CONSOLIDATED REMEDIAL INVESTIGATION REPORT

TRACT I SITE
3123 HIGHLAND AVENUE
NIAGARA FALLS, NIAGARA COUNTY, NEW YORK
SITE NO. C932157

SUBMITTED TO:

THE NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

Prepared for:

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ACRONYMS

ACM	Asbestos Containing Material
Amec	Amec Environment & Infrastructure, Inc.
BCP	Brownfield Cleanup Program
bgs	Below Ground Surface
Brightfields	Brightfields, Inc.
City	City of Niagara Falls, New York
CLP	Contract Laboratory Program
COCs	Constituents of Concern
COPCs	Constituents of Potential Concern
CSM	Conceptual Site Model
DUSR	Data Usability Summary Report
EA	EA Science and Technology
EDR	Environmental Data Resources
E&E	Ecology and Environment Engineering, P.C.
ft-bgs	Feet Below Ground Surface
FWIA	Fish and Wildlife Impact Analysis
HHEA	Human Health Exposure Assessment
J	Estimated value due to detection below reporting limit
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
NFWB	Niagara Falls Water Board
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York Department of Environmental Conservation
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PLM	Polarized Light Microscopy
RI	Remedial Investigation
ROD	Record of Decision
SCOs	Soil Cleanup Objectives
Site	Tract I Site
SMP	Site Management Plan
S.U.	Standard Units
SVOCs	Semivolatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List

TCLP	Toxicity Characteristic Leaching Procedure
TEM	Transmission Electron Microscopy
TestAmerica	TestAmerica Laboratories
TOC	Total Organic Carbon
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	Volatile Organic Compounds
XRF	X-Ray Fluorescence

1.0 INTRODUCTION

Amec Environment & Infrastructure, Inc. (Amec) has prepared this Consolidated Remedial Investigation (RI) Report on behalf of Brightfields, Inc. (Brightfields) for the Tract I Site (Site) located at 3123 Highland Avenue, in the City of Niagara Falls (City), Niagara County, New York. Figure 1 shows the location of the Site on a United States Geological Survey (USGS) topographic map and Figure 2 shows the existing layout of the Site in plan view.

The Site is a former lead/acid battery manufacturing plant and has been the subject of site characterization by the New York State Department of Environmental Conservation (NYSDEC) and a removal action by the United States Environmental Protection Agency (USEPA) between 1999 and 2010. Adjacent to the Site to the south and east is the Tract II property, which is being remediated under the State of New York Inactive Hazardous Waste Sites program.

The City has endeavored to redevelop both the Site and the Tract II property since closure of the industrial facilities in the early 1970's. In order to support a viable redevelopment on the Tract II property, Brightfields has elected to also remediate and redevelop the Site. The Site will be remediated under the New York State Brownfield Cleanup Program (BCP).

1.1 PURPOSE OF REPORT

The purpose of this Consolidated RI Report is to serve as a summary of the investigations and remedial actions conducted at the Site to date under NYSDEC and USEPA oversight. This report documents the results and observations from the previous investigations and remedial action, provides a limited qualitative exposure assessment for the Site, and presents recommendations for additional actions (if any) to facilitate redevelopment of the Site.

1.2 SITE BACKGROUND

The following subsections provide a brief description of the Site location and history along with a physical description of the Site, including geology and hydrology.

1.2.1 *Site Location and History*

The Site is located at 3123 Highland Avenue in the City of Niagara Falls, New York in a multi-use area comprised of industrial, commercial, and residential properties. The Site consists of approximately 5.9 acres located east of Highland Avenue, north and west of the industrial Tract II property, and south of the active Tulip Corporation (Figures 1 and 2).

The Site was first developed for industrial use in approximately 1910 as the Power City Warehouse, a battery manufacturing facility for U.S. Light and Heat Co., and later Autolite Co. The facility was acquired by Prestolite Co. in the 1960s for the manufacture of hard rubber battery cases along with battery charging and filling. Battery manufacturing activities ceased in the 1970s and the Site was used as a warehouse and an automotive body shop until the 1980s. By the late 1980s, the Site had been abandoned and various portions were in disrepair. At that time, the City acquired the property via tax foreclosure.

1.2.2 *Site Description*

The Site consists of approximately 5.9 acres of property and is mainly covered by the former Power City Warehouse building in various levels of disrepair. The Site consists of roughly 30 percent grass and concrete surface, 15 percent is wooded with undergrowth, and approximately 55 percent contains building structures. The western portion of the Site consists of a grassy area and a gravel drive to the loading dock area. Along the southern boundary of the Site are some trees and undergrowth, along with a segment of a retaining wall. The eastern portion of the Site has some grassy areas intermixed with broken asphalt and sections of concrete pavement.

The Power City Warehouse building covers approximately 3.3 acres of the Site and is a three-story masonry building with a basement area under a portion of the structure. The building has had numerous additions to the original structure. Portions of the building roof have collapsed, making several areas of the warehouse building unsafe. Previous investigations of the warehouse building have reported that the majority of the structure is constructed on concrete floors approximately six-inches thick. The concrete floors were noted to be in good condition with no major cracking or deterioration (EA, 2009). Several areas of the warehouse have brick flooring over the concrete floor and drains, and sumps were identified throughout the building.

A second, considerably smaller, one-story building (approximately 462 square feet) is located in the northeast corner of the Site. The smaller building is constructed of brick with a concrete floor. Past investigations have suggested that this building may have been used for chemical storage (E&E, 2000).

1.2.3 Site Geology and Hydrogeology

The Geologic Map of New York, Niagara Sheet, published by the University of the State of New York indicates that the Site lies within the Silurian-aged Lockport Group. The Lockport Group consists of Geulph, Oak Orchard, Eramosa, and Goat Island Dolostones and the Gasport Limestone. Tract II property investigations have revealed that bedrock is between 12.5 and 23.5 feet below ground surface (ft-bgs) in the vicinity of the Site. The unconsolidated material at the Site consists of various fill materials at the surface, underlain by silty clay. Dolostone bedrock is present below the silty clay.

Although no direct groundwater investigations have been performed on the Site, previous investigations conducted for the NYSDEC on the adjacent Tract II property indicate that there is no significant groundwater aquifer within the overburden soils or fill materials (EA, 2009). Groundwater flow at the Site appears to be generally southwest, toward the Niagara River, on the top of the competent bedrock.

The NYSDEC concluded, in the initial Tract II site characterization report, (E&E, 2000) and in the 2003 Tract II Record of Decision (ROD) that groundwater in the vicinity of the Site was not likely to be used as drinking water source. The report cited the small amount of water available, a local ordinance prohibiting water supply wells in the City, and the fact that public drinking water is available throughout the area as justification for this conclusion.

1.3 SITE INVESTIGATION/REMEDIATION HISTORY

In May 1999, an initial investigation was conducted on the Site by Ecology and Environment Engineering, P.C. (E&E) for the City under a grant from the NYSDEC. Results from this investigation were presented in a May 2000 Site investigation report (E&E, 2000). In late 2007, the NYSDEC contracted EA Engineering, P.C. and its affiliate EA Science and Technology (EA) to perform an additional Site characterization. Results of that investigation were presented in a May 2009 Site characterization report (EA, 2009).

In late 2009 and in 2010, the USEPA conducted a removal action at the Site. These activities included fencing the Site, removal/cleanup and disposal of lead-contaminated debris including sediments and sludge from within the warehouse building, and removal and disposal of some asbestos containing building materials from the Site. Additionally, paint-related materials, PCB light ballasts, batteries, mercury switches, piping and other miscellaneous debris located on the Site were removed and disposed of by the USEPA.

In July 2011, Amec implemented a NYSDEC-approved pre-design study work plan (Mactec, 2011) on the Site. This study was performed to refine the extent of lead identified in surface soil at the Site and to obtain additional data to support anticipated Site remediation.

1.4 REPORT ORGANIZATION

This report is organized into six sections following this introduction, as follows:

- **Section 2** provides a description of the previous investigations and remedial action performed at the Site.
- **Section 3** provides the results and observations from the previous investigations conducted at the Site.

- **Section 4** summarizes the analytical results and associated impacts at the Site.
- **Section 5** presents a limited qualitative exposure assessment for the Site.
- **Section 6** presents the conclusions for the investigations performed at the Site and presents recommendations for additional actions.
- **Section 7** provides a list of references cited in this report.

1.5 LIMITATIONS

This RI Report presents a summary of information known to Amec concerning the Site that Amec considered pertinent to the scope of work and stated project objectives. Amec has performed this work with the care and skill ordinarily used by members of the profession practicing under similar conditions. The conclusions presented herein are those that are deemed pertinent by Amec based upon the assumed accuracy of the available information. No other warranty, expressed or implied, is made as to the professional advice included in this report. The information present in this report is not intended for any use other than the stated objectives of the project. This document was prepared for the sole use of Brightfields, Inc., Honeywell, Inc., and the NYSDEC, who are the only intended beneficiaries of the work.

2.0 SITE INVESTIGATIONS

This section provides a description of previous investigations and remedial work performed at the Site.

2.1 SUMMARY OF REMEDIAL INVESTIGATIONS

The Site was investigated in three efforts between 1999 and 2011. These included the 1999 E&E Site investigation, the 2007-2008 EA Site characterization, and the July 2011 predesign study implemented by Amec. The following subsections summarize the field activities conducted during these three Site characterization efforts.

2.1.1 1999 E&E Site Investigation

In May 1999, E&E conducted the initial investigation of the Site. According to the E&E report (E&E, 2000), the 1999 site investigation was conducted to characterize the nature and extent of potential Site-related constituents, and consisted of a building inspection and multimedia sampling. The building inspection was performed to determine if petroleum products or other hazardous materials were located in the Site buildings. Due to safety concerns, this inspection was limited to the first floor of the Power City Warehouse building. Sampling activities included the collection of surface soils, sediments, paint chips for lead analysis and building materials for asbestos analysis. These activities are described in further detail below and sample locations from the E&E Site investigation are shown on Figure 3.

Samples collected during the E&E Site investigation, with the exception of asbestos samples, were submitted to E&E Analytical Services Center for laboratory analysis. Analytical results were subjected to a review to determine data usability, and a Data Usability Summary Report (DUSR) was completed. Results from the E&E Site investigation are contained in the "*Site Investigation Report for the Power City Warehouse, Niagara Falls, New York"* (E&E, 2000), and are presented in Section 3.1 of this report.

2.1.1.1 *Surface Soil Sampling*

During the 1999 Site investigation, 13 (10 composite and three grab) samples that were classified by E&E as surface soil samples, were collected from the Site; mainly from within the Power City Warehouse building. Composite and grab samples were collected by room or area and were reportedly collected from the 0 to 0.5 foot depth interval.

Although classified as surface soil samples, several of the samples or sub-samples were collected from within sumps and drains within the building. According to the E&E report, in rooms with highly fractured concrete or brick floors, the concrete was broken or the bricks were removed and sampling was conducted from the underlying soils/material. Additionally, in rooms where floor drains or sumps were present, sampling was conducted from the drains and/or sumps, as well as below brick floors and damaged concrete areas (E&E, 2000).

Of the 13 samples designated as surface soil samples (SS-PCW-01 through SS-PCW-13), only four composite samples (SS-PWC-07, SS-PWC-11, SS-PWC-12 and SS-PWC-13) and two grab samples (SS-PWC-04 and SS-PWC-08) did not include debris material from within sumps or drains (Figure 3).

Eight of the samples collected by E&E were analyzed for target compound list (TCL) semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and total lead. Of the remaining five samples, two were analyzed for total lead (SS-PCW-04 and SS-PCW-07), two were analyzed for PCBs (SS-PWC-08 and SS-PWC-13), and one sample (SS-PWC-10) was analyzed for TCL SVOCs and PCBs. Additionally, because PCBs were analyzed by Contract Laboratory Program (CLP) methodologies, pesticides were reported in the PCB samples.

2.1.1.2 *Background Surface Soil Sampling*

Three background grab surface soil samples were collected from areas near the Site for lead analysis. According to the E&E report, background samples were collected from 0 to 0.5 feet in depth at the following locations:

- Southeast of the corner of Profit Lane and 9th Street (sample SS-PCW-BK01),
- North of the Power City Warehouse at the Tulip Corporation yard on Highland Avenue (sample SS-PCW-BK02), and

- East of the Doris Jones Tennis Courts along Highland Avenue (sample SS-PCW-BK03).

2.1.1.3 Sediment/Sludge Sampling

One composite sediment/sludge sample and a duplicate sample, consisting of three sub-samples, were obtained by E&E from the central floor drain in the Power City Warehouse building. This sample and duplicate were analyzed for SVOCs, pesticides/PCBs and lead (samples SD-PCW-01 and SD-PCW-01/D).

2.1.1.4 Lead Paint Sampling

One composite paint chip sample (sample PT-PCW-01) was collected from different color painted chips located in the former Moulding Room. This sample was analyzed for Toxicity Characteristic Leaching Procedure (TCLP) lead.

2.1.1.5 Asbestos Sampling

Two samples of pipe insulation (AS-PCW-01 and AS-PCW-02) and one sample of roofing material (AS-PCW-03) were collected from the Power City Warehouse building. These samples were analyzed for asbestos by polarized light microscopy (PLM) and by Transmission Electron Microscopy (TEM) for organically bound material.

2.1.2 2007-2008 EA Site Characterization

EA conducted additional characterization activities at the Site for NYSDEC from September 2007 to October 2008. According to the EA report, the Site characterization was performed to characterize known constituents of concern (COCs) at the Site and to determine the extent to which those COCs contribute to risks to human health and the environment (EA, 2009). To accomplish this, EA's Site characterization consisted of the following activities:

- Historical data and records review;
- Sample location identification and warehouse flooring inspection;
- Debris sampling and debris volume estimation;

- Flooded basement water discharge and basement inspection; and
- Soil boring sampling.

These activities are described in further detail below. Sample locations from the EA Site characterization are shown on Figure 4.

Samples collected during the EA Site characterization were submitted to Mitkem Corporation located in Warwick, Rhode Island for laboratory analysis. Analytical results from this investigation were supplied to Environmental Data Services, Inc. for review and a DUSR was completed. Results from the EA Site characterization are contained in the "*Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York*" (EA, 2009) and are discussed in Section 3.2 of this report.

2.1.2.1 Historical Data and Records Review

EA conducted a historical data and records review of the Site prior to initiating field activities. This assessment included reviewing a radius report map from Environmental Data Resources (EDR) and data provided to EA by the NYSDEC. Additionally, EA contacted several City offices for any other information they could obtain regarding the Site.

2.1.2.2 Sample Location Identification and Warehouse Flooring Inspection

Based upon the findings of the historical data and records review, EA and the NYSDEC conducted a Site visit to locate debris and soil sampling locations in September of 2007. According to the EA report, sampling locations were field-selected based upon historical operations and areas where sufficient sample volumes could be obtained for analysis.

Prior to debris and soil sampling, EA conducted an inspection of flooring materials throughout the Power City Warehouse building. This inspection was conducted by removing bricks and asphalt from several locations within the warehouse to determine the condition and type of sub-floor materials present. During this inspection, it was observed that brick floors are underlain by a layer of soil/sand on top of a concrete sub-floor. Based upon the condition of the concrete sub-floor and concluding that the soil/sand was used as a bedding material for the brick floor, EA and the NYSDEC determined that sampling of the soils/sands located beneath the bricks would not be conducted as part of EA's characterization (EA, 2009).

2.1.2.3 Building Debris Sampling and Debris Volume Estimation

According to the EA report, on September 12, 2007, 19 debris samples (composite and grab) were collected from selected locations based on results of the historical records review, the warehouse flooring inspection, and in concurrence with the NYSDEC representative. Grab debris samples DS-01, DS-04 through DS-15, DS-17, DS-18, and DS-21 were collected from individual sumps/pits and composite debris samples DS-16, DS-19 and DS-20 were collected from continuous floor drains and trenches from within the Power City Warehouse building (Figure 4).

