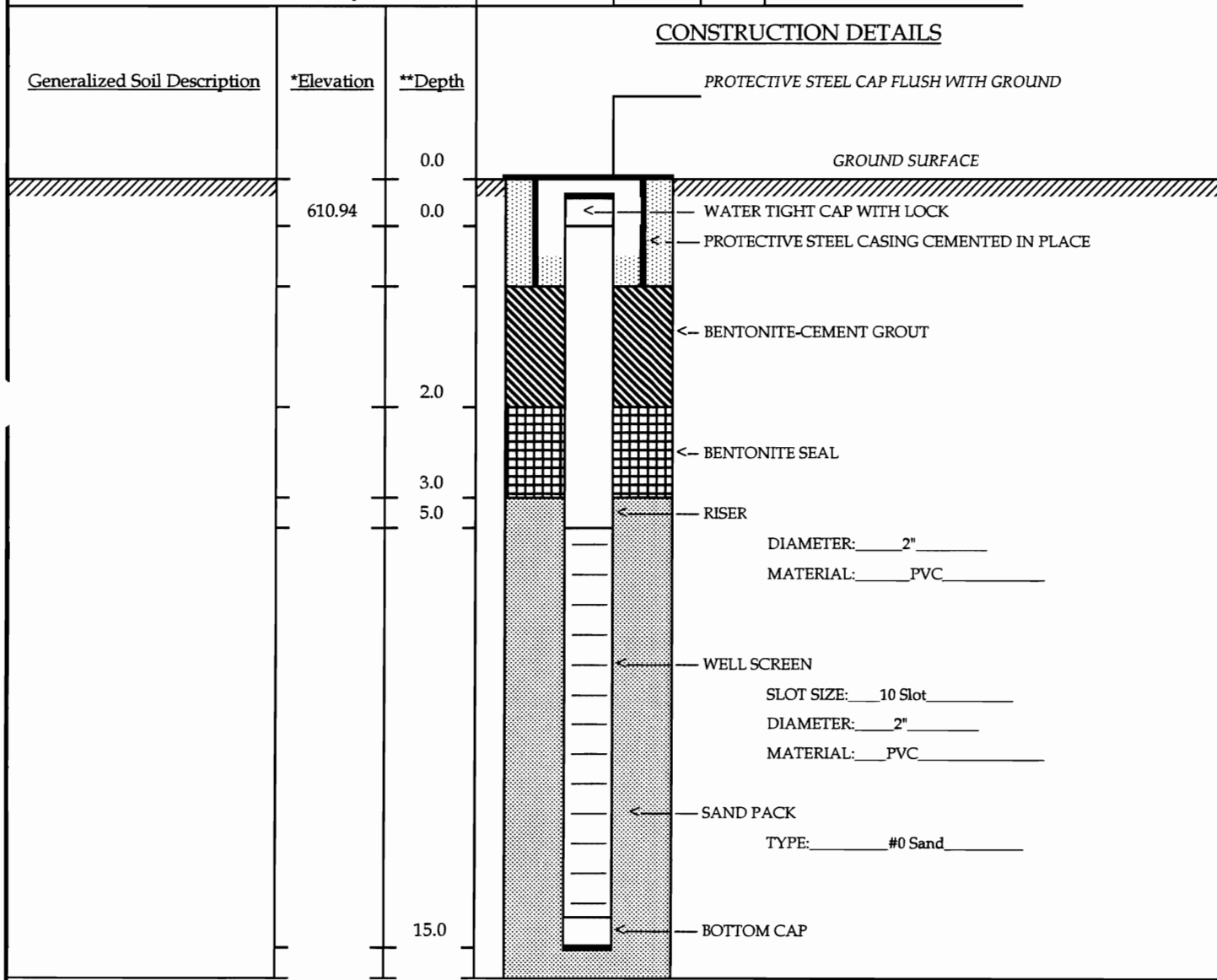
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\* Elevation (feet) above mean sea level unless noted

\*\* Depth in feet below ground surface

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Lockport Phase II</b>	Project No. <b>56607</b>	Water Level(s) <i>(ft below top of PVC casing)</i>		Site Elevation Datum (feet)
Drilling Company <b>Nothnagle</b>	Foreman	Date	Time	Level (feet)
Surveyor				
Date and Time of Completion <b>30 Oct 2006 0930</b>		Geologist <b>Jeremy Wolf</b>		Ground Elevation (feet)
				Top of Protective Steel Cap Elevation (feet)
				Top of Riser Pipe Elevation (feet)



REMARKS Well Sandpacked from -3 to -15 bgs.

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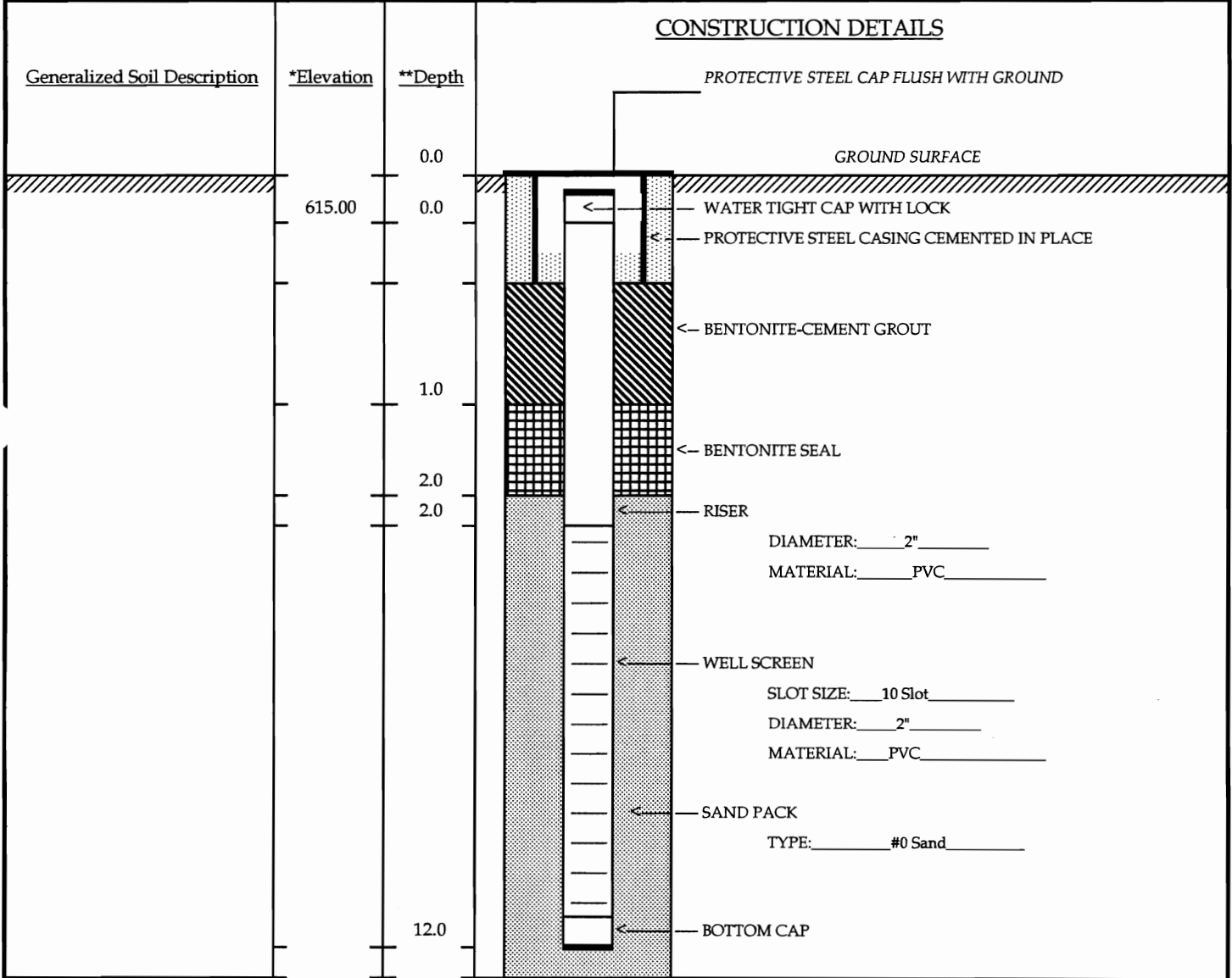
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\* Elevation (feet) above mean sea level unless noted      \*\* Depth in feet below ground surface

5788 Widewaters Parkway, Dewitt, NY 13214 (315) 445-2554

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Lockport Phase II</b>	Project No. <b>56607</b>	Water Level(s) <i>(ft below top of PVC casing)</i>			Site Elevation Datum (feet)
Drilling Company <b>Nothnagle</b>	Foreman	Date	Time	Level (feet)	Ground Elevation (feet)
Surveyor					Top of Protective Steel Cap Elevation (feet)
Date and Time of Completion <b>26 Oct 2006 1440</b>	Geologist <b>Jeremy Wolf</b>				Top of Riser Pipe Elevation (feet)



REMARKS Well Sandpacked from -3 to -15 bgs.