Debris samples collected by EA were analyzed for SVOCs, target analyte list (TAL) metals and TCLP metals. Additionally, five debris samples (DS-09, DS-13 DS-14, DS-16 and DS-19) were analyzed for volatile organic compounds (VOCs) based upon photoionization detector (PID) organic vapor field screening results.

During debris sampling activities, volume calculations were also completed for the debris sample collection areas. These volume estimations were completed by EA to calculate the estimated volume of debris located within the floor drains, floor trenches, and catch basins (sumps/pits) within the Power City Warehouse building.

2.1.2.4 Flooded Basement Water Discharge and Basement Inspection

The partial basement located in the northern portion of the Power City Warehouse building was observed by EA to be flooded during debris sampling activities. On June 27, 2008 EA collected one composite sample of the water in the basement for VOCs, SVOCs, TAL metals, total organic carbon (TOC), and total suspended solids (TSS) analyses. This sample was required as part of the industrial discharge permit with the Niagara Falls Water Board (NFWB) to allow EA to discharge the basement water to the sanitary sewer. After issuance of the industrial discharge permit from the NFWB, EA removed water from the basement into the sanitary sewer system from September 15 through September 17, 2008.

Following basement water removal and discharge, EA inspected the basement and collected one composite sample (BSMT COMPOSITE) from the debris observed in the basement. The composite sample was analyzed for TAL metals.

2.1.2.5 Soil Boring Sampling

On September 30 and October 1, 2008, EA advanced 23 soil borings (SB-01 through SB-23) using direct-push drilling technologies. According to the EA report, 13 of the soil borings were installed within the footprint of the former Power City Warehouse building and 10 borings were installed around the exterior of the structure. To facilitate soil boring installation within the building, a 4-inch coring bit was utilized to core through the concrete floor prior to drilling. Reportedly, continuous soil samples were collected with a macro-core sampler until a confining clay layer was reached. The soil cores were geologically logged and screened with a PID at 1 foot intervals. It should be noted that NYSDEC considers “surface” soil to consist of soil less than 0.5 feet deep. As such, EA reported the 0-2 ft-bgs interval as “subsurface” soil, consistent with NYSDEC policy. Additionally, although 13 of the soil borings were drilled within the building footprint, the samples collected from them are considered building exterior samples for the purposes of this report because they were collected from beneath the building slab.

Thirty-two soil samples were reportedly collected by EA from the 23 soil borings advanced at the Site. However, according to the tables located in the EA report, only 31 samples were collected consisting of the following (Figure 4):

- Twenty-two shallow subsurface soil samples were collected from 0 to 2 ft-bgs and analyzed for TAL metals. Shallow subsurface samples were collected from all of the soil borings, except SB-19.
- Nine deeper subsurface soil samples were collected from depth intervals ranging from three to eight ft-bgs and analyzed for VOCs and SVOCs. These samples were only collected in soil borings from depth intervals that reportedly exhibited elevated PID readings, staining, or odors. These nine samples (with their corresponding sample depth interval) include; SB-01D(6-8), SB-06D(5-6), SB-09D(6-7), SB-12D(6-7), SB-13D(6-7), SB-17(5-6), SB-18(4-7), SB-19(4-7) and SB-23S(3-4).

2.1.3 July 2011 Amec Pre-design Study

In July 2011, Amec implemented a NYSDEC-approved Predesign Study Work Plan (Mactec, 2011). This study was performed to refine the extent of metals identified in surface soil surrounding the Power City Warehouse building and to obtain additional data to support anticipated Site remediation.

2.1.3.1 Surface Soil Sampling

To further delineate metals concentrations in surface soil at the Site, Amec collected 11 grab surface soil samples around the perimeter of the Power City Warehouse building. The locations of these samples are shown on Figure 5 and are described below:

- Six surface soil samples (B-10 through B-15) were collected on the eastern side of the Site (east of the warehouse building) from areas of exposed soil;
- Three surface soil samples (B-16 through B-18) were collected south of the warehouse building and north of the Tract II property; and
- Two surface soil samples (B-19 and B-20) were collected from the grassy area west of the warehouse building and east of Highland Avenue.

The surface soil samples were collected as grab samples using a decontaminated hand auger. Samples were collected from a depth interval of 0 to 0.5 ft-bgs, below any vegetative cover. The surface soil samples were analyzed for metals (antimony, lead and tin) by USEPA SW-846 Method 6010B/6020, TCLP lead by USEPA SW-846 Method 1311/6010B, and pH by USEPA SW-846 Method 9045.

In addition to soil sampling, an Innov-X Alpha Series hand-held X-ray fluorescence (XRF) meter was used to field screen the surface soil sampling locations for the presence of lead and tin. XRF field screening was conducted to measure real-time lead and tin concentrations for later correlation to laboratory results. Due to equipment failure of the XRF, only four surface soil sampling locations (B-10, B-11, B-19 and B-20) were field screened.

All surface soil samples collected during the Amec pre-design study were submitted to TestAmerica Laboratories (TestAmerica) located in Amherst, NY for laboratory analysis. After receipt of the analytical data package, data validation was completed by an Amec chemist for Method 6010B/6020 (antimony, lead and tin) and TCLP lead in accordance with the NYSDEC DUSR guidelines (NYSDEC, 2010). Analytical results and a summary of the building evaluation from the Amec pre-design study are presented in Section 3.3 of this report.

2.2 SITE REMEDIATION SUMMARY

In May 2009, the Site was referred to the USEPA by the NYSDEC for potential cleanup. NYSDEC's referral was based upon the threat posed by elevated levels of lead identified in sumps, floor trenches, and drains (debris samples), asbestos containing building materials, and the overall deteriorating condition of the warehouse building. As a result of the referral, USEPA conducted an assessment of the Site and approved funding to secure the Site from direct access. This included a fencing and security action at the Site that was implemented in November 2009.

In late March 2010, USEPA approved additional funding for a Removal Action to remediate lead containing materials, asbestos materials, and other hazardous substances within the warehouse building. These activities were conducted from May to November 2010 and included the removal, cleanup and disposal of a significant amount of lead-contaminated debris, sediments and sludge from within the warehouse building, removal and disposal of water in the building basement, and removal and disposal of some asbestos containing building materials from the Site. Additionally, paint-related materials, PCB light ballasts, batteries, mercury switches, piping, and other miscellaneous debris located in the warehouse building were removed and disposed of by the USEPA.

According to the USEPA Pollution Reports from this Remedial Action, cleanup activities did not take place in areas of the warehouse building that were deemed unsafe due to deteriorating building conditions. The portions of the warehouse building addressed and not addressed by the USEPA are shown on Figure 2. USEPA Pollution Reports detailing the cleanup work activities are included in Appendix A.

3.0 SITE INVESTIGATION RESULTS

This section provides observations and results from the three investigations conducted at the Site. Based upon the City's Master Plan to redevelop the Site for commercial use, analytical results presented in this section are compared to 6 New York Code of Rules and Regulations (NYCRR) Part 375 Soil Cleanup Objectives (SCOs) for "Restricted Commercial" use (hereafter referred to as "Commercial SCOs").

3.1 E&E SITE INVESTIGATION RESULTS

Results of the May 1999 E&E Site investigation are contained in the "*Site Investigation Report for the Power City Warehouse, Niagara Falls, New York"* (E&E, 2000) and are summarized below. Table 1 is an analytical summary table of sample detections from this investigation, with Commercial SCOs listed for comparison to analytical results. Sample locations from the E&E investigation are shown on Figure 3, and Figure 6 provides a pictorial summary of analytical results detected above Commercial SCOs.

3.1.1 Surface Soil Sampling Results

During the E&E Site investigation, 13 surface soil samples (10 composite and three grab) were collected by E&E. As shown in Table 1, lead, pesticides, PCBs and SVOCs were detected in several samples classified by E&E as surface soil samples. The following bullet list and discussion summarizes these samples and compounds that were detected above Commercial SCOs (Figure 6):

- Samples SS-PCW-01, SS-PCW-02 and SS-PCW-03 were three-point composite samples collected in rooms on the eastern side of the warehouse building. Sub-samples consisted of material within sumps, floor drains, under brick floors, from a pile of debris, and at a seam in the floor.
    - Samples SS-PCW-01 and SS-PCW-02 both contained polynuclear aromatic hydrocarbons (PAHs) including benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene, PCBs (Aroclor 1254), and lead above Commercial SCOs. SS-PWC-02 also detected benzo(a)anthracene above the Commercial SCO.

  - Sample SS-PWC-03 contained PCBs (Aroclor 1254) and lead above Commercial SCOs.
- Sample SS-PCW-04 was a grab sample from an area of visible soil in the Dust Bin area (exterior southeast corner of warehouse building) and was only analyzed for lead.
  - Lead was detected above Commercial SCOs in this sample.
- Samples SS-PCW-05 and SS-PWC-06 were three-point composite samples collected in rooms on the northwestern side of the warehouse building. Sub-samples consisted of material within sumps and floor drains and presumably from material under brick floors.
  - Two PAHs (benzo(b)fluoranthene and benzo(a)pyrene), and lead were detected above the Commercial SCOs in these composite samples. Sample SS-PWC-06 also contained PCBs (Aroclor 1254) above the Commercial SCO.
- Sample SS-PCW-07 was a two-point composite sample from soil beneath the concrete floor in the former Storage Plate Area. This sample was only analyzed for lead.
  - Lead was detected in this sample at levels above the Commercial SCOs.
- Sample SS-PCW-08 was a grab sample from an area of visible oil staining on the floor in the former Air Room that was only analyzed for pesticides/PCBs.
  - Pesticides/PCBs were not detected in this grab sample.
- Sample SS-PCW-09 was a three-point composite sample collected from within the former Central Factory Building area. Sub-samples consisted of soils from under an area of concrete floor, material within a drain, and material under the brick floor.
  - Five PAHs including benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene, PCBs (Aroclor 1254), and lead were detected above Commercial SCOs in this sample.
- Sample SS-PWC-10 was a grab sample of material within the floor drain of the former Oil House room on the southern side of the warehouse building. This sample was only analyzed for SVOCs and pesticides/PCBs.
  - PCBs (Aroclor 1260), were detected above the Commercial SCO in this grab sample.
- Sample SS-PCW-11 was a two-point composite sample collected around the small building located in the northeast corner of the Site (suspected chemical

storage building). One sub-sample consisted of soil from the northeast corner of the building at the end of the concrete, and the other sub-sample was collected from soil under the concrete ramp on the north side of the building.

    - One PAH (benzo(a)pyrene), PCBs (Aroclor 1260), and lead were detected above the Commercial SCOs in this composite sample.

- Sample SS-PWC-12 was a five-point composite sample collected around the eastern perimeter of the warehouse building.
    - Four PAHs including benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and dibenz(a,h)anthracene, and lead were detected above Commercial SCOs in this composite sample.
- Sample SS-PWC-13 was a three-point composite surface soil sample collected in and around the former electrical substation in the southeast corner of the Site. One sub-sample was reportedly collected at a seam in the concrete floor of the substation foundation and the two other sub-samples were collected adjacent to the transformer pad. This sample was analyzed for pesticides/PCBs. Pesticides/PCBs were not detected in this sample above Commercial SCOs.

Lead. Of the ten samples listed above that were analyzed for lead, all were found to contain lead at concentrations exceeding the Commercial SCO of 1,000 milligrams per kilogram (mg/kg). Lead concentrations in these samples ranged from 2,350 mg/kg to 178,000 mg/kg. The building interior surface samples and areas with the highest concentrations of lead are SS-PWC-06 (137,000 mg/kg) located in the former Lead Foundry Area and SS-PWC-07 (178,000 mg/kg) collected under the concrete floor in the former Storage Plate Area. These areas are located in the northwest portion of the warehouse building.

PCBs. As presented above, of the 11 samples analyzed for PCBs, seven were found to contain PCBs at concentrations that exceed the Commercial SCO of 1 mg/kg. PCB concentrations in these seven samples ranged from an estimated 1.3 J mg/kg to 21 mg/kg. The samples and areas with the highest concentrations of PCBs are SS-PWC-01 (21 mg/kg) and SS-PWC-02 (7.9 mg/kg) located in the former E Building Addition and F Building/F Building Extension in the northeast portion of the warehouse building and SS-PWC-09 (17 mg/kg) collected in the former Central Factory Building area. None of these detections exceed the Toxic Substances Control Act regulatory level of 50 mg/Kg.

PAHs. Of the nine samples listed above that were analyzed for SVOCs, seven were found to contain various PAHs above the Commercial SCOs. The PAHs detected, and their range of concentrations above the Commercial SCOs include: benzo(a)anthracene (6.5 mg/kg to 29 mg/kg), benzo(b)fluoranthene (6.3 mg/kg to 35 J mg/kg), benzo(a)pyrene (2 J mg/kg to 31 J mg/kg), indeno(1,2,3-cd)pyrene (7.5 J mg/kg to 9.8 J mg/kg) and dibenz(a,h)anthracene (0.82 J mg/kg to 3.6 J mg/kg). As with PCBs, the highest concentrations of PAHs were observed in samples SS-PWC-01 and SS-PWC-02 collected in the northeast portions of the warehouse building and in sample SS-PWC-09 collected in the former Central Factory Building area.

It should be noted that several of the E&E samples that were comprised of (or partially comprised of) building debris have been removed from the warehouse building during the USEPA Removal Action in 2010. As shown on Figure 6, the E&E samples associated with debris that has been removed include SS-PCW-05, SS-PCW-06, SS-PCW-08, SS-PCW-09 and SS-PCW-10.

3.1.2 Background Surface Soil Sampling Results

Three background grab surface soil samples were collected by E&E from areas near the Site for lead analysis. Results of these background surface soil samples by sample number and location are as follows (Table 1):

- Sample SS-PCW-BK01 collected southeast of the corner of Profit Lane and 9th Street contained lead at a concentration of 201 mg/kg;
- Sample SS-PCW-BK02 collected north of the Site at the Tulip Corporation yard contained lead at a concentration of 1,400 mg/kg; and
- Sample SS-PCW-BK03 collected east of the Doris Jones Tennis Courts along Highland Avenue contained lead at a concentration of 281 mg/kg.

3.1.3 Sediment/Sludge Sampling Results

One composite sediment/sludge sample (SD-PCW-01) and a duplicate sample (SD-PCW-01/D) were collected by E&E of the material contained in the central floor drain of the Power City Warehouse building. These samples were analyzed for SVOCs, pesticides/PCBs and lead. Results from these samples (detections only) are provided in Table 1 and detections above Commercial SCOs are shown on Figure 6. Sediment/Sludge results above Commercial SCOs are as follows:

- Of the nine PAHs detected, only benzo(a)pyrene was detected above the Commercial SCO of 1 mg/kg at an estimated concentration of 2.1 J mg/kg (2.9 J mg/kg in the duplicate);
- PCBs (Aroclor 1254) were detected above the Commercial SCO of 1 mg/kg at an estimated concentration of 1.8 J mg/kg (1.2 J mg/kg – duplicate sample); and
- Lead was detected above the Commercial SCO of 1,000 mg/kg at a concentration of 225,000 mg/kg (270,000 mg/kg – duplicate sample).

During the USEPA Removal Acton in 2010, the sediment/sludge in the central floor drain was removed and disposed of off-Site by the USEPA (Appendix A).

3.1.4 Lead Paint Sampling Results

One composite paint chip sample (sample PT-PCW-01) was collected by E&E from different colored wooden beams in the former Moulding Room for TCLP lead analysis. According to the E&E report, the TCLP result from this sample was found to exceed the lead TCLP regulatory action level (standard) of 5 milligrams per liter (mg/L) at a concentration of 42.3 mg/L.