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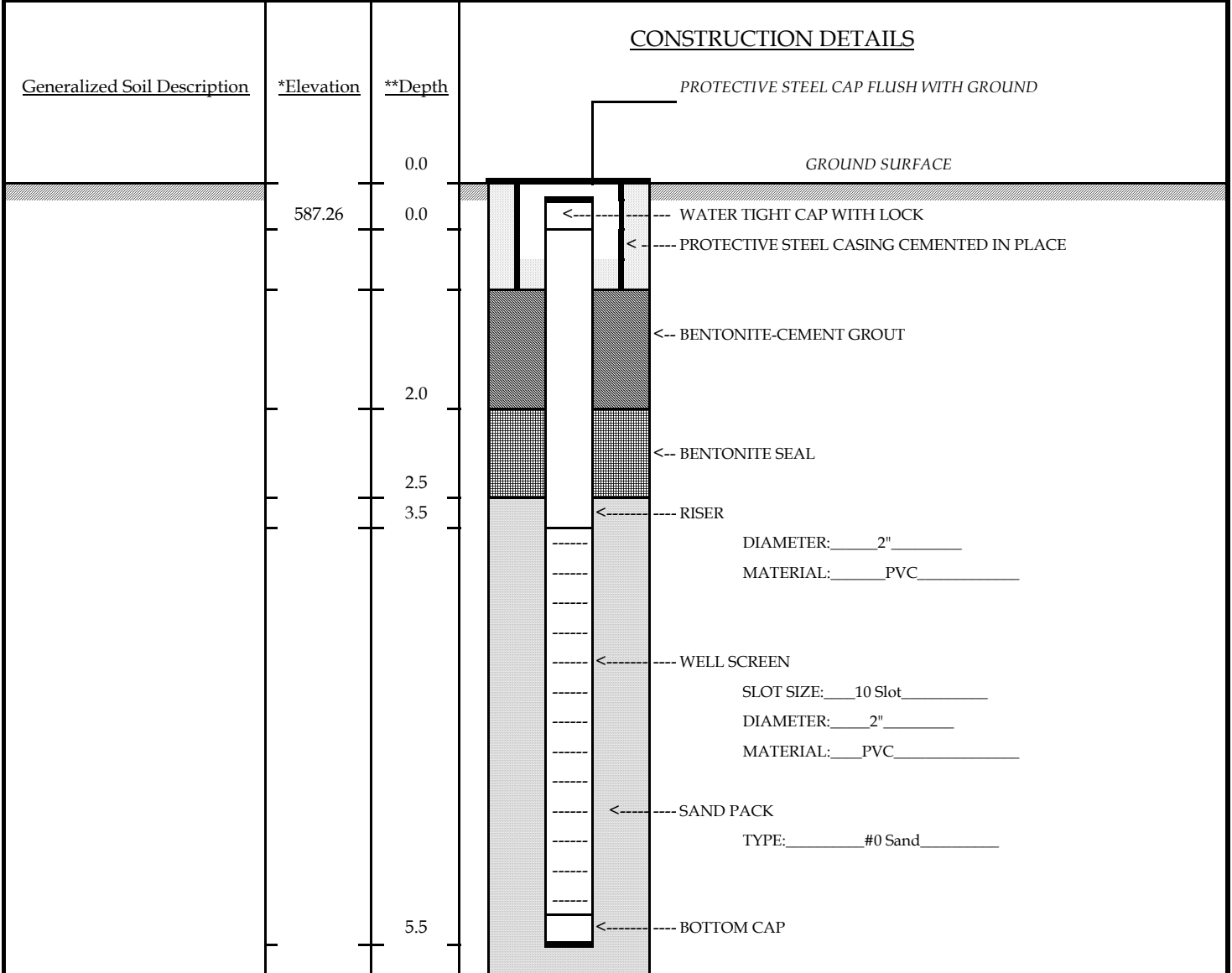


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\* Elevation (feet) above mean sea level unless noted      \*\* Depth in feet below ground surface

## MONITORING WELL CONSTRUCTION LOG

Project Name & Location <b>Lockport Phase II</b>	Project No. <b>56607</b>	Water Level(s) <i>(ft below top of PVC casing)</i>			Site Elevation Datum (feet)
Drilling Company <b>TREC</b>	Foreman <b>Jim Agar</b>	Date	Time	Level (feet)	Ground Elevation (feet)
Surveyor					Top of Protective Steel Cap Elevation (feet)
Date and Time of Completion <b>31 Oct 2006 1410</b>	Geologist <b>Ron Taylor</b>				Top of Riser Pipe Elevation (feet)



REMARKS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\* Elevation (feet) above mean sea level unless noted      \*\* Depth in feet below ground surface

*Appendix C*  
*Ground Water Sampling Records*

# GROUND WATER SAMPLING RECORD

SITE Delphi Phase II

DATE 11/8/06

PROJECT NUMBER: 0056607

SAMPLE ID: ~~MAW-26A~~ ~~MAW-26A~~

MW-6-F-1 (110806)

WELL ID: ~~MAW-26A~~ ~~MAW-26A~~

Time Onsite: \_\_\_\_\_ Time Offsite: \_\_\_\_\_

SAMPLERS: Jeremy Wolf, Mike Nigro

Brian Hoffmire

Depth of well (from top of casing) ..... 13.49 Time: \_\_\_\_\_  
 Static water level (from top of casing) ..... 2.48 Time: \_\_\_\_\_  
 Water level after purging (from top of casing) ..... 2.49 Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... 2.49 Time: \_\_\_\_\_

**Purging Method:**

- Airlift
- Bailer
- Submersible
- Low-Flow Pump
- Peristaltic Pump
- Ded. Pump

**Well Volume Calculation:**

2 in. well: \_\_\_\_\_ ft. of water x 0.16 = \_\_\_\_\_ gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal.  
 4 in. well: 11.01 ft. of water x 0.65 = 7.16 gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal.

1 volume \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 3 volumes \_\_\_\_\_ gal. x 3 = 21.5 gal.

Volume of water removed: 24 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

units	pH	Cond. mg/cm	Turb. NTU	DO mg/L	Temp. °F	DEP	SAL	TDS g/L	ORP mV
Initial	-				<u>10</u>	-	-		
1 Volume									
2 Volumes									
3 Volumes	<u>6.83</u>	<u>2.103</u>	<u>6.29</u>	<u>6.39</u>	<u>15.13</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>157.8</u>

**Sampling**

Time of Sample Collection: 1500

**Collection Method:**

- Disposable bailer
- Teflon bailer
- Dedicated pump
- Submersible Pump
- Low-Flow Sampling
- Other: Peri Pump

**Analyses:**

- VOCs - 8200 2021
- SVOCs
- Metals
- PCB/Pest
- MNA
- Other

**Analytical Method:**

701 PAHS  
PCRAS, Cr6

**Observations**

Weather/Temperature: cloudy ~40°F  
 Sample Description: clear w/ petroleum odor  
 Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes  no \_\_\_\_\_ describe \_\_\_\_\_  
 Odor? yes  no \_\_\_\_\_ describe petroleum

**Comments:**

Strong gasoline odor noted during purging



# GROUND WATER SAMPLING RECORD

SITE Delphi Phase II  
 PROJECT NUMBER: 0056607  
 SAMPLE ID: TK-6 (110806)  
 WELL ID: TK-6  
 SAMPLERS: Mike Nigro, J. Wolf  
Brian Holtmire

DATE 11/8/06

Time Onsite: \_\_\_\_\_ Time Offsite: \_\_\_\_\_

Depth of well (from top of casing) ..... 13.44 Time: 1645  
 Static water level (from top of casing) ..... 10.02 Time: 1645  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

- Airlift
- Bailer
- Submersible
- Low-Flow Pump
- Peristaltic Pump
- Ded. Pump

**Well Volume Calculation:**

2 in. well: \_\_\_\_\_ ft. of water x 0.16 = \_\_\_\_\_ gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal.  
 4 in. well: 3.42 ft. of water x 0.65 = 2.22 gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal.

1 volume      3 volumes  
 \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
2.22 gal. x 3 = 6.66 gal.  
 \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed: 7 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	° F	-	-	g/L	mV
Initial									
1 Volume									
2 Volumes									
3 Volumes	<u>7.88</u>	<u>0.54</u>	<u>6.35</u>	<u>7.70</u>	<u>14.86</u>				<u>30.6</u>

**Sampling**

Time of Sample Collection: 1800

**Collection Method:**

- Disposable bailer
- Teflon bailer
- Dedicated pump
- Submersible Pump
- Low-Flow Sampling
- Other: Peri Pump

**Analyses:**

- VOCs - TCL 8260
- SVOCs PAHS
- Metals RCRA 8, Cr 6
- PCB/Pest
- MNA
- Other

**Analytical Method:**

- \_\_\_\_\_ 503.1
- \_\_\_\_\_ Other

**Observations**

Weather/Temperature: \_\_\_\_\_  
 Sample Description: clear  
 Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
 \_\_\_\_\_

# GROUND WATER SAMPLING RECORD

SITE Delphi Lockport Phase II

DATE 11/8/06

PROJECT NUMBER: \_\_\_\_\_

SAMPLE ID: MW-6-F-5 (110806)