3.1.5 Asbestos Sampling Results

Two samples of pipe insulation (AS-PCW-01 and AS-PCW-02) and one sample of roofing material (AS-PCW-03) were collected by E&E from the Power City Warehouse building for asbestos analysis. According to the E&E report, results indicated that both pipe insulations and the roofing material are considered asbestos containing materials (ACMs). The pipe insulations contained 30% to 68% chrysotile asbestos and the roofing material contained 49% chrysotile asbestos.

3.2 EA SITE CHARACTERIZATION RESULTS

Results of the Site characterization conducted by EA from September 2007 to October 2008 are contained in the "*Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York"* (EA, 2009) and are summarized below. The EA Site characterization consisted of the following inspection and sampling activities:

- Warehouse flooring inspection;
- Debris sampling;
- Basement inspection and debris sampling; and
- Soil boring sampling.

Tables 2, 3, and 4 are analytical summary tables of detections from the EA investigation, with Commercial SCOs and TCLP standards listed for comparison to analytical results. Sample locations from the EA Site characterization are shown on Figure 4 and Figures 7 and 8 provide a pictorial summary of analytical results detected above Commercial SCOs and TCLP standards for debris samples and subsurface soil samples collected from 0 to 2 ft-bgs, respectively.

3.2.1 Warehouse Flooring Inspection Results

By removing bricks and asphalt from several locations within the Power City Warehouse building, EA determined that a poured concrete sub-floor covers a large portion of the warehouse building. EA noted that the concrete floor was in good condition where inspected, with no major cracking or deterioration observed. Cores of the foundation by EA revealed that the concrete is 6 inches thick on average. Based upon this information, EA concluded that the concrete sub-floor would significantly limit COCs from migrating to the subsurface.

In addition, EA observed that brick floors are underlain by a layer of soil/sand on top of the concrete sub-floor. Concluding that the soil/sand was used as a bedding material for the brick floor, EA and the NYSDEC determined that sampling of the soils/sands located beneath the bricks would not be conducted as part of EA's additional characterization (EA, 2009).

3.2.2 Debris Sampling Results

In September 2007, EA collected 19 debris samples (composite and grab) throughout the interior of the former Power City Warehouse building (Figure 4). Grab debris samples DS-01, DS-04 through DS-15, DS-17, DS-18, and DS-21 were collected from individual sumps/pits and composite debris samples DS-16, DS-19 and DS-20 were collected from continuous floor drains and trenches (EA, 2009). The debris samples were analyzed for SVOCs, TAL metals, and TCLP metals. Additionally, five debris samples (DS-09, DS-13 DS-14, DS-16 and DS-19) were also analyzed for VOCs based upon PID organic vapor field screening results.

As shown in Table 2 and on Figure 7, metals results from the debris samples indicated exceedances of the Commercial SCOs for arsenic, barium, cadmium, copper, lead, mercury, and zinc.

SVOCs that exceeded the Commercial SCOs in the debris samples consisted mainly of PAHs and include: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene. Other SVOCs detected above their respective SCOs include; 2-methylphenol, 4-methylphenol, hexachlorobenzene, and phenol.

No VOCs were detected above Commercial SCOs in the five debris samples analyzed.

TCLP metals results from the debris samples indicate that lead exceeded the TCLP standard of 5 mg/L in the 19 debris sampled collected by EA. TCLP lead concentrations in the debris samples ranged from 5.31 mg/L to 1,630 mg/L.

It should be noted that during the USEPA Removal Acton in 2010 (discussed in Section 2.2) and as shown on Figure 7, materials associated with all EA debris samples, except DS-13, DS-20 and DS-21 were removed and disposed of off-Site by USEPA. Debris associated with samples DS-13, DS-20 and DS-21 remain at the Site, as this area was not addressed by the USEPA due to safety concerns regarding the building structure. These three debris samples contained four metals (arsenic, copper, lead and mercury) and 17 SVOCs (acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, hexachlorobenzene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene) above Commercial SCOs.

3.2.3 Basement Inspection and Sampling Results

The partial basement located in the northern portion of the Power City Warehouse building was observed by EA to be flooded during debris sampling activities. Following basement water removal and discharge, EA inspected the basement to assess its structural condition and determine if any types of wastes were present. The basement was found to be constructed of poured concrete and was observed by EA to be in good condition. One composite sample (BSMT COMPOSITE) was collected from debris observed in the basement and analyzed for TAL metals. Five metals including arsenic, barium, cadmium, copper and lead were detected above Commercial SCOs in this composite sample (Table 2).

During the USEPA removal acton in 2010, the debris associated with the BSMT COMPOSITE sample was removed and disposed of off-Site (Appendix A).

3.2.4 Soil Boring Sampling Results

In September and October 2008, EA advanced 23 soil borings at the Site using direct-push drilling technologies. Thirteen of the soil borings were installed within the footprint of the former Power City Warehouse and 10 soil borings were installed around the exterior of the structure as shown on Figure 4. Thirty-one subsurface soil samples were collected from the 23 soil borings.

Analytical summary tables from these subsurface soil samples are presented in Tables 3 and 4. Figure 8 provides a pictorial summary of analytical results detected above the Commercial SCOs.

3.2.4.1 Soil Borings within Building Footprint

Soil borings SB-01 through SB-13 were installed beneath the concrete sub-floor within the footprint of the warehouse building. Because these samples were collected beneath the building slab, and because portions of the slab will be removed in the demolition, these samples are considered to be building exterior samples for the purpose of the Site characterization. Of the 13 soil samples collected from 0 to 2 ft-bgs for TAL metals analysis, only lead at two locations (SB-08 at 9,410 J mg/kg and SB-12 at 1,160 J mg/kg) and chromium at one location (SB-11 at 2,060 J mg/kg) exceeded the Commercial SCOs.

Five of the boring locations (SB-01, SB-06, SB-09, SB-12 and SB-13) advanced within the building footprint were also sampled for VOCs and SVOCs, based upon field screening. These samples were collected at depth intervals ranging from 5 to 8 ft-bgs. No VOCs or SVOCs were detected in these samples exceeding the Commercial SCOs.

3.2.4.2 Exterior Soil Borings

Soil borings SB-14 through SB-23 were installed around the exterior of the warehouse building. All 10 exterior soil borings were sampled from 0 to 2 ft-bgs for TAL metals with the exception of boring SB-19. Of the nine exterior soil samples, only one location (SB-22) was found to contain COCs exceeding the Commercial SCOs. The 0 to 2 ft-bgs samples collected from boring SB-22 contained arsenic (40.4 mg/kg), copper (421 mg/kg), and lead (2,160 mg/kg) above Commercial SCOs.

Four of the boring locations (SB-17, SB-18, SB-19 and SB-23) advanced around the exterior of the warehouse building were also sampled for VOCs and SVOCs, based upon field screening, at depth intervals ranging from 3 to 7 ft-bgs. No VOCs or SVOCs exceeded the Commercial SCOs in these samples.

3.2.5 EA Boring Cross Sections

Cross sections (A-A' and B-B') were prepared by Amec using EA boring logs from the 13 direct-push soil borings located inside the footprint of the building. These cross sections were completed to provide an understanding of the depth of the fill on the Site. The location of the cross sections is shown on Figure 8.

The cross sections, as shown on Figure 9, indicate that the soil beneath the building consists of fill, silt, silty clay, and clay. Fill thicknesses shown in the cross sections beneath the building ranged from zero feet (at boring locations SB-16, SB-03, SB-07, SB-12, SB-09, and SB-06) to a maximum of eight feet at boring location SB-13. A layer of silty material exists beneath the majority of the Site from zero to eight ft-bgs, except in the areas containing fill. Beneath the silty material is a clay from approximately 6 ft-bgs to the bottom of the borings.

3.3 AMEC PRE-DESIGN STUDY RESULTS

Observations and results from the July 2011 Amec pre-design study are presented below. This study consisted of collecting surface soil samples from the building perimeter.

3.3.1 Surface Soil Sampling Results

In July 2011, 11 surface soil samples were collected by Amec from around the perimeter of the Power City Warehouse from a depth interval of 0 to 0.5 ft-bgs for the analysis of metals (antimony, lead and tin), TCLP lead, and pH. Analytical results from this study were compared to the Commercial SCOs and TCLP standards and are presented in Table 5. TestAmerica analytical data reports are contained on CD in Appendix B and a Data Validation Summary Report prepared by Amec for these samples is located in Appendix C. Surface soil sample locations are presented on Figure 5 and Figure 10 provides a pictorial summary of COCs detected above Commercial SCOs and TCLP standards.

Lead was detected in all of the surface soil sampling locations at concentrations exceeding the Commercial SCO of 1,000 mg/kg. Lead surface soil concentrations ranged from 1,210 mg/kg to 16,900 mg/kg at the Site in the following areas (Table 5 and on Figure 10):

- On the eastern side of the Site (east of the warehouse building), surface soil concentrations ranged from 1,210 mg/kg to 7,940 mg/kg in borings B-10 through B-15. In this area, the highest concentrations of lead were observed in the northeast corner of the Site at surface soil borings B-10 and B-11 (7,940 mg/kg and 6,430 mg/kg respectively) and the lowest lead concentrations were observed in the southeast corner of the Site at borings B-14 and B-15 (1,210 mg/kg and 1,660 mg/kg respectively).
- On the south side of the Site (south of the warehouse building and north of the Tract II property) surface soil concentrations ranged from a low of 1,230 mg/kg at boring B-16 located to the east to a high of 16,900 mg/kg at boring B-18 located to the west and near the loading dock. Just south of the approximate midpoint to the warehouse building, surface soil boring B-17 detected lead at a concentration of 2,280 mg/kg.

- West of the warehouse building from the grassy area, surface soil borings B-19 and B-20 detected lead at concentrations of 1,730 mg/kg and 2,630 mg/kg respectively.

TCLP lead results ranged from 0.6 mg/L to 69.7 mg/L and exceeded the TCLP standard of 5 mg/L at four surface soil locations. Surface soil borings B-10 and B-11, located in the northeast corner of the Site, exceeded the lead TCLP standard at concentrations of 18.4 mg/L and 46.5 mg/L, respectively and borings B-17 and B-18, located along the southern boundary of the property exceeded the TCLP standard at concentrations of 21 mg/L and 69.7 mg/L, respectively.

Surface soil pH levels were found to be neutral to slightly alkaline and ranged from 7.16 to 8.25 standard units (S.U.).

During surface soil sampling, XRF field screening was conducted to measure real-time lead and tin concentrations for later correlation to laboratory results. Due to equipment failure of the XRF, only four surface soil sampling locations (B-10, B-11, B-19, and B-20) were field screened. Results of XRF field screening are presented in Table 5 below the analytical results. As shown on this table, lead XRF results for surface soils collected at B-10 and B-11 were an order of magnitude lower than analytical results. However, at B-19 and B-20, lead XRF results closely correlated with analytical data. XRF screening results for tin were an order of magnitude higher than analytical results.

4.0 SUMMARY OF SITE IMPACTS

This section provides a summary of impacts in Site media based upon the investigations conducted and the USEPA Removal Action performed.

4.1 SITE IMPACTS SUMMARY

4.1.1 Remaining Building Material/Debris

As discussed in Section 2.2, the USEPA Removal Action performed in 2010 removed a significant amount of impacted debris and other materials from a large portion of the Power City Warehouse building. As a result, materials associated with several samples obtained during the E&E and EA investigations have been removed from the Site. Figure 11 provides a pictorial summary of analytical detections above Commercial SCOs and TCLP standards for the debris samples that are located in the portion of the warehouse building that was not addressed by the USEPA removal action. As shown on this Figure, debris samples collected by E&E and EA in this portion of the building were found to exceed Commercial SCOs for the following:

- Metals including arsenic, copper, lead and mercury;
- SVOCs (mainly PAHs) including acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, hexachlorobenzene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene; and
- PCBs including Aroclor 1254.

Debris samples collected by EA were also analyzed for TCLP metals. As shown on Figure 11, the three debris samples collected in the portion of the warehouse building not addressed by the EPA were found to exceed the TCLP lead standard of 5 mg/L at concentrations ranging from 5.31 mg/L to 1,050 mg/L.

As previously addressed, it should be noted that several of the samples classified by E&E as surface soil samples were actually comprised of building debris, including materials within sumps and drains and presumably from the bedding material located beneath brick floors. As a result, only applicable E&E samples are included in the above debris sample summary and only the samples that consisted of surface soils are included below.

4.1.2 Building Exterior Surface Soil

Several surface soil samples (defined as being collected from 0 to 0.5 ft-bgs) have been collected at the Site. A summary of the theses samples and analysis conducted is provided in the following table.

Company	# of Samples	Depth (bgs)	Analysis
E&E	5 Samples	0 to 6 inches	2 Samples for SVOCs, Pesticides/PCBs and Lead; 2 Samples for Lead only; and 1 Sample for Pesticides/PCBs only
Amec	11 Samples	0 to 6 inches	Metals (Antimony, Lead, Tin) and TCLP Lead

A summary of the analytical results detected above Commercial SCOs and TCLP standards from these surface soil samples is provided on Figure 12. As shown on this figure, the following constituents were found to exceed Commercial SCOs:

- Lead;
- PAHs (from E&E samples) including benzo(a)anthracene; benzo(b)fluoranthene, benzo(a)pyrene and dibenz(a,h)anthracene; and
- PCBs (from E&E samples) including Aroclor 1260.

Metals. Surface soil samples collected by E&E and Amec from 0 to 0.5 ft-bgs and analyzed for lead were found to exceed the Commercial SCO of 1,000 mg/kg at concentrations ranging from 1,210 mg/kg to 178,900 mg/kg. As shown on Figure 12, these samples were collected around the exterior of the Power City Warehouse building, with the exception of E&E sample SS-PWC-07, which was collected in the former Storage Plate Area of the warehouse building beneath the broken up concrete floor. This sample (SS-PWC-07) was found to contain the highest lead level in soil at a concentration of 178,900 mg/kg.

The E&E and Amec surface soil samples (0 to 0.5 ft-bgs) collected around the exterior of the warehouse building ranged in concentrations from 1,210 mg/kg to 16,900 mg/kg in the following areas:

- On the eastern side of the Site (east of the warehouse building) surface soil concentrations ranged from 1,210 mg/kg to 11,300 mg/kg. In this area, the highest concentrations of lead were observed at the southeast corner of the warehouse building at sample SS-PWC-04 (11,300 mg/kg) and in the northeast corner of the Site at sample SS-PWC-11 (8,240 mg/kg) and at Amec borings B-10 and B-11 (7,940 mg/kg and 6,430 mg/kg respectively).
- On the south side of the Site (south of the warehouse building and north of the Tract II property) surface soil concentrations ranged from a low of 1,230 mg/kg at boring B-16 located to the east to a high of 16,900 mg/kg at boring B-18 located to the west and near the loading dock.
- West of the warehouse building from the grassy area, surface soil borings B-19 and B-20 contained lead at concentrations of 1,730 mg/kg and 2,630 mg/kg respectively.

TCLP lead results from the 0 to 0.5 ft-bgs surface soil samples obtained by Amec ranged from 0.6 mg/L to 69.7 mg/L and exceeded the TCLP standard of 5 mg/L at four locations. Surface soil borings B-10 and B-11, located in the northeast corner of the Site, exceeded the lead TCLP standard at concentrations of 18.4 mg/L and 46.5 mg/L respectively. Also, borings B-17 and B-18, located along the southern boundary of the property, exceeded the lead TCLP standard at concentrations of 21 mg/L and 69.7 mg/L respectively.

PAHs. Of the five surface soil samples collected by E&E, only two samples (SS-PCW-11 and SS-PWC-12) were analyzed for SVOCs. Sample SS-PCW-11 was a two-point composite sample collected around the small building located in the northeast corner of the Site (Figure 6). This sample contained benzo(a)pyrene above the Commercial SCO of 1 mg/kg at an estimated concentration of 2 J mg/kg. Sample SS-PWC-12 was a five-point composite sample collected around the eastern perimeter of the warehouse building. The following four PAHs were detected above Commercial SCOs in this sample:

- benzo(a)anthracene was detected above the Commercial SCO of 5.6 mg/kg at a concentration of 6.5 mg/kg;
- benzo(b)fluoranthene was detected above the Commercial SCO of 5.6 mg/kg at a concentration of 6.3 mg/kg;
- benzo(a)pyrene was detected above the Commercial SCO of 1 mg/kg at a concentration of 6.5 mg/kg; and

- dibenz(a,h)anthracene was detected above the Commercial SCO of 0.56 mg/kg at an estimated concentration of 0.82 J mg/kg.

<u>PCBs</u>. Of the five surface soil samples collected by E&E, three (SS-PCW-11, SS-PWC-12, and SS-PWC-13) were analyzed for pesticides/PCBs with one sample (SS-PCW-11) containing PCBs above the Commercial SCO. Composite sample SS-PCW-11 collected in northeast corner of the Site contained PCBs (Aroclor 1260) above the Commercial SCO of 1 mg/kg at an estimated concentration of 3.8 J mg/kg (Figure 6). Composite sample SS-PWC-12 collected around the eastern perimeter of the warehouse building and composite sample SS-PWC-13 collected in and around the former electrical substation in the southeast corner of the Site did not contain detectable concentrations of PCBs.

4.1.3 Building Exterior Subsurface Soil

As stated previously, the NYSDEC considers surface soil to be less than 0.5 ft-bgs. As such, the 22 EA boring samples collected from 0 to 2 ft-bgs were considered subsurface soil samples. Furthermore, because the borings within the building footprint were collected from beneath the building slab, they are being considered as building exterior samples for the purpose of this report and the remediation.

Of the 22 EA subsurface soil samples collected from 0 to 2 ft-bgs at the Site for TAL metals, only four samples were found to contain metals at concentrations above Commercial SCOs (Figure 8) as follows:

- **Within Building Footprint –** Of the 13 soil samples collected beneath the concrete sub-floor within the warehouse building, only three locations contained metals above Commercial SCOs. Soil samples collected at SB-08 and SB-12 contained lead above the Commercial SCO of 1,000 mg/kg at concentrations of 9,410 J mg/kg and 1,160 mg/kg, respectively. At boring SB-11, chromium was detected in soil above the Commercial SCO of 400 mg/kg for hexavalent chromium at an estimated concentration of 2,060 J mg/kg.
- **Building Perimeter –**Of the nine building perimeter soil samples collected by EA, only one location contained metals above Commercial SCOs. The sample collected from boring SB-22, advanced south of the warehouse building, contained the following three metals above Commercial SCOs: arsenic (40.4 mg/kg), copper (421 mg/kg), and lead (2,160 mg/kg).

Nine deep subsurface soil samples (defined as being collected below 2 ft-bgs) were collected from the Site. Deep subsurface soil sampling was conducted during the EA Site characterization from soil boring depth intervals that exhibited elevated PID readings, staining, or odors. EA deep subsurface soil samples were analyzed for VOCs and SVOCs and were collected from depth intervals ranging from 3 to 8 ft-bgs.

Five of the deep subsurface soil samples (SB-01, SB-06, SB-09, SB-12 and SB-13) were collected within the building footprint and the other four (SB-17, SB-18, SB-19 and SB-23) were collected around the exterior of the warehouse building (Figure 4). No VOCs or SVOCs were detected in these samples exceeding the Commercial SCOs.

5.0 QUALITATIVE EXPOSURE ASSESSMENT

This section generally follows the guidelines presented in NYSDEC *DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC, May 2010) to conduct a qualitative human health exposure assessment (HHEA). This assessment is being conducted to consider potential exposure to Site-related constituents of potential concern (COPCs) by human receptors and is limited to the data presented in this report.

It should be noted that ACMs and other building materials have been identified or likely still exist at the Site in the portion of the warehouse building not addressed in the Removal Action by the USEPA in 2010. These materials were not considered in this HHEA and will need to be addressed under separate actions associated with overall Site cleanup/redevelopment and potential building decontamination/demolition.

For the purposes of this assessment, constituents detected above Commercial SCOs in Site media are defined as COPCs. This is based upon the City's Master Plan to develop the Site for commercial use, even though the previous/current use of the Site is industrial. Investigations have identified COPCs in Site media at concentrations above Commercial SCOs (Figures 8, 11, and 12). Excluding samples associated with debris/materials removed from the Site during the USEPA Removal Action in 2010, the main COPCs identified at this Site include:

- **Metals, including:**
    - Arsenic;
    - Chromium;
    - Copper;
    - Lead; and
    - Mercury.

- **PAHs, including:**
    - Acenaphthene;
    - Acenaphthylene;
    - Anthracene;
    - Benzo(a)anthracene;

  - Benzo(a)pyrene;
  - Benzo(b)fluoranthene;
  - Benzo(g,h,i)perylene;
  - Benzo(k)fluoranthene;
  - Chrysene;
  - Dibenzo(a,h)anthracene;
  - Fluoranthene;
  - Fluorene;
  - Indeno(1,2,3-cd)pyrene;
  - Phenanthrene; and
  - Pyrene.

- **PCBs, including:**
  - Aroclor 1254; and
  - Aroclor 1260.

Human exposure to COPCs occurs via several possible routes, including ingestion, dermal contact, and inhalation. Exposure assessment is the process of describing, measuring, or estimating the intensity, frequency, and duration of potential human exposure to COPCs in environmental media (e.g., soil, air) at a site. This section discusses the mechanisms by which people (receptors) might come in contact with COPCs. The assessment includes the following:

- Description of the exposure setting;
- Identification of potential receptors;
- Identification of release mechanisms; and
- Identification of potential sources and exposure pathways.

A conceptual site model (CSM) was developed based on the history, conditions, analytical results, and the anticipated future commercial use scenario of the Site. The CSM identifies the relationship among sources, release mechanisms, exposure media, exposure routes, and potential receptors. Figure 13 depicts the CSM for the Site.

5.1 EXPOSURE SETTING

Potential exposure to COPCs at a site depends on a number of factors related to the physical characteristics of a site and its surroundings. These factors include location, surrounding land use, surface topography, hydrogeology, meteorology, and vegetation. They also include factors related to the current and anticipated future use(s) of the property. These factors determine the types of activities that might occur at the Site, the degree to which the Site is accessible to the general public, and the mechanisms that might result in migration of COPCs to on-Site and off-Site populations.

5.1.1 Physical Setting and Land Use

The Site is located in a multi-use area comprised of industrial, commercial, and residential properties. Properties immediately surrounding the Site include an industrial facility to the north, the former industrial Tract II property to the east and south, and Highland Avenue to the west. Beyond these properties to the north are mainly industrial facilities and to the east, south, and west are mainly residential properties with some commercial areas to the west. Additionally, schools are present west of the Site beyond Highland Avenue and east-southeast of the Site past the Tract II property.

The Site consists of approximately 5.9-acres of relatively level land; the majority of which, is covered by the former Power City Warehouse building. The building is currently in various levels of disrepair. The western portion of the Site consists of a grassy area and a gravel drive to the loading dock area. Along the southern boundary of the Site are some trees and undergrowth along with a segment of a retaining wall. The eastern portion of the Site has some grassy areas intermixed with broken asphalt and sections of concrete pavement. It is estimated that the Site consists of roughly 30 percent grass and concrete surface, 15 percent is wooded with undergrowth, and approximately 55 percent is building structures. Access to the Site is currently restricted by a chain link fence that surrounds the majority of the property.

The planned future use of the Site is commercial. Currently, the City's Master Plan is to redevelop the Site to include commercial facilities and an adult educational incubator, which would also be consistent with a commercial use scenario.

In addition to land use, water use also contributes to the degree of potential exposure to COPCs at a site. Although no direct groundwater investigations have been performed on the Site, previous investigations conducted for the NYSDEC on the adjacent Tract II property indicate that there is no significant groundwater aquifer within the overburden soils or fill materials. Groundwater flow appears to be generally toward the southwest, toward the Niagara River, on top of the bedrock formation located between 12.5 and 23.5 ft-bgs (EA, 2009).

The NYSDEC concluded (in the Tract II Site Characterization Reports and the 2003 ROD) that groundwater in the vicinity of the Site was not likely to be used as a drinking water source due to: 1) the small amount of water available, 2) a local ordinance prohibiting water supply wells in the City, and 3) the fact that public drinking water is available throughout the area. Based upon this information and the assumed depth to groundwater at the Site, exposure pathways to potential COPCs in groundwater are currently not considered to be potentially complete.

5.2 CHARACTERIZATION OF POTENTIAL RECEPTORS

The identification of potential human receptors is based on the characteristics of the Site, the surrounding land uses, and the anticipated future land use.

5.2.1 Current On-Site Receptors

The Site is currently vacant and access to the Site is restricted by a fence that surrounds the majority of the property. It is possible that an adult or adolescent trespasser could access the Site; thus this population is considered a potential receptor. However, since access to the Site is restricted by a maintained chain link fence, the frequency of exposure to the potential trespasser scenario is considered to be limited.

5.2.2 Future On-Site Receptors

As indicated previously, the planned future use of the Site will include commercial facilities and an adult educational incubator, which would also be consistent with a commercial use scenario. The post-redevelopment occupants on the Site would be considered potential receptors.

Under the anticipated future commercial use scenario, the need to perform subsurface maintenance and/or construction activities at the Site is possible. Although this work would be completed following a Site Management Plan (SMP) to mitigate potential risks, the future construction worker and/or on-Site site worker involved with subsurface disturbance or excavation activities is considered a potential receptor.

5.3 IDENTIFICATION OF POTENTIAL EXPOSURE PATHWAYS

This section identifies the potential pathways by which the receptors described above could be exposed to COPCs potentially at the Site. An exposure pathway is the mechanism by which an individual may come into contact with COPCs in the environment. An exposure pathway is defined by four elements:

1. A source and mechanism of COPC release to the environment;
2. An environmental receiving or transport medium (e.g., air, soil) for the released COPC;
3. A point of potential contact with the medium of concern; and
4. An exposure route (e.g., ingestion) at the contact point.

An exposure pathway is considered "complete" only if all four elements are present. A discussion of the potential exposure pathways is presented below.

5.3.1 Sources, Mechanisms of Releases, and Mechanisms of Transport

COPCs at the Site are likely derived from historical operations. COPCs could have been released to soil through spills or operational practices during these operations.

Metals. Investigations have identified heavy metals (mainly lead) as a COPC in building debris and surface soil samples. In general, most inorganic constituents (metals) have a tendency to bind to soil and the primary transport mechanisms for these constituents tend to be dispersion of particulates in air upon disturbance of soil, and migration through erosion/runoff during storm events.

PAHs. PAHs have also been identified as COPCs in building debris samples and in surface soils at the Site. PAHs are considered to be one of the more widespread organic pollutants and are known to be present in organized areas through various anthropogenic activities.

The PAHs identified as COPCs at the Site consist of the heavier molecular weight PAHs that contain four or more rings in their structure and PAHs that have three rings. PAHs with four or more rings are considered to have very low water solubility, are strongly sorbed to soils, and do not tend to move in soil from their point of release. Three-ring PAHs are slightly more mobile, but still resist movement in soil (WVDEP 1999). Both the four-ring and three-ring PAHs would be expected to have the greatest potential to migrate by mechanical means in the soil medium through dispersion of particulates in air upon disturbance of the soil, and by erosion/runoff during storm events.

PCBs. PCBs (Aroclor 1254 and Aroclor 1260) have also been identified as COPCs in building debris samples and in soils at the Site. According to the USEPA, PCBs have historically been used in numerous applications including; heat transfer, hydraulic and electrical equipment; as plasticizers in rubber products, paints and plastics; in dyes, pigments, and carbonless copy paper; as stabilizing additives in flexible PVC coatings of electrical wiring and electronic components; and in several additional industrial applications ("Polychlorinated Biphenyls [PCBs] - Basic Information").

The heavier PCBs (i.e., Aroclor 1254 and 1260) are very stable compounds and do not decompose readily. These PCBs exhibit fairly low mobility in soils due to their tendency to be strongly sorbed to soils and relatively low solubility in aqueous solutions (Haasbeek, 1994). The primary transport mechanism for these constituents tends to be dispersion of particulates in air upon disturbance of soil, and migration through erosion/runoff during storm events.

Fugitive Dust Generation - Non-volatile chemicals present in soil can be released to ambient air as a result of fugitive dust generation. The Site is currently covered by roughly 30 percent grass and concrete, 15 percent by wooded areas with undergrowth, and approximately 55 percent by building structures. The presence of these surface features would mitigate significant airborne suspension of surface soil particles resulting from either vehicles or pedestrian traffic and thus fugitive dust generation is not considered to be a significant source of exposure.

Vapor Phase Transport - Volatile chemicals are not present in Site soils at levels of concern and are not believed to be present in groundwater beneath the Site. COPCs including PAHs and PCBs detected in Site soils have low volatility are not considered to represent a significant source of vapors to be released into ambient air. Therefore, this migration pathway is not considered to represent a significant exposure pathway.

Erosion/Surface Water Runoff - COPCs present in shallow Site soils can be eroded and be transported off-site as a result of surface water runoff. The presence of grass, concrete and wooded areas with undergrowth at the Site should minimize the erosion of the ground surface and should mitigate migration of COPCs from erosion following significant rain events via storm water runoff or snow melt.

Leaching (percolation) - COPCs present in shallow soil at the Site could migrate downward to groundwater with infiltrating precipitation. Since some "open areas" are present at the Site, infiltration of rain water and snow melt is possible. However, COPCs at the Site tend to bind to soil, so the transport mechanism is not considered a significant pathway for potential COPC transport at the Site.

Groundwater Transport - Constituents in groundwater could migrate in the direction of groundwater flow and be affected by the chemical properties of the water-bearing matrix (i.e., dissolved oxygen, reduction potential, and organic content). Because leaching is not a likely transport mechanism to groundwater on the Site, it follows that transport of COPCs in groundwater is not likely to occur.

5.3.2 Exposure Media and Routes

Based upon the known or potential presence of COPCs in Site media and the potential migration pathways discussed above, Site receptors could potentially contact COPCs in the following environmental media:

- Surface Soil
- Soils down to 10 ft-bgs (practical subsurface depth interval for utility/construction excavations)
- Ambient air within an excavation

Potential exposure routes associated with these media would include: incidental ingestion, dermal contact, and inhalation of soil particulates.

5.3.3 Exposure Scenarios

Given the characteristics of the identified COPCs, and the relevant release processes, the potential exposure pathways for the current and anticipated future land use of the Site (exposure scenarios) are described below.

As discussed above, the Site is vacant and access is limited by a chain link fence that surrounds the majority of the property. Current potential receptors include only a Site trespasser.

5.3.3.1 Current Trespasser

Current trespassers may potentially be exposed to COPCs in building debris and surface soil via incidental ingestion, dermal contact, and inhalation of particles if they partake in activities that disturb the building debris or ground surface. Concentrations of COPCs were detected in surface soil samples above Commercial SCOs and in debris samples from the portion of the warehouse building not addressed by the USEPA Removal Action. Therefore, a trespasser could be exposed via dermal contact, ingestion, or inhalation of particulates (Figure 13). However, since access to the Site is restricted by a maintained chain link fence, any exposure to surface soil or remaining building debris by a current trespasser is considered to be minimal.

5.3.3.2 Future On-Site Workers

In the absence of remedial action, future on-site workers may potentially be exposed to COPCs in surface soil. Potential exposure routes include incidental ingestion, dermal contact, and inhalation of particulates (Figure 13).

5.3.3.3 Future On-Site Construction Worker

Future on-Site construction workers involved with subsurface disturbance or excavation for repair activities of on-Site utilities may potentially be exposed to

COPCs in surface and subsurface soil. Potential exposure routes include incidental ingestion, dermal contact, and inhalation of soil particulates associated with the subsurface disturbance or excavation (Figure 13). Subsurface disturbance or excavation work would require proper methods to minimize worker exposure (i.e., such as those defined in a SMP).