WELL ID: MW-6-F-5

SAMPLERS: J. Wolo, Brian Hoffmire  
Mike Nigro

Time Onsite: \_\_\_\_\_

Time Offsite: \_\_\_\_\_

Depth of well (from top of casing) ..... 12.58

Time: 1541

Static water level (from top of casing) ..... 2.39

Time: 1546

Water level after purging (from top of casing) ..... 4.37

Time: 1600

Water level before sampling (from top of casing) ..... \_\_\_\_\_

Time: \_\_\_\_\_

**Purging Method:**

- Airlift  
 Bailer  
 Submersible
- Low-Flow Pump  
 Peristaltic Pump  
 Ded. Pump

**Well Volume Calculation:**

- 2 in. well: \_\_\_\_\_ ft. of water x 0.16 = \_\_\_\_\_ gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal.  
 4 in. well: 10.19 ft. of water x 0.65 = 6.6 gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal.

- 1 volume \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 3 volumes \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
6.6 gal. x 3 = 19.8 gal.  
 \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed: 20 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	(C) F	-	-	g/L	mV
Initial									
1 Volume									
2 Volumes									
3 Volumes	<u>7.66</u>	<u>.012</u>	<u>6.72</u>	<u>4.26</u>	<u>15.55</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>-126.6</u>

**Sampling**

Time of Sample Collection: 1605

**Collection Method:**

- Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Peri Pump

**Analyses:**

- VOCs - TCL 8260 \_\_\_\_\_ 503.1 \_\_\_\_\_ Other \_\_\_\_\_  
 SVOCs TCL \_\_\_\_\_  
 Metals TAL & Cr6 \_\_\_\_\_  
 PCB/Pest \_\_\_\_\_  
 MNA \_\_\_\_\_  
 Other \_\_\_\_\_

**Analytical Method:**

**Observations**

Weather/Temperature: \_\_\_\_\_

Sample Description: \_\_\_\_\_

- Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes  no \_\_\_\_\_ describe Petroleum 2  
 Odor? yes  no \_\_\_\_\_ describe \_\_\_\_\_

Comments: \_\_\_\_\_

## GROUND WATER SAMPLING RECORD

SITE Delphi Phase II  
 PROJECT NUMBER: 0056607  
 SAMPLE ID: TK-4 (110806)  
 WELL ID: TK-4  
 SAMPLERS: J. Wolf, M. Nigro  
B. Hoffmire

DATE 10/8/06

Time Onsite: \_\_\_\_\_ Time Offsite: \_\_\_\_\_

Depth of well (from top of casing) ..... 14.54 Time: 1700  
 Static water level (from top of casing) ..... 9.05 Time: 1700  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

Airlift  
 Bailer  
 Submersible

**Well Volume Calculation:**

1 volume      3 volumes  
 2 in. well: \_\_\_\_\_ ft. of water x 0.16 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 4 in. well: 5.49 ft. of water x 0.65 = 3.57 gal. x 3 = 10.7 gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed:  
17 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	C F	-	-	g/L	mV
Initial									
1 Volume									
2 Volumes									
3 Volumes	<u>8.28</u>	<u>1.104</u>	<u>0.8</u>	<u>7.70</u>	<u>13.81</u>				<u>9.5</u>

**Sampling**

Time of Sample Collection: 1730

**Collection Method:**

Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Dedicated Pump (Peri)

**Analyses:**

VOCs - TCL 8260 \_\_\_\_\_ 503.1 \_\_\_\_\_ Other \_\_\_\_\_  
 SVOCs TCL \_\_\_\_\_  
 Metals TAL + Cr 6 \_\_\_\_\_  
 PCB/Pest \_\_\_\_\_  
 MNA \_\_\_\_\_  
 Other \_\_\_\_\_

**Analytical Method:**

**Observations**

Weather/Temperature: \_\_\_\_\_

Sample Description: Clear

Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
 \_\_\_\_\_

# GROUND WATER SAMPLING RECORD

SITE Delphi Phase II DATE 11/10/06  
 PROJECT NUMBER: 0056607  
 SAMPLE ID: MW8-003-B (11/10/06)  
 WELL ID: MW8-003-BS Time Onsite: 1050 Time Offsite: 1155  
 SAMPLERS: B. Hoffmeyer, W. Jpfjdl

Depth of well (from top of casing) ..... 14.15 Time: 1055  
 Static water level (from top of casing) ..... 5.28 Time: 1055  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