5.4 POTENTIAL ECOLOGICAL IMPACTS

Based upon the investigations conducted at the Site, it does not appear that a Fish and Wildlife Impact Analysis (FWIA) is necessary. The Site is located in an urban area consisting of industrial, commercial, and residential areas with minimal ecological habitat. COPCs have been identified in surface soil; however the potential for Site related COPCs to migrate to potential fish and wildlife resources is considered minimal. No surface water bodies are located in the immediate vicinity of the Site and although no direct groundwater investigations have been performed, groundwater at the Site is not anticipated to be impacted at estimated depths of 12.5 to 23.5 ft-bgs.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

Based upon the three investigations conducted at the Site, the following conclusions were made:

6.1.1 Building Debris

1. Debris located throughout the Power City Warehouse building has been found to exceed Commercial SCOs for several metals, several SVOCs (mainly PAHs), and PCBs (Aroclor 1254 and Aroclor 1260).
2. The USEPA removal action performed in 2010 removed a significant amount of debris and other hazardous material from the Power City Warehouse Building, but did not address the eastern portion of the building, due to safety concerns.
3. Debris samples obtained from the portion of the warehouse building not addressed by the USEPA in 2010 contained metals (arsenic, copper, lead and mercury), SVOCs (mainly PAHs), and PCBs (Aroclor 1254) at concentrations above Commercial SCOs. Additionally, all TCLP metals samples collected in this portion of the building were found to exceed the TCLP standard for lead.
4. Other hazardous materials including ACMs, lead based paint, PCB light ballasts, batteries, and mercury switches likely exist in the portions of the Site buildings not addressed by the USEPA in 2010.

6.1.2 Surface Soil

1. All 15 surface soil samples collected across the Site from 0 to 0.5 ft-bgs and analyzed for lead were found to exceed the Commercial SCO of 1,000 mg/kg.
2. Two of the 16 surface soil samples collected at the Site were analyzed for SVOCs. Both samples were exterior composite samples collected from 0 to 0.5 ft-bgs on the northeastern portion of the Site. The composite sample collected around the small building located in the northeast corner of the Site contained benzo(a)pyrene above the Commercial SCO and the composite sample collected around the eastern perimeter of the warehouse building contained benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and dibenz(a,h)anthracene above Commercial SCOs.

3. Three of the 16 surface soil samples collected at the Site were analyzed for pesticides/PCBs. These samples were exterior composite samples collected from 0 to 0.5 ft-bgs on the eastern side of the Site. The composite sample collected around the small building located in the northeast corner of the Site contained one PCB detection (Aroclor 1260) above the Commercial SCO. The composite sample collected around the eastern perimeter of the warehouse building and the composite sample collected in and around the former electrical substation in the southeast corner of the Site contained no detectable PCBs.

6.1.3 Subsurface Soil

1. Twenty-two shallow (0 to 2 ft-bgs) and 9 deep (3 to 8 ft-bgs) subsurface soil samples have been collected at the Site. The shallow subsurface samples were analyzed for metals and the deep subsurface samples were analyzed for VOCs and SVOCs. Eighteen of the subsurface soil samples were collected within the warehouse building footprint and the other 13 were collected around the exterior of the building. Four of the 22 shallow subsurface samples contained metals (arsenic, chromium, copper or lead) exceeding the Commercial SCOs. No VOCs or SVOCs exceeded Commercial SCOs from the deep subsurface samples.
2. Three samples collected from soil beneath the slab of the Power City Warehouse Building exhibited levels of metals exceeding the Commercial SCOs. One of these samples was collected from soil in an area where the concrete had been breached. The remaining two were from soil borings SB-08 and SB-12, which were located in the north-central portion of the building.
3. Subsurface soil sampling results indicate that SVOCs at concentrations above Commercial SCOs (mainly PAHs) are limited to building debris and surface soils at the Site.

6.1.4 Qualitative Exposure Assessment

The qualitative HHEA, which was limited to the findings presented in this report, identified the potential for human exposure to COPCs in Site media (building debris and surface soils) through dermal contact, incidental ingestion, and inhalation of particulates. The potentially exposed current on-Site receptors include only persons that may trespass onto the Site; however since access to the Site is restricted by a maintained fence, this exposure expected to be minimal. Based upon the anticipated future commercial development and land use scenario, the potentially exposed future on-Site receptors include construction workers and/or Site workers.

Based upon the investigations conducted, it does not appear that a FWIA is necessary. The Site is located in an urban area with minimal ecological habitat. The potential for Site related COPCs to migrate to potential fish and wildlife resources is considered minimal and no surface water bodies are located in the immediate vicinity of the Site.

6.2 POTENTIAL DATA GAPS

Based upon the results presented in Section 4.0, the following bullet list provides potential data gaps that should be considered to complete the characterization of the Site and provide additional data to support anticipated remedial measures:

- Groundwater was not characterized on the Site. A groundwater investigation should be considered to determine groundwater quality and verify groundwater flow direction. Groundwater samples should be collected and analyzed for VOCs, SVOCs, metals, and PCBs.
- Additional surface soil sampling for PAHs and PCBs should be considered to define the horizontal extent of these constituents in Site soils. Only limited composite sampling in surface soil for these compounds has been conducted on the eastern side of the Site during the E&E investigation, which identified PAHs and PCBs above Commercial SCOs.
- Since it is anticipated that portions of the Power City Warehouse building will be demolished or renovated, an investigation should be considered to characterize the bedding material located under the brick floors throughout the warehouse building.
- The extent of the lead beneath the building slab in the vicinity of soil borings SB-08 and SB-12 has not been completely defined.
- Finally, further identification/characterization should also be considered of the remaining debris, sediments and sludge, and any other potentially hazardous materials (ACMs, lead based paint, PCB light ballasts, batteries, mercury switches, etc.) located in the portion of the Power City Warehouse Building not addressed by the USEPA removal action in 2010. Due to the poor condition of this portion of the building, this may only be accomplished safely during anticipated future building demolition activities.

6.3 RECOMMENDATIONS

Based upon the findings presented in this report, it is recommended that an additional investigation be completed to further characterize the Site and provide additional data to support anticipated remedial measures. Additional investigation should consider the potential data gaps identified in Section 6.2 of this report. These briefly include:

- A groundwater investigation to determine groundwater quality and verify groundwater flow direction;
- Additional surface soil sampling for PAHs and PCBs to define the horizontal extent of these constituents in Site soils above SCOs;
- An investigation to characterize the bedding material located under brick floors located in portions of the Power City Warehouse building in conjunction with demolition activities;
- If the floor slab is removed in the vicinity of soil borings SB-08 and SB-12, confirmatory samples should be collected to verify the extent of lead in subsurface soil at these locations; and
- Identification and characterization of the remaining debris, sediments and sludge, and any other potentially hazardous materials (ACMs, lead based paint, PCP light ballasts, batteries, mercury switches, etc.) located in the portion of the Power City Warehouse building not addressed by the USEPA in conjunction with demolition activities.

7.0 REFERENCES

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TABLES

Table 1
E and E Site Investigation
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Number			SS-PCW-01		SS-PCW-02		SS-PCW-03		SS-PCW-04		SS-PCW-05		SS-PCW-06		SS-PCW-07		SS-PCW-08		SS-PCW-09	
Sample Date			May 1999		May 1999		May 1999		May 1999		May 1999		May 1999		May 1999		May 1999		May 1999	
Sample Type			C, Debris		C, Debris		C, Debris/SS		G, SS		C, Debris		C, Debris		C, SS		G, Debris		C, Debris/SS	
Sample Depth*			0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
TCL SVOCs																				
Naphthalene	mg/kg	500	1.1	J	ND		ND		NA		ND		ND		NA		NA		2.8	J
2-methylnaphthalene	mg/kg		0.51	J	ND		ND		NA		ND		ND		NA		NA		1.2	J
Acenaphthylene	mg/kg	500	0.58	J	ND		ND		NA		ND		ND		NA		NA		0.64	J
Acenaphthene	mg/kg	500	3.9	J	4.6	J	ND		NA		ND		ND		NA		NA		6.6	
Dibenzofuran	mg/kg	350	2.4	J	2.7	J	ND		NA		ND		ND		NA		NA		4.4	J
Di-ethylphthalate	mg/kg		ND		ND		ND		NA		ND		ND		NA		NA		ND	
Fluorene	mg/kg	500	3.5	J	3.1	J	ND		NA		ND		ND		NA		NA		5.7	
Phenanthrene	mg/kg	500	33	D	91		ND		NA		5.5	J	6.5	J	NA		NA		68	D
Anthracene	mg/kg	500	12		7.4	J	ND		NA		ND		ND		NA		NA		19	
Carbazole	mg/kg		4.6		7.6	J	ND		NA		ND		ND		NA		NA		9	
Di-n-butylphthalate	mg/kg		ND		ND		ND		NA		ND		ND		NA		NA		0.79	J
Fluoranthene	mg/kg	500	53	D	87	D	ND		NA		10	J	13	J	NA		NA		63	D
Pyrene	mg/kg	500	50	D	100	D	ND		NA		9.1	J	11	J	NA		NA		130	DJ
Butylbenzylphthalate	mg/kg		ND		1.7	J	13	J	NA		ND		ND		NA		NA		ND	
Benzo(a)anthracene	mg/kg	5.6	2.8		22		ND		NA		3.9	J	4.3	J	NA		NA		29	
Chrysene	mg/kg	56	22	D	35		ND		NA		6.4	J	7.7	J	NA		NA		36	
bis(2-ethylhexyl)phthalate	mg/kg		5.3		1.4	J	1.8	J	NA		3.1	J	ND		NA		NA		2	J
Di-n-octylphthalate	mg/kg		ND	J	2	J	ND		NA		ND		ND		NA		NA		ND	
Benzo(b)Fluoranthene	mg/kg	5.6	23	D	33	D	ND		NA		7.5	J	8.1	J	NA		NA		35	J
Benzo(k)Fluoranthene	mg/kg	56	24	D	38	D	ND		NA		6.4	J	7.8	J	NA		NA		39	J
Benzo(a)pyrene	mg/kg	1	30	J	28	D	ND		NA		4.9	J	4.8	J	NA		NA		31	J
Indeno(1,2,3-cd)pyrene	mg/kg	5.6	9.8	J	7.7	J	ND		NA		1.5	J	1.9	J	NA		NA		7.5	J
Dibenz(a,h)anthracene	mg/kg	0.56	3.6	J	2.5	J	ND		NA		ND		ND		NA		NA		2.7	J
Benzo(g,h.I)perylene	mg/kg	500	8.9	J	6.3	J	ND		NA		1.6	J	ND		NA		NA		7.3	J
TCL Pesticides/PCBs																				
beta-BHC	mg/Kg	3	NA		NA		NA		NA		NA		0.073	J	NA		ND		0.087	
delta-BHC	mg/Kg	500	NA		NA		NA		NA		NA		0.28		NA		ND		0.24	
gamma-BHC	mg/Kg	9.2	NA		NA		NA		NA		NA		0.079	J	NA		ND		0.054	J
Heptachlor	mg/Kg	15	NA		NA		NA		NA		NA		ND		NA		ND		0.055	J
Aldrin	mg/Kg	0.68	0.12		0.092		ND		NA		ND		ND		NA		ND		0.21	
Heptachlor Epoxide	mg/Kg		0.39		0.31		ND		NA		0.13		0.2		NA		ND		0.7	
Dieldrin	mg/Kg	1.4	0.26		0.11	J	ND		NA		ND		ND		NA		ND		0.24	
Endrin	mg/Kg	89	0.29		ND		ND		NA		ND		ND		NA		ND		0.33	
Endosulfan II	mg/Kg	200	NA		NA		NA		NA		NA		ND		NA		ND		0.15	
Endosulfan Sulfate	mg/Kg	200	0.12		ND		ND		NA		ND		ND		NA		ND		0.21	
4,4'-DDT	mg/Kg	47	0.26		0.12	J	ND		NA		ND		0.15	J	NA		ND		0.4	
Methoxychlor	mg/Kg		0.95		ND		1.8		NA		0.3	J	0.65	J	NA		ND		1.5	
Endrin Ketone	mg/Kg		0.14		0.15		ND		NA		ND		0.12	J	NA		ND		0.34	
Endrin aldehyde	mg/Kg		NA		NA		NA		NA		NA		NA		NA		NA		NA	
gamma-Chlordane	mg/Kg		0.15		ND		ND		NA		ND		NA		NA		NA		NA	
Aroclor-1254	mg/Kg	1	21		7.9		1.3	J	NA		0.93	J	2.1	J	NA		ND		17	
Aroclor-1260	mg/Kg	1	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Total Lead																				
Lead	mg/Kg	1,000	2,350		3,540		3,650		11,300		19,200		137,000		178,000		NA		31,800	
pH - standard units (S.U.)																				
pH	S.U.		4.9		6.3		7.2		NA		7.8		7.3		NA		6.8		6.9	

Notes:

ND - Analyte not detected by laboratory
D - Sample was diluted by laboratory during analysis
J - Estimated value below laboratory reporting limit
C= Composite Sample
G = Grab Sample
SS = Surface Soil

Data presented in this table was obtained from the Ecology and Environment Engineering, P.C. (E&E) "Site Investigation Report for the Power City Warehouse, Niagara Falls, New York" dated May 31, 2000
NA - Analyte not analyzed or not reported in the E&E report referenced above.
* = Depths are as reported in the E&E report text referenced above.
Debris = Sample collected all or partially from material within sumps or drains or bedding material under brick floors
TCL = Target compound list
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Checked By: TPH

Table 1
E and E Site Investigation
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Number			SS-PCW-10		SS-PCW-11		SS-PCW-12		SS-PCW-13		SS-PCW-BK01		SS-PCW-BK02		SS-PCW-BK03		SD-PCW-01		SD-PCW-01/D	
Sample Date			May 1999		May 1999		May 1999		May 1999		May 1999		May 1999		May 1999		May 1999		May 1999	
Sample Type			G, Debris		C, SS		C, SS		C, SS		G, background SS		G, background SS		G, background SS		C, Sediment/Sludge		C, Sediment/Sludge	
Sample Depth*			0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches		0-6 inches	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
TCL SVOCs																				
Naphthalene	mg/kg	500	ND		0.48		0.33	J	NA		NA		NA		NA		NA		NA	
2-methylnaphthalene	mg/kg		ND		0.3	J	0.23	J	NA		NA		NA		NA		NA		NA	
Acenaphthylene	mg/kg	500	ND		0.075	J	0.17	J	NA		NA		NA		NA		NA		NA	
Acenaphthene	mg/kg	500	ND		0.36	J	1.8		NA		NA		NA		NA		NA		NA	
Dibenzofuran	mg/kg	350	ND		0.31	J	0.83		NA		NA		NA		NA		NA		NA	
Di-ethylphthalate	mg/kg		ND		0.055	J	ND		NA		NA		NA		NA		NA		NA	
Fluorene	mg/kg	500	ND		0.36	J	1.3		NA		NA		NA		NA		NA		NA	
Phenanthrene	mg/kg	500	ND		4.2	D	17	D	NA		NA		NA		NA		1.8	J	5.5	J
Anthracene	mg/kg	500	ND		0.71		4.1	DJ	NA		NA		NA		NA		NA		NA	
Carbazole	mg/kg		ND		0.45		1.3		NA		NA		NA		NA		NA		NA	
Di-n-butylphthalate	mg/kg		ND		0.1	J	ND		NA		NA		NA		NA		NA		NA	
Fluoranthene	mg/kg	500	ND		4.8	D	21	D	NA		NA		NA		NA		2.7	J	6.1	J
Pyrene	mg/kg	500	ND		6.9	D	20	D	NA		NA		NA		NA		2.4	J	5	J
Butylbenzylphthalate	mg/kg		ND		0.15	J	0.22	J	NA		NA		NA		NA		NA		NA	
Benzo(a)anthracene	mg/kg	5.6	ND		1.8	D	6.5	D	NA		NA		NA		NA		ND		2.4	J
Chrysene	mg/kg	56	ND		2.3	D	7.1	D	NA		NA		NA		NA		1.8	J	3.4	J
bis(2-ethylhexyl)phthalate	mg/kg		3.3	J	0.57	J	0.16	J	NA		NA		NA		NA		NA		NA	
Di-n-octylphthalate	mg/kg		ND		ND	J	ND		NA		NA		NA		NA		NA		NA	
Benzo(b)Fluoranthene	mg/kg	5.6	ND		2.5	J	6.3	D	NA		NA		NA		NA		2.4	J	3.1	J
Benzo(k)Fluoranthene	mg/kg	56	ND		2.4	J	6.5	D	NA		NA		NA		NA		2.1	J	3.9	J
Benzo(a)pyrene	mg/kg	1	ND		2	J	6.5	D	NA		NA		NA		NA		2.1	J	2.9	J
Indeno(1,2,3-cd)pyrene	mg/kg	5.6	ND		0.8	J	2.2	J	NA		NA		NA		NA		NA		NA	
Dibenz(a,h)anthracene	mg/kg	0.56	ND		0.3	J	0.82	J	NA		NA		NA		NA		NA		NA	
Benzo(g,h.I)perylene	mg/kg	500	ND		0.93	J	2.1	J	NA		NA		NA		NA		ND		1.6	J
TCL Pesticides/PCBs																				
beta-BHC	mg/Kg	3	ND		0.07		ND		ND		NA		NA		NA		NA		NA	
delta-BHC	mg/Kg	500	NA		NA		NA		NA		NA		NA		NA		NA		NA	
gamma-BHC	mg/Kg	9.2	ND	J	0.055		ND		ND		NA		NA		NA		NA		ND	
Heptachlor	mg/Kg	15	ND		0.065		ND		ND		NA		NA		NA		NA		ND	
Aldrin	mg/Kg	0.68	NA		NA		NA		NA		NA		NA		NA		NA		ND	
Heptachlor Epoxide	mg/Kg		ND		ND		0.074		0.18		NA		NA		NA		NA		ND	
Dieldrin	mg/Kg	1.4	ND	J	0.11		ND		ND		NA		NA		NA		NA		ND	
Endrin	mg/Kg	89	NA		NA		NA		NA		NA		NA		NA		NA		ND	
Endosulfan II	mg/Kg	200	NA		NA		NA		NA		NA		NA		NA		NA		ND	
Endosulfan Sulfate	mg/Kg	200	NA		NA		NA		NA		NA		NA		NA		NA		ND	
4,4'-DDT	mg/Kg	47	ND		0.2		ND		ND		NA		NA		NA		NA		ND	
Methoxychlor	mg/Kg		0.38	J	37		0.14		0.81		NA		NA		NA		NA		ND	
Endrin Ketone	mg/Kg		0.2	J	ND		ND		ND		NA		NA		NA		NA		ND	
Endrin aldehyde	mg/Kg		ND		0.22		ND		ND		NA		NA		NA		NA		ND	
gamma-Chlordane	mg/Kg		ND		0.069		ND		ND		NA		NA		NA		NA		ND	
Aroclor-1254	mg/Kg	1	NA		NA		NA		NA		NA		NA		NA		1.8	J	1.2	J
Aroclor-1260	mg/Kg	1	3.7		3.8	J	ND		ND		NA		NA		NA		NA		NA	
Total Lead																				
Lead	mg/Kg	1,000	NA		8,240		2,790		NA		201		1,400		281		225,000		270,000	
pH - standard units (S.U.)																				
pH	S.U.		8		9.6		8.5		8.8		NA		NA		NA		8.3		8.3	

Notes:

ND - Analyte not detected by laboratory
D - Sample was diluted by laboratory during analysis
J - Estimated value below laboratory reporting limit
C= Composite Sample
G = Grab Sample
SS = Surface Soil

Data presented in this table was obtained from the Ecology and Environment Engineering, P.C. (E&E) "Site Investigation Report for the Power City Warehouse, Niagara Falls, New York" dated May 31, 2000
NA - Analyte not analyzed or not reported in the E&E report referenced above.
* = Depths are as reported in the E&E report text referenced above.
Debris = Sample collected all or partially from material within sumps or drains or bedding material under brick floors
TCL = Target compound list
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

Created By: PJY
Checked By: TPH

Table 2
EA Debris Samples
Summary of Analytical Results Detected
Tract I Site - Niagra Falls, New York

Sample Location			DS-01		DS-04		DS-05		DS-06		DS-07	
Sample Number			9-32-131-DS-01		9-32-131-DS-04		9-32-131-DS-05		9-32-131-DS-06		9-32-131-DS-07	
Sample Date			9/12/2007		9/12/2007		9/12/2007		9/12/2007		9/12/2007	
Sample Type			Debris		Debris		Debris		Debris		Debris	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
VOCs												
Acetone	mg/kg	500 b	NA		NA		NA		NA		NA	
Carbon disulfide	mg/kg		NA		NA		NA		NA		NA	
1,3-Dichlorobenzene	mg/kg	280	NA		NA		NA		NA		NA	
2-Hexanone	mg/kg		NA		NA		NA		NA		NA	
4-Isopropyltoluene	mg/kg		NA		NA		NA		NA		NA	
Naphthalene	mg/kg	500 b	NA		NA		NA		NA		NA	
Toluene	mg/kg	500 b	NA		NA		NA		NA		NA	
1,2,4-Trichlorobenzene	mg/kg		NA		NA		NA		NA		NA	
1,2,4-Trimethylbenzene	mg/kg	190	NA		NA		NA		NA		NA	
SVOCs												
Acenaphthene	mg/kg	500 b	3,800	JD	78,000		7,600	JD	280	J	8,900	
Acenaphthylene	mg/kg	500 b	1,000	JD	20,000		1,300	JD	350	J	1,600	
Anthracene	mg/kg	500 b	8,900	D	150,000	D	19,000	D	920	J	18,000	D
Benzo(a)anthracene	mg/kg	5.6	31,000	D	340,000	D	38,000	D	1,900		32,000	D
Benzo(a)pyrene	mg/kg	1 f	27,000	D	270,000	D	30,000	D	1,600		24,000	D
Benzo(b)fluoranthene	mg/kg	5.6	39,000	D	310,000	D	41,000	D	2,000		34,000	D
Benzo(g,h.I)perylene	mg/kg	500 b	17,000	D	140,000	D	17,000	D	1,500		14,000	D
Benzo(k)fluoranthene	mg/kg	56	14,000	D	73,000		15,000	D	1,400		12,000	
Bis(2-ethylhexyl)phthalate	mg/kg			U		U		U	640	J	830	J
Carbazole	mg/kg		7,500	D	87,000	JD	10,000	D	480	J	11,000	
Chrysene	mg/kg	56	34,000	D	300,000	D	35,000	D	2,100		30,000	D
Dibenzo(a,h)anthracene	mg/kg	0.56	5,100	JD	55,000		5,300	JD	320	J	4,300	JD
Dibenzofuran	mg/kg	350	3,300	JD	73,000	JD	6,200	JD	270	J	8,300	
2,4-Dichlorophenol	mg/kg			U		U		U		U		U
2,4-Dimethylphenol	mg/kg			U	4,700	J		U		U	340	J
Di-n-butylphthalate	mg/kg			U		U		U	330	J	540	J
Di-n-octylphthalate	mg/kg			U		U		U		U		U
Fluoranthene	mg/kg	500 b	82,000	D	790,000	D	94,000	D	5,800		82,000	D
Fluorene	mg/kg	500 b	3,400	JD	77,000		7,300	JD	280	J	9,100	
Hexachlorobenzene	mg/kg	6		U		U		U		U		U
Indeno(1,2,3-cd)pyrene	mg/kg	5.6	15,000	D	140,000	D	16,000	D	1,100	J	13,000	D
2-Methylnaphthalene	mg/kg		1,700	JD	58,000		4,100	JD	300	J	4,900	
2-Methylphenol (o-cresol)	mg/kg	500 b		U	3,400	J		U		U	270	J
4-Methylphenol (p-cresol)	mg/kg	500 b		U	9,900			U		U	820	J
Naphthalene	mg/kg	500 b	4,100	JD	110,000	D	7,000	JD	350	J	11,000	
Phenanthrene	mg/kg	500 b	55,000	D	690,000	D	73,000	D	2,900		79,000	D
Phenol	mg/kg	500 b		U	4,000	J		U		U	380	J
Pyrene	mg/kg	500 b	48,000	D	520,000	D	55,000	JD	2,500		51,000	D
1,2,4-Trichlorobenzene	mg/kg			U		U		U		U		U
TAL Metals												
Aluminum	mg/kg		5,710	J	5,790	J	5,760	J	2,190	J	6,030	J
Antimony	mg/kg		3,090	J	692	J	417	J	720	J	407	J
Arsenic	mg/kg	16 f	216		153		291		139		537	
Barium	mg/kg	400	2,920	J	2,200	J	540	J	3,060	J	1,340	J
Beryllium	mg/kg	590	0.53	J	0.72	J	0.45	J	0.1	J	0.17	J
Cadmium	mg/kg	9.3	22.6	J	7.6	J	16.3	J	11.9	J	29.5	J
Calcium	mg/kg		21,800	J	26,000	J	30,500	J	14,600	J	60,100	J
Chromium	mg/kg	400 k	158	J	48.8	J	87.9	J	66.2	J	55.7	J
Cobalt	mg/kg		15.7	J	15.7	J	33.1	J	13.2	J	33.2	J
Copper	mg/kg	270	648	J	165	J	329	J	120	J	209	J
Iron	mg/kg		41,900	J	49,900	J	85,300	J	62,600	J	180,000	J
Lead	mg/kg	1,000	58,800	J	74,200	J	70,100	J	64,200	J	60,100	J
Magnesium	mg/kg		9,730	J	4,600		9,670		3,320		13,200	
Manganese	mg/kg	10,000 d	586	J	738		873		336		782	
Mercury	mg/kg	2.8 j	2.1	J	6.1	J	2.9	J	3.2	J	3	J
Nickel	mg/kg	310	138	J	39.3	J	73.9	J	42.1	J	39.1	J
Potassium	mg/kg		499	J	1,460	J	2,080	J	3,080	J	946	J
Selenium	mg/kg	1,500		UJ		UJ		UJ		UJ		UJ
Silver	mg/kg	1,500		R		R		R		R		R
Sodium	mg/kg		420	J	255	J	552	J	799	J	245	J
Thallium	mg/kg		8.7	J	11.3	J	13.5	J	10.7	J	15.9	J
Vanadium	mg/kg		44.50	J	31	J	25.3	J	10.1	J	19	J
Zinc	mg/kg	10,000 d	5,620		3,210		14,000		3,590		17,000	
TCLP Metals		TCLP Action Level										
Arsenic	mg/L	5	0.176	J		U	0.0813	J	0.0261	J	0.0937	J
Barium	mg/L	100	0.733	J	1.5	J	0.314	J	4.170	J	1.800	J
Cadmium	mg/L	1	0.154	J	0.0462	J	0.100	J	0.0652	J	0.105	J
Chromium	mg/L	5		U		U		U		U		U
Lead	mg/L	5	241	D	377	D	1,030	D	190	D	158	D
Mercury	mg/L	0.2		U		U		U		U		U
Selenium	mg/L	1	0.0641	J	0.116	J		UD	0.141	J	0.212	J
Silver	mg/L	5		U		U		U		U		U

Notes:
NA - Analyte not analyzed.
D - Sample was diluted by laboratory during analysis
J - Estimated value
U -Not detect above the sample reporting limit.
UJ - Estimated non detect
UD - Diluted sample not detected above reporting limit
TAL = Target Analyte List
R - The data are unusable. Resampling/reanalyses are necessary for verification.
mg/kg = milligrams per kilogram; mg/L = milligrams per liter

The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.

d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
b - The SCOs for commercial use were capped at a maximum value of 500ppm.
k - Standard for hexavalent chromium
f- For constituents where calculated SCO was lower than the rural soil background concentration as determined by a rural soil survey, the rural soil background concentration is used as the Track 2 SCO for this use of the Site.

[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Checked By: TPH

Table 2
EA Debris Samples
Summary of Analytical Results Detected
Tract I Site - Niagra Falls, New York

Sample Location			DS-08		DS-09		DS-10		DS-11		DS-12	
Sample Number			9-32-131-DS-08		9-32-131-DS-09		9-32-131-DS-10		9-32-131-DS-11		9-32-131-DS-12	
Sample Date			9/12/2007		9/12/2007		9/12/2007		9/12/2007		9/12/2007	
Sample Type			Debris		Debris		Debris		Debris		Debris	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
VOCs												
Acetone	mg/kg	500 b	NA			U	NA		NA		NA	
Carbon disulfide	mg/kg		NA			U	NA		NA		NA	
1,3-Dichlorobenzene	mg/kg	280	NA			U	NA		NA		NA	
2-Hexanone	mg/kg		NA			U	NA		NA		NA	
4-Isopropyltoluene	mg/kg		NA			U	NA		NA		NA	
Naphthalene	mg/kg	500 b	NA			U	NA		NA		NA	
Toluene	mg/kg	500 b	NA			U	NA		NA		NA	
1,2,4-Trichlorobenzene	mg/kg		NA			U	NA		NA		NA	
1,2,4-Trimethylbenzene	mg/kg	190	NA			U	NA		NA		NA	
SVOCs												
Acenaphthene	mg/kg	500 b		U	280	JD	130	J	53,000	D	160	J
Acenaphthylene	mg/kg	500 b	160	J	290	JD	250	J	3,200		570	J
Anthracene	mg/kg	500 b		U	1,200	D	770		110,000	D	890	J
Benzo(a)anthracene	mg/kg	5.6		U	4,100	D	2,700		180,000	D	3,600	
Benzo(a)pyrene	mg/kg	1 f		U	3,700	D	2,600		140,000	D	3,200	
Benzo(b)fluoranthene	mg/kg	5.6	3,300	JD	5,200	D	3,600		160,000	D	4,400	
Benzo(g,h.I)perylene	mg/kg	500 b		U	2,000	D	1,400		82,000	D	2,400	
Benzo(k)fluoranthene	mg/kg	56		U	1,900	D	2,000		88,000	D	1,800	
Bis(2-ethylhexyl)phthalate	mg/kg		160,000	D	170	JD	170	J		U	310	J
Carbazole	mg/kg			U	460	JD	260	J	64,000	D	300	J
Chrysene	mg/kg	56	2,700	JD	4,100	D	2,700		170,000	D	2,900	
Dibenzo(a,h)anthracene	mg/kg	0.56		U	630	JD	430		22,000		570	J
Dibenzofuran	mg/kg	350		U	260	JD	120	J	36,000	D	150	J
2,4-Dichlorophenol	mg/kg			U		U		U		U		U
2,4-Dimethylphenol	mg/kg			U		U		U		U		U
Di-n-butylphthalate	mg/kg			U		U		U		U	990	J
Di-n-octylphthalate	mg/kg			U		U	80	J		U		U
Fluoranthene	mg/kg	500 b	3,000	JD	10,000	D	6,100		640,000	D	6,000	
Fluorene	mg/kg	500 b		U	300	JD	130	J	51,000	D	190	J
Hexachlorobenzene	mg/kg	6		U		U		U		U		U
Indeno(1,2,3-cd)pyrene	mg/kg	5.6		U	1,900	D	1,300		73,000	D	2,200	
2-Methylnaphthalene	mg/kg		240	J	140	JD	63	J	16,000			U
2-Methylphenol (o-cresol)	mg/kg	500 b		U		U		U		U		U
4-Methylphenol (p-cresol)	mg/kg	500 b		U		U		U	1,100	J		U
Naphthalene	mg/kg	500 b	210	J	290	JD	100	J	40,000	JD	170	J
Phenanthrene	mg/kg	500 b	1,900	JD	4,000	D	2,200		570,000	D	2,200	
Phenol	mg/kg	500 b		U		U		U	960	J		U
Pyrene	mg/kg	500 b	2,200	JD	5,600	D	3,700		410,000	D	4,000	
1,2,4-Trichlorobenzene	mg/kg			U		U		U		U		U
TAL Metals												
Aluminum	mg/kg		2,740	J	1,320	J	1,770	J	3,610	J	9,880	J
Antimony	mg/kg		1,040	J	104	J	66	J	50	J	1,090	J
Arsenic	mg/kg	16 f	184		125		81.7		66.6		217	
Barium	mg/kg	400	2,570	J	2,570	J	3,640	J	2,320	J	674	J
Beryllium	mg/kg	590	0.094	J	0.013	J	0.059	J	0.28	J	0.47	J
Cadmium	mg/kg	9.3	22.5	J	13.4	J	8.9	J	8.5	J	22.8	J
Calcium	mg/kg		20,800	J	9,300	J	19,000	J	25,500	J	9,330	J
Chromium	mg/kg	400 k	60.3	J	37.8	J	29.9	J	51.5	J	62.2	J
Cobalt	mg/kg		25.5	J	20.4	J	13.5	J	14.4	J	23.6	J
Copper	mg/kg	270	6,120	J	67.3	J	70.5	J	146	J	241	J
Iron	mg/kg		173,000	J	129,000	J	86,600	J	56,900	J	124,000	J
Lead	mg/kg	1,000	56,500	J	74,300	J	66,500	J	71,400	J	8,910	J
Magnesium	mg/kg		2,570		2,170		2,720		6,840		6,100	
Manganese	mg/kg	10,000 d	606		565		384		415		692	
Mercury	mg/kg	2.8 j	4.4	J	0.7	J	0.71	J	19.9	J	0.91	J
Nickel	mg/kg	310	57.3	J	23.7	J	26.8	J	33.6	J	32.8	J
Potassium	mg/kg		6,550	J	4,130	J	1,870	J	532	J	576	J
Selenium	mg/kg	1,500		UJ		UJ		UJ		UJ		UJ
Silver	mg/kg	1,500		R		R		R		R		R
Sodium	mg/kg		900	J	346	J	263	J	73.7	J	114	J
Thallium	mg/kg		18.8	J	20.2	J	15.4	J	14	J	13.9	J
Vanadium	mg/kg		17.6	J	12.9	J	9	J	20.3	J	41	J
Zinc	mg/kg	10,000 d	4,280		2,480		2,590		1,880		976	
TCLP Metals		TCLP Action Level										
Arsenic	mg/L	5		U	0.0356	J		U		U		U
Barium	mg/L	100	8.050	J	4.230	J	1.050	J	1.540	J	0.855	J
Cadmium	mg/L	1	0.0872	J	0.0328	J	0.0124	J	0.0517	J	0.197	J
Chromium	mg/L	5		U		U		U		U		U
Lead	mg/L	5	75.5	D	395	D	82.1	D	780	D	126	D
Mercury	mg/L	0.2		U		U		U		U		U
Selenium	mg/L	1	0.199	J	0.153	J	0.127	J	0.0894	J	0.144	J
Silver	mg/L	5		U		U		U		U		U