- Airlift  Low-Flow Pump  
 Bailer  Peristaltic Pump  
 Submersible  Ded. Pump

**Well Volume Calculation:**

1 volume 3 volumes  
 2 in. well: 4.87 ft. of water x 0.16 = 1.419 gal. x 3 = 4.3 gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 4 in. well: \_\_\_\_\_ ft. of water x 0.65 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed:  
6.5 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	(C) F	-	-	g/L	mV
Initial									
1 Volume									
2 Volumes									
3 Volumes	<u>7.69</u>	<u>1.772</u>	<u>5.45</u>	<u>7.56</u>	<u>13.90</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>4.7</u>

**Sampling**

Time of Sample Collection: 1135

**Collection Method:**

- Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Dedicated Pump (Peri)

**Analyses:**

- VOCs -  
 SVOCs  
 Metals  
 PCB/Pest  
 MNA  
 Other

**Analytical Method:**

8260 \_\_\_\_\_ 503.1 \_\_\_\_\_ Other \_\_\_\_\_  
+ C86

**Observations**

Weather/Temperature: Cloudy, ~40°F

Sample Description: Clear

Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
 \_\_\_\_\_

# GROUND WATER SAMPLING RECORD

SITE Delphi Phase II  
 PROJECT NUMBER: 0056607  
 SAMPLE ID: MW7-A-6 (111006)  
 WELL ID: MW7-A-6  
 SAMPLERS: B. Hoffmire, W. Upfold

DATE 11/10/06  
 Time Onsite: 1345  
 Time Offsite: 1430

Depth of well (from top of casing) ..... 14.25 Time: \_\_\_\_\_  
 Static water level (from top of casing) ..... 2.38 Time: \_\_\_\_\_  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

Airlift  Low-Flow Pump  
 Bailer  Peristaltic Pump  
 Submersible  Ded. Pump

**Well Volume Calculation:**

2 in. well: 11.87 ft. of water x 0.16 = 1.89 gal. x 3 = 5.7 gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 4 in. well: \_\_\_\_\_ ft. of water x 0.65 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed: 9 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	(C) F	-	-	g/L	mV
Initial									
1 Volume									
2 Volumes									
3 Volumes	<u>9.32</u>	<u>1.521</u>	<u>48.5</u>	<u>6.70</u>	<u>15.27</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>-2.8</u>

**Sampling**

Time of Sample Collection: 1420

**Collection Method:**

Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Dedicated Per. Pump

**Analyses:**

VOCs -  
 SVOCs  
 Metals  
 PCB/Pest  
 MNA  
 Other

**Analytical Method:**

8260 \_\_\_\_\_ 503.1 \_\_\_\_\_ Other \_\_\_\_\_

**Observations**

Weather/Temperature: ~45°F, Clear skies

Sample Description: Clear

Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
 \_\_\_\_\_

# GROUND WATER SAMPLING RECORD

SITE Delphi Phase II  
 PROJECT NUMBER: 00 56607  
 SAMPLE ID: MW9-101-A (11006)  
 WELL ID: MW9-101-A  
 SAMPLERS: B. Hoffmire, W. J. Feld

DATE 11/10/06  
 Time Onsite: 1200 Time Offsite: 1330

Depth of well (from top of casing) ..... 12.54 Time: 1210  
 Static water level (from top of casing) ..... 5.50 Time: 1210  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

- Airlift  Low-Flow Pump  
 Bailer  Peristaltic Pump  
 Submersible  Ded. Pump

**Well Volume Calculation:**

1 volume 3 volumes  
 2 in. well: 7.04 ft. of water x 0.16 = 1.12 gal. x 3 = 3.4 gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 4 in. well: \_\_\_\_\_ ft. of water x 0.65 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed: 6.5 gal.

>3 volumes: yes  no \_\_\_\_\_ purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	°C F	-	-	g/L	mV
Initial									
1 Volume									
2 Volumes									
3 Volumes	<u>10.79</u>	<u>1.273</u>	<u>44.1</u>	<u>10.16</u>	<u>13.42</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>-137.6</u>

**Sampling**

Time of Sample Collection: 1305

**Collection Method:**

- Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Dedicated per. pump

**Analyses:**

- VOCs -  
 SVOCs  
 Metals  
 PCB/Pest  
 MNA  
 Other

**Analytical Method:**

8260 \_\_\_\_\_ 503.1 \_\_\_\_\_ Other \_\_\_\_\_

**Observations**

Weather/Temperature: ~ 41° F, Cloudy  
 Sample Description: Clean  
 Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

## GROUND WATER SAMPLING RECORD

SITE Delphi Phase II  
 PROJECT NUMBER: 0096607  
 SAMPLE ID: 7-C-2(111006)  
 WELL ID: 7-C-2  
 SAMPLERS: B. Hoffmire, W. Upfeld