Notes:
NA - Analyte not analyzed.
D - Sample was diluted by laboratory during analysis
J - Estimated value
U -Not detect above the sample reporting limit.
UJ - Estimated non detect
UD - Diluted sample not detected above reporting limit
TAL = Target Analyte List
R - The data are unusable. Resampling/reanalyses are necessary for verification.
mg/kg = milligrams per kilogram; mg/L = milligrams per liter

The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.
d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
b - The SCOs for commercial use were capped at a maximum value of 500ppm.
k - Standard for hexavalent chromium
f- For constituents where calculated SCO was lower than the rural soil background concentration as determined by a rural soil survey, the rural soil background concentration is used as the Track 2 SCO for this use of the Site.
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

Created By: PJY
Checked By: TPH

Table 2
EA Debris Samples
Summary of Analytical Results Detected
Tract I Site - Niagra Falls, New York

Sample Location			DS-13		DS-14		DS-15		DS-16		DS-17	
Sample Number			9-32-131-DS-13		9-32-131-DS-14		9-32-131-DS-15		9-32-131-DS-16		9-32-131-DS-17	
Sample Date			9/12/2007		9/12/2007		9/12/2007		9/12/2007		9/12/2007	
Sample Type			Debris		Debris		Debris		Debris		Debris	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
VOCs												
Acetone	mg/kg	500 b	130			UJ	NA		71		NA	
Carbon disulfide	mg/kg		38			UJ	NA		7.6		NA	
1,3-Dichlorobenzene	mg/kg	280		U		UJ	NA			UJ	NA	
2-Hexanone	mg/kg		3.3	J		UJ	NA		2.4	J	NA	
4-Isopropyltoluene	mg/kg		9.4	J		UJ	NA			UJ	NA	
Naphthalene	mg/kg	500 b	8.8	J		UJ	NA		18		NA	
Toluene	mg/kg	500 b	4.2	J		UJ	NA			UJ	NA	
1,2,4-Trichlorobenzene	mg/kg			U		UJ	NA			R	NA	
1,2,4-Trimethylbenzene	mg/kg	190		U		UJ	NA		3.1	J	NA	
SVOCs												
Acenaphthene	mg/kg	500 b	310	J	78,000	JD	130	J	9,300	D		U
Acenaphthylene	mg/kg	500 b	970	J	12,000		1,400		730		420	J
Anthracene	mg/kg	500 b	1,500	J	150,000	D	2,900		20,000	D	460	J
Benzo(a)anthracene	mg/kg	5.6	5,200		280,000	D	9,300	D	28,000	D	880	J
Benzo(a)pyrene	mg/kg	1 f	3,100		210,000	D	8,100	D	22,000	D	660	J
Benzo(b)fluoranthene	mg/kg	5.6	6,000		280,000	D	10,000	D	28,000	D	780	J
Benzo(g,h.I)perylene	mg/kg	500 b	1,800		110,000	D	4,600		13,000	D	530	J
Benzo(k)fluoranthene	mg/kg	56	2,700		72,000		4,100		7,300	J	430	J
Bis(2-ethylhexyl)phthalate	mg/kg		870	J		U	110	J	3,000	J		U
Carbazole	mg/kg		800	J	95,000	JD	600		9,800	J		U
Chrysene	mg/kg	56	6,100		240,000	D	8,400	D	26,000	D	740	J
Dibenzo(a,h)anthracene	mg/kg	0.56	640	J	41,000		1,600		3,900	J		U
Dibenzofuran	mg/kg	350	460	J	88,000	JD	290	J	7,100	JD		U
2,4-Dichlorophenol	mg/kg		170	J		U		U		U		U
2,4-Dimethylphenol	mg/kg			U	6,000			U		U		U
Di-n-butylphthalate	mg/kg			U		U		U		U		U
Di-n-octylphthalate	mg/kg			U		U		U		U		U
Fluoranthene	mg/kg	500 b	18,000		690,000	D	18,000	D	85,000	D	2,000	
Fluorene	mg/kg	500 b	380	J	78,000	JD	250	J	8,800	JD		U
Hexachlorobenzene	mg/kg	6		U		U		U		U		U
Indeno(1,2,3-cd)pyrene	mg/kg	5.6	1,800		110,000	D	4,800		12,000	JD	360	J
2-Methylnaphthalene	mg/kg		240	J	76,000		82	J	2,400			U
2-Methylphenol (o-cresol)	mg/kg	500 b		U	4,500			U		U		U
4-Methylphenol (p-cresol)	mg/kg	500 b	490	J	13,000		130	J	5,800	JD		U
Naphthalene	mg/kg	500 b	320	J	140,000	D	190	J	5,800	J		U
Phenanthrene	mg/kg	500 b	8,200		730,000	D	6,300	D	79,000	JD	930	J
Phenol	mg/kg	500 b	290	J	5,600		81	J	120	J		U
Pyrene	mg/kg	500 b	7,400		440,000	D	14,000	D	56,000	JD	1,100	J
1,2,4-Trichlorobenzene	mg/kg			U		U		U		U		U
TAL Metals												
Aluminum	mg/kg		1,340	J	7,420	J	6,560	J	2,890	J	5,170	J
Antimony	mg/kg		277	J	144	J	135	J	1,650	J	840	J
Arsenic	mg/kg	16 f	44.0		79.8		41.6		445		62	
Barium	mg/kg	400	109	J	3,980	J	445	J	1,050	J	148	J
Beryllium	mg/kg	590		UJ	0.72	J	0.33	J	0.2	J	0.19	J
Cadmium	mg/kg	9.3	4	J	5.7	J	7.1	J	11	J	3.6	J
Calcium	mg/kg		33,900	J	38,900	J	78,800	J	18,900	J	67,100	J
Chromium	mg/kg	400 k	13.2	J	65.9	J	37	J	76	J	20	J
Cobalt	mg/kg		6.6	J	13.1	J	12	J	16	J	9.4	J
Copper	mg/kg	270	93.5	J	134	J	286	J	177	J	151	J
Iron	mg/kg		39,300	J	22,800	J	56,200	J	50,000	J	31,800	J
Lead	mg/kg	1,000	75,000	J	66,000	J	48,300	J	73,500	J	24,300	J
Magnesium	mg/kg		1,290		7,050		18,900		5,030		7,340	
Manganese	mg/kg	10,000 d	96.1		565		430		459		498	
Mercury	mg/kg	2.8 j	11.7	J	2.5	J	0.25	J	1.4	J	0.14	J
Nickel	mg/kg	310	12.4	J	48.7	J	28.3	J	55.8	J	24.9	J
Potassium	mg/kg		1,390	J	2,290	J	1,890	J	430	J	809	J
Selenium	mg/kg	1,500		UJ	3.2	J		UJ		UJ		UJ
Silver	mg/kg	1,500		R		R		R		R		R
Sodium	mg/kg		538	J	341	J	199	J	153	J	111	J
Thallium	mg/kg		8.1	J	6.7	J	8.3	J	12.3	J	3.4	J
Vanadium	mg/kg		14.4	J	32.6	J	14.8	J	18.4	J	15.9	J
Zinc	mg/kg	10,000 d	252		3,780		567		3,840		427	
TCLP Metals		TCLP Action Level										
Arsenic	mg/L	5	0.0272	J		U		U		U		U
Barium	mg/L	100	0.0179	J	1.860	J	0.127	J	1.280	J	0.495	J
Cadmium	mg/L	1	0.0051	J	0.0419	J	0.0103	J	0.0595	J	0.0044	J
Chromium	mg/L	5		U		U		U		U		U
Lead	mg/L	5	99.4	D	169	D	56.2	D	1,510	D	35.4	D
Mercury	mg/L	0.2	0.00012	J		U		U		U		U
Selenium	mg/L	1	0.217	J	0.149	J	0.168	J		U	0.242	J
Silver	mg/L	5		U		U		U		U		U

Notes:
NA - Analyte not analyzed.
D - Sample was diluted by laboratory during analysis
J - Estimated value
U -Not detect above the sample reporting limit.
UJ - Estimated non detect
UD - Diluted sample not detected above reporting limit
TAL = Target Analyte List
R - The data are unusable. Resampling/reanalyses are necessary for verification.
mg/kg = milligrams per kilogram; mg/L = milligrams per liter

The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.
d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
b - The SCOs for commercial use were capped at a maximum value of 500ppm.
k - Standard for hexavalent chromium
f- For constituents where calculated SCO was lower than the rural soil background concentration as determined by a rural soil survey, the rural soil background concentration is used as the Track 2 SCO for this use of the Site.
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

Created By: PJY
Checked By: TPH

Table 2
EA Debris Samples
Summary of Analytical Results Detected
Tract I Site - Niagra Falls, New York

Sample Location			DS-18		DS-19		DS-20		DS-21		Basement	
Sample Number			9-32-131-DS-18		9-32-131-DS-19		9-32-131-DS-20		9-32-131-DS-21		BSMT COMPOSITE	
Sample Date			9/12/2007		9/12/2007		9/12/2007		9/12/2007		10/1/2008	
Sample Type			Debris		Debris		Debris		Debris		Debris	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
VOCs												
Acetone	mg/kg	500 b	NA		42		NA		NA		NA	
Carbon disulfide	mg/kg		NA		9.8	J	NA		NA		NA	
1,3-Dichlorobenzene	mg/kg	280	NA		4.9	J	NA		NA		NA	
2-Hexanone	mg/kg		NA			U	NA		NA		NA	
4-Isopropyltoluene	mg/kg		NA			U	NA		NA		NA	
Naphthalene	mg/kg	500 b	NA		52		NA		NA		NA	
Toluene	mg/kg	500 b	NA			U	NA		NA		NA	
1,2,4-Trichlorobenzene	mg/kg		NA		12		NA		NA		NA	
1,2,4-Trimethylbenzene	mg/kg	190	NA			U	NA		NA		NA	
SVOCs												
Acenaphthene	mg/kg	500 b	5,000	J	290,000	D	1,700	JD	160	J	NA	
Acenaphthylene	mg/kg	500 b	970	J	28,000			U		U	NA	
Anthracene	mg/kg	500 b	10,000		520,000	D	5,400	JD	380	J	NA	
Benzo(a)anthracene	mg/kg	5.6	24,000		820,000	D	15,000	D	1,300	J	NA	
Benzo(a)pyrene	mg/kg	1 f	19,000		570,000	D	14,000	D	1,000	J	NA	
Benzo(b)fluoranthene	mg/kg	5.6	24,000		700,000	D	20,000	D	1,600		NA	
Benzo(g,h.I)perylene	mg/kg	500 b	10,000		290,000	D	10,000	D	780	J	NA	
Benzo(k)fluoranthene	mg/kg	56	11,000		310,000	D	8,300	D	750	J	NA	
Bis(2-ethylhexyl)phthalate	mg/kg		1,400	J		U	2,200	JD	11,000		NA	
Carbazole	mg/kg		6,600	J	320,000	D	2,300	JD	290	J	NA	
Chrysene	mg/kg	56	21,000		680,000	D	16,000	D	1,600		NA	
Dibenzo(a,h)anthracene	mg/kg	0.56	3,300	J	99,000		2,300	JD	190	J	NA	
Dibenzofuran	mg/kg	350	5,400	J	330,000	D	1,100	JD	270	J	NA	
2,4-Dichlorophenol	mg/kg			U		U		U		U	NA	
2,4-Dimethylphenol	mg/kg			U	26,000			U		U	NA	
Di-n-butylphthalate	mg/kg			U		U		U	1,600		NA	
Di-n-octylphthalate	mg/kg			U		U		U		U	NA	
Fluoranthene	mg/kg	500 b	62,000		2,100,000	D	38,000	D	5,400		NA	
Fluorene	mg/kg	500 b	4,700	J	300,000	D	1,700	JD	420	J	NA	
Hexachlorobenzene	mg/kg	6		U		U		U	380	J	NA	
Indeno(1,2,3-cd)pyrene	mg/kg	5.6	9,400		270,000	D	8,900	D	590	J	NA	
2-Methylnaphthalene	mg/kg		4,000	J	270,000	D		U	230	J	NA	
2-Methylphenol (o-cresol)	mg/kg	500 b		U	21,000			U		U	NA	
4-Methylphenol (p-cresol)	mg/kg	500 b		U	62,000			U	200	J	NA	
Naphthalene	mg/kg	500 b	7,800		570,000	D		U	330	J	NA	
Phenanthrene	mg/kg	500 b	50,000		2,500,000	D	22,000	D	3,500		NA	
Phenol	mg/kg	500 b		U	27,000			U		U	NA	
Pyrene	mg/kg	500 b	37,000		1,300,000	D	28,000	D	2,800		NA	
1,2,4-Trichlorobenzene	mg/kg			U		U		U		U	NA	
TAL Metals												
Aluminum	mg/kg		660	J	8,890	J	693	J	1,450		4,580	
Antimony	mg/kg		3,680	J	164	J	93.7	J	376		1,660	J
Arsenic	mg/kg	16 f	128		80.4		115		27.1		185	
Barium	mg/kg	400	733	J	2,260	J	72.5	J	349		1,060	
Beryllium	mg/kg	590		UJ	0.8	J	0.15	J	0.095	J	0.270	J
Cadmium	mg/kg	9.3	1.8	J	7.9	J	8.7	J	4.5		117	
Calcium	mg/kg		7,060	J	34,300	J	63,500	J	3,990		24,400	
Chromium	mg/kg	400 k	19	J	66.3	J	38.5	J	20.7		145	
Cobalt	mg/kg		2.8	J	17.7	J	17.9	J	3.8		13.80	J
Copper	mg/kg	270	90	J	142	J	297	J	312		407	
Iron	mg/kg		7,390	J	31,900	J	97,300	J	15,300		201,000	
Lead	mg/kg	1,000	59,400	J	95,900	J	4,890	J	48,700		103,000	
Magnesium	mg/kg		3,410		7,690		406		1,540		5,380	
Manganese	mg/kg	10,000 d	84.5		598		147		92.9		959	J
Mercury	mg/kg	2.8 j	0.31	J	2	J	0.52	J	1.2		1.70	
Nickel	mg/kg	310	44.7	J	47.8	J	11.8	J	19		129	J
Potassium	mg/kg		161	J	1,560	J	194	J	221		700	
Selenium	mg/kg	1,500		UJ	1.6	J		UJ		U	2.30	J
Silver	mg/kg	1,500	6.4	J		R		R		U	18.80	
Sodium	mg/kg		57.2	J	181	J	14,200	J		U	491	
Thallium	mg/kg		7.9	J	7.4	J	9.9	J	4.1			U
Vanadium	mg/kg		3.20	J	32.6	J	23.4	J	10.2		16.10	
Zinc	mg/kg	10,000 d	265		3,330		299		465		4,140	J
TCLP Metals		TCLP Action Level										
Arsenic	mg/L	5	0.494	J	0.0636	J		U	0.0247		NA	
Barium	mg/L	100	0.476	J	3.240	J	0.0269	J	0.443		NA	
Cadmium	mg/L	1	0.017	J	0.0437	J		U	0.0405		NA	
Chromium	mg/L	5		U	0.004	J	0.0011	J			NA	
Lead	mg/L	5	1,520	D	1,630	D	5.31	D	1,050	D	NA	
Mercury	mg/L	0.2		U		U		U		U	NA	
Selenium	mg/L	1		U	0.0562	J	0.279	J		U	NA	
Silver	mg/L	5		U		U		U		U	NA	