DATE 11/10/06  
 Time Onsite: 0935 Time Offsite: 1045

Depth of well (from top of casing) ..... 23.86 Time: 0945  
 Static water level (from top of casing) ..... 6.10 Time: 0945  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

- Airlift                       Low-Flow Pump  
 Bailer                         Peristaltic Pump  
 Submersible                 Ded. Pump

**Well Volume Calculation:**

1 volume                      3 volumes  
 2 in. well: 17.76 ft. of water x 0.16 = 2.841 gal. x 3 = 8.52 gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 4 in. well: \_\_\_\_\_ ft. of water x 0.65 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed: 8.5 gal.                      >3 volumes: yes \_\_\_\_\_ no   
 purged dry?                      yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	mg/L	°C F	-	-	g/L	mV
<u>3 volumes</u> Initial	<u>7.73</u>	<u>1.300</u>	<u>13.9</u>	<u>8.28</u>	<u>14.05</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>22.1</u>
1 Volume									
2 Volumes									
3 Volumes									

**Sampling**

Time of Sample Collection: 1025

**Collection Method:**

- Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Dedicated Pump (Peri)

**Analyses:**

- VOCs - 8260  
 SVOCs  
 Metals  
 PCB/Pest  
 MNA  
 Other

**Analytical Method:**

8260                      503.1                      Other \_\_\_\_\_  
+ Cr6, TCN, Sulfate, Fe

**Observations**

Weather/Temperature: Cloudy ~ 40°F

Sample Description: clear

- Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
 \_\_\_\_\_

# GROUND WATER SAMPLING RECORD

SITE Delphi Phase II  
 PROJECT NUMBER: 0056607  
 SAMPLE ID: MW7-P-2 (11/14/06)  
 WELL ID: MW7-P-2  
 SAMPLERS: B. Hoffmire, W. Upfold

DATE 11/14/06  
 Time Onsite: 1120  
 Time Offsite: \_\_\_\_\_

Depth of well (from top of casing) ..... 19.61' Time: 1130  
 Static water level (from top of casing) ..... 2.10' Time: 1130  
 Water level after purging (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_  
 Water level before sampling (from top of casing) ..... \_\_\_\_\_ Time: \_\_\_\_\_

**Purging Method:**

- Airlift  Low-Flow Pump  
 Bailer  Peristaltic Pump  
 Submersible  Ded. Pump

**Well Volume Calculation:** <sup>2.40</sup>  
 2 in. well: 17.51 ft. of water x 0.16 = 2.80 gal. x 3 = 8.4 gal.  
 3 in. well: \_\_\_\_\_ ft. of water x 0.36 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 4 in. well: \_\_\_\_\_ ft. of water x 0.65 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.  
 6 in. well: \_\_\_\_\_ ft. of water x 1.47 = \_\_\_\_\_ gal. x 3 = \_\_\_\_\_ gal.

Volume of water removed: 1 gal.  
 >3 volumes: yes \_\_\_\_\_ no  purged dry? yes \_\_\_\_\_ no

**Field Tests:**

	pH	Cond.	Turb.	DO	Temp.	DEP	SAL	TDS	ORP
units	-	mg/cm	NTU	<del>mg/L</del>	C F	-	-	g/L	mV
Initial			<u>36</u>		<u>17.51</u>				
1 Volume									
2 Volumes									
3 Volumes	<u>6.46</u>	<u>8.71</u>		<u>73.9</u>	<u>21.52</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>67.5</u>

**Sampling**

Time of Sample Collection: 1150

**Collection Method:**

- Disposable bailer  
 Teflon bailer  
 Dedicated pump  
 Submersible Pump  
 Low-Flow Sampling  
 Other: Dedicated Peri Pump

**Analyses:**

- VOCs -  
 SVOCs  
 Metals  
 PCB/Pest  
 MNA  
 Other

**Analytical Method:**

8260 \_\_\_\_\_ 503.1 \_\_\_\_\_ Other \_\_\_\_\_  
CATS

**Observations**

Weather/Temperature: ~40°F, light rain and cloudy  
 Sample Description: Clear  
 Free Product? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Sheen? yes \_\_\_\_\_ no  describe \_\_\_\_\_  
 Odor? yes \_\_\_\_\_ no  describe \_\_\_\_\_

**Comments:**

BH & W.V. initially collected sample w/ peri pump, had to switch to bailer because the pump was not pulling the water.



# WELL DEVELOPMENT DATA SHEET

Well Number: 7-A-6      Date: 11/5/66      Project Name: Delphi Phase II      Project Number: 0056607

Development Technique  

Peri Pump

Weather Conditions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Static water level before development: 2.30 (feet below top of casing) .16 gpf  
 Bottom of well: 14.26 (feet below top of casing) 1.9

Time Started: 0340      Time Finished: 0935

TIME	DTW	Pump (on/off)	Turb. (NTU)	Temp.	pH	Cond.	Flow	Comments
Initial Conditions	2.30	011	68	NR				
0900	3.37	01	76	NR				
	3.32	00	40	NR				Removed 6.5 gallons

NOTES: \_\_\_\_\_

# WELL DEVELOPMENT DATA SHEET

Well Number: 7-C-2 Date: 11/7/06 Project Name: Delphi Phase II Project Number: 0056607

Development Technique  
Dedicated bailer

Weather Conditions: light rain, ~50°F

Static water level before development: 5.01 (feet below top of casing)  
 Bottom of well: 23.86 (feet below top of casing)

Time Started: 0800 Time Finished: 0855

TIME	DTW	Pump (on/off)	Turb. (NTU)	Temp.	pH	Cond.	Flow	Comments
Initial Conditions								
0825	5.01'	NA	13.8	NR				
0835	9.60'	NA	278	NR				
0845	12.86'	NA	320	NR				
	14.40'	NA	993	NR				Removed 10 gallons
1100	8.44'	NA	320	NR				
1115	8.74'	NA	43.7	NR				
1120	8.81'	NA	40.1	NR				Removed 6 gallons

NOTES: 23.86 - 5.01 = 18.85 x 0.16 = 3.02 gallons = 1 well volume.

# WELL DEVELOPMENT DATA SHEET

Well Number: MW-9-101-A Date: 11/8/06 Project Name: Delphi Phase II Project Number: 0056607

Development Technique  
Bailer / Peri. Pump

Weather Conditions: \_\_\_\_\_

Static water level before development: 5.41 (feet below top of casing)  
 Bottom of well: 12.54 (feet below top of casing)

Time Started: 1055 Time Finished: 1220

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	Flow	Comments
Initial Conditions								
Peri Pump		ON	7500	NR			→	Removed 12 gallons with bailer
"		ON	1839					Removed 15 gallons
"		ON	363					
		ON	203					
		ON	152					
		ON	85					
	6.41	ON	630.5					Total removed 17 gallons
		ON	42.9					

NOTES: 1.14 g per volume.

# WELL DEVELOPMENT DATA SHEET

Well Number: MW 8-3-B    Dates: 11/9/06    Project Name: Delphi Phase II    Project Number: 0056607

Development Technique  
Disposible bailer  
DEDICATED

Weather Conditions: CLOUDY OVERCAST ~50°F  
 Static water level before development: 5.23' (feet below top of casing)  
 Bottom of well: 14.15' (feet below top of casing)

Time Started: 0920    Time Finished: 1015

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	Flow	Comments
Initial Conditions	5.23'	NA	24.1	NR				
1000		NA	298.0	NR				
1005		NA	55.1	NR				
1010		NA	21.7	NR				10 gallons removed
<del>1000</del>								

NOTES: 14.15 - 5.23 = 8.92 x 0.16 = 1.43 1 well volume

# WELL DEVELOPMENT DATA SHEET

Well Number: SS-WSP-115 Date: 11/10/06 Project Name: Delphi Phase II Project Number: 0056607

Development Technique



PEEI Pump

Weather Conditions: Cloudy, ~40°F

Static water level before development: 2.40 (feet below top of casing)  
 Bottom of well: 4.10 (feet below top of casing)

Time Started: 0900 Time Finished: 0912

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	Flow	Comments
------	-----	------------------	-------	-------	----	-------	------	----------

Initial Conditions

	2.80							
Purged well		dry		water is still				very turbid and dark in color, removed ~ 80% of H <sub>2</sub> O

NOTES: 4.10 - 2.80 = 1.30 x .08 = .104 gallons = 1 well volume,  
10 well volumes = 1.04 gallons

# WELL DEVELOPMENT DATA SHEET

Well Number: W07-P-1 Date: 11/10/06 Project Name: Delphi Phase II Project Number: 0056607

Weather Conditions: Cloudy, ~45°F

Development Technique  
Dedicated bailer

Static water level before development: 9.08 (feet below top of casing)  
 Bottom of well: 19.65 (feet below top of casing)

Time Started: 0740 Time Finished: 0755

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	Flow	Comments
Initial Conditions	9.08	ON	FLUR	NE				

NOTES: 19.65 - 9.08 = 10.57 x 0.16 = 1.69 gallons is 4 well volume, 10 well volumes is 16.91 gallons

*Appendix D*  
*Laboratory Reports*