Notes:
NA - Analyte not analyzed.
D - Sample was diluted by laboratory during analysis
J - Estimated value
U -Not detect above the sample reporting limit.
UJ - Estimated non detect
UD - Diluted sample not detected above reporting limit
TAL = Target Analyte List
R - The data are unusable. Resampling/reanalyses are necessary for verification.
mg/kg = milligrams per kilogram; mg/L = milligrams per liter

The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.
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j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
b - The SCOs for commercial use were capped at a maximum value of 500ppm.
k - Standard for hexavalent chromium
f- For constituents where calculated SCO was lower than the rural soil background concentration as determined by a rural soil survey, the rural soil background concentration is used as the Track 2 SCO for this use of the Site.

[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Checked By: TPH

Table 3
EA Shallow Subsurface Soil Samples
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Location/Boring I.D.			SB-01		SB-02		SB-03		SB-04		SB-05		SB-06		SB-07	
Sample Number			9-32-131-SB-01S		9-32-131-SB-02S		9-32-131-SB-03S		9-32-131-SB-04S		9-32-131-SB-05S		9-32-131-SB-06S		9-32-131-SB-07S	
Sample Date			9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008	
Sample Type			Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil	
Sample Depth*			0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
TAL Metals																
Aluminum	mg/kg		14,500	J	11,100	J	9,430	J	15,200	J	9,460	J	16,800	J	13,500	J
Antimony	mg/kg		ND	U J	ND	U J	0.270	U J	ND	U J	ND	U J	ND	U J	ND	U J
Arsenic	mg/kg	16	4.60	J	3.30	J	3.30	J	4.70	J	4.40	J	4.10	J	5.40	J
Barium	mg/kg	400	110	J	90.80	J	63.60	J	102	J	61.40	J	94.90	J	141	J
Beryllium	mg/kg	590	0.750	J	0.50	J	0.440	J	0.740	J	0.480	J	0.720	J	0.60	J
Cadmium	mg/kg	9.3	0.210	J	0.130	J	0.130	J	0.180	J	0.130	J	0.250		0.290	
Calcium	mg/kg		74,200		66,000		55,500		77,700		3,340		45,500		43,800	
Chromium	mg/kg	400 k	22.60	J	16.30	J	12.90	J	21.50	J	13.40	J	20.50	J	32.20	J
Cobalt	mg/kg		26.40	J	8.80	J	9.00	J	8.90	J	10.20	J	11.70	J	8.30	J
Copper	mg/kg	270	27.60		19.30		33.90		28.70		20.80		24.30		28.30	
Iron	mg/kg		31,900		27,100		23,400		29,000		22,400		29,000		25,100	
Lead	mg/kg	1,000	34.0		6.0		45.0		20.70		5.60		18.0		55.0	
Magnesium	mg/kg		11,200	J	9,090	J	9,130	J	11,200	J	4,540	J	10,200	J	7930	J
Manganese	mg/kg	10,000 d	606	J	652	J	682	J	449	J	976	J	661	J	597.0	J
Mercury	mg/kg	2.8 j	ND	U	ND	U	0.0150	J	ND	U	ND	U	ND	U	ND	U
Nickel	mg/kg	310	25.90	J	19.90	J	17.70	J	22.20	J	21.40	J	23.80	J	19.70	J
Potassium	mg/kg		2,620	J	1,710	J	1,480	J	2,530	J	1,090	J	2,280	J	2,480	J
Selenium	mg/kg	1,500	ND		ND		ND		ND		ND		ND		ND	U
Silver	mg/kg	1,500	ND		ND		ND		ND		ND		ND		ND	U
Sodium	mg/kg		161.00	J	137	J	125	J	168	J	91.0	J	155	J	131	J
Thallium	mg/kg		ND		ND		ND		ND		ND		ND		ND	U
Vanadium	mg/kg		30.60	J	20.70	J	19.40	J	30.80	J	19.90	J	28.90	J	23.50	J
Zinc	mg/kg	10,000 d	52.50	J	39.0	J	39.20	J	48.20	J	44.40	J	65.80	J	74.40	J

Notes:
U -Not detect above the sample reporting limit.
J - Estimated value
UJ - Estimated non detect
ND - Analyte not detected above reporting limit
TAL = Target Analyte List
k - Standard for hexavalent chromium

The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.
d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
* = Depths are as reported in the EA report text referenced above.
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Table 3
EA Shallow Subsurface Soil Samples
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Location/Boring I.D.			SB-08		SB-09		SB-10		SB-11		SB-12		SB-13		SB-14	
Sample Number			9-32-131-SB-08S		9-32-131-SB-09S		9-32-131-SB-10S		9-32-131-SB-11S		9-32-131-SB-12S		9-32-131-SB-13S		9-32-131-SB-14S	
Sample Date			9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008	
Sample Type			Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil	
Sample Depth*			0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
TAL Metals																
Aluminum	mg/kg		7,500	J	18,200	J	18,700	J	4,140	J	13,100	J	13,300	J	24,500	J
Antimony	mg/kg		30.90	J	ND	U J	2.20	J	ND	U J	8.30	J	ND	U J	ND	U J
Arsenic	mg/kg	16	9.50	J	5.0	J	4.90	J	4.30	J	4.40	J	2.10	J	5.90	J
Barium	mg/kg	400	90.10	J	133.0	J	151	J	80.40	J	71.70	J	91.70	J	174	J
Beryllium	mg/kg	590	0.850	J	1.0	J	0.920	J	0.50	J	0.510	J	0.540	J	1.80	J
Cadmium	mg/kg	9.3	0.590		0.130	J	0.240	J	0.260		0.430		2.80		0.260	
Calcium	mg/kg		40,800	J	3,100		63,600		60,100		61,900		93,600		2,790	
Chromium	mg/kg	400 k	10.10	J	24.70	J	28.30	J	2,060	J	9.80	J	32.20	J	32.20	J
Cobalt	mg/kg		6.20	J	11.0	J	12.40	J	62.00	J	7.30	J	6.0	J	15.50	J
Copper	mg/kg	270	85.90	J	27.20		27.40		43.90		25.60		25.80		36.50	
Iron	mg/kg		31,000		34,600		38,000		5,970		28,000		7,110		46,200	
Lead	mg/kg	1,000	9,410	J	9.90		52.50		148		1,160		24.50		15.70	
Magnesium	mg/kg		4,320	J	5,840	J	11,400	J	25,400	J	10,900	J	46,300	J	7,960	J
Manganese	mg/kg	10,000 d	368.0	J	470	J	556	J	339	J	613	J	510	J	601	J
Mercury	mg/kg	2.8 j	0.280	J	ND	U	0.094		0.10		0.0880		0.0770		ND	U
Nickel	mg/kg	310	9.80	J	28.30	J	31.30	J	58.30	J	12.40	J	20.40	J	38.0	J
Potassium	mg/kg		847	J	1,770	J	4,040	J	1,270	J	1,010	J	1,060	J	2,860	J
Selenium	mg/kg	1,500	ND	U	ND	U	ND	U	ND	U	ND	U	1.80	J	ND	U
Silver	mg/kg	1,500	0.150	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Sodium	mg/kg		266	J	96.10	J	159	J	179	J	82.50	J	88.40	J	77.90	J
Thallium	mg/kg		ND	U	ND	U	ND	U	0.670	J	ND	U	ND	U	ND	U
Vanadium	mg/kg		12.90	J	33.90	J	36.50	J	25.70	J	14.40	J	38.10	J	40.60	J
Zinc	mg/kg	10,000 d	168.0	J	59.60	J	65.40	J	50.50	J	119	J	5,490	J	86.90	J

Notes:
U -Not detect above the sample reporting limit.
J - Estimated value
UJ - Estimated non detect
ND - Analyte not detected above reporting limit
TAL = Target Analyte List
k - Standard for hexavalent chromium

The data presented in this table was obtained from the EA Science and Technology (EA) “Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York” dated May 2009.
d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
* = Depths are as reported in the EA report text referenced above.
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Table 3
EA Shallow Subsurface Soil Samples
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Location/Boring I.D.			SB-15		SB-16		SB-17		SB-18		SB-20		SB-21		SB-22		SB-23	
Sample Number			9-32-131-SB-15S		9-32-131-SB-16S		9-32-131-SB-17S		9-32-131-SB-18S		9-32-131-SB-20S		9-32-131-SB-21S		9-32-131-SB-22S		9-32-131-SB-23S	
Sample Date			9/30/2008		9/30/2008		10/1/2008		10/1/2008		10/1/2008		10/1/2008		10/1/2008		10/1/2008	
Sample Type			Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil	
Sample Depth*			0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet		0-2 feet	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
TAL Metals																		
Aluminum	mg/kg		22,300		11,300		11,000		8,330		22,900		14,200		10,200		12,000	
Antimony	mg/kg		ND	U J	ND	U	ND	U J	ND	U J	ND	U J	ND	U J	20.60	J	ND	U
Arsenic	mg/kg	16	2.40		5.40		2.80		2.60		6.30		3.70		40.40		4.70	
Barium	mg/kg	400	72.40		70.10		76.30		62.80		266		137		125		105	
Beryllium	mg/kg	590	0.90		0.490		0.40		0.250	J	1.20		0.630		0.50		0.530	
Cadmium	mg/kg	9.3	ND	U	ND	U	ND	U	ND	U	0.67		0.240	J	3.30		ND	
Calcium	mg/kg		31,400		55,500		2,670		1,320		4,150		19,100		37,100		62,900	
Chromium	mg/kg	400 k	28.30		15.10		9.10		7.60		29.80		17.30		33.60		16.50	
Cobalt	mg/kg		8.0	J	9.60	J	5.60	J	3.60	J	16.0		6.90	J	11.40	J	9.90	J
Copper	mg/kg	270	24.10		22.20		17.30		19.40		42.30		32.40		421		19.80	
Iron	mg/kg		32,400		24,500		14,900		13,300		41,900		18,500		78,900		24,600	
Lead	mg/kg	1,000	14.80		5.30		5.30		15.60		11.80		247		2,160		8.80	
Magnesium	mg/kg		12,500		8,620		2,570		2,110		7,380		5,650		6,870		10,200	
Manganese	mg/kg	10,000 d	311	J	859		762.0	J	239.0	J	272.0		496	J	862	J	789	
Mercury	mg/kg	2.8 j	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	0.270		ND	U
Nickel	mg/kg	310	25.80		20.90	J	11.10	J	9.00	J	35.70		18.40	J	47.40	J	20.30	J
Potassium	mg/kg		3,700		2,000		806		642		3,430		1,420		1,510		2,430	
Selenium	mg/kg	1,500	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Silver	mg/kg	1,500	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Sodium	mg/kg		230		140		43.50	J	33.70	J	77.20		145		326		144	
Thallium	mg/kg		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vanadium	mg/kg		33.60		22.40		19.10		14.80		45.70		25.40		27.90		23.30	
Zinc	mg/kg	10,000 d	60.30	J	42.30	J	30.30	J	45.0	J	309	J	252	J	688	J	41.50	

Notes:

U -Not detect above the sample reporting limit.
J - Estimated value
UJ - Estimated non detect
ND - Analyte not detected above reporting limit
TAL = Target Analyte List
k - Standard for hexavalent chromium

The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.
d - The SCOs for metals were capped at a maximum value of 10,000 ppm.
j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).
* = Depths are as reported in the EA report text referenced above.
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Table 4
EA Deep Subsurface Soil Samples
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Location/Boring I.D.			SB-01		SB-06		SB-09		SB-12		SB-13		SB-17		SB-18		SB-19		SB-23	
Sample Number			9-32-131-SB-01D(6-8)		9-32-131-SB-06D(5-6)		9-32-131-SB-09D(6-7)		9-32-131-SB-12D(6-7)		9-32-131-SB-13D(6-7)		9-32-131-SB-17(5-6)		9-32-131-SB-18(4-7)		9-32-131-SB-19(4-7)		9-32-131-SB-23S(3-4)	
Sample Date			9/30/2008		9/30/2008		9/30/2008		9/30/2008		9/30/2008		10/1/2008		10/1/2008		10/1/2008		10/1/2008	
Sample Type			Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil		Subsurface Soil	
Sample Depth			6-8 feet		5-6 feet		6-7 feet		6-7 feet		6-7 feet		5-6 feet		4-7 feet		4-7 feet		3-4 feet	
Parameter	Units	Restricted Use Soil Cleanup Objectives - Commercial Standard[1]	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier	Result Value	Qualifier
VOCs																				
Acetone	mg/kg	500 b	<0.00640 U R		0.150 J		0.0480 J		0.0130 J		0.0460 J		<0.00650 U		0.0450		0.10		0.00330 J	
2-Butanone	mg/kg	500 b	<0.00640 U R		0.0280 J		<6.30 U		<0.00610 U R		0.0070 J		<0.00650 U		<0.0130 U		0.0220		<0.00580 U	
n-Butylbenzene	mg/kg	500 b	0.020 J		0.0220		0.0170		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		0.0120		<0.00580 U	
sec-Butylbenze	mg/kg	500 b	0.00460 J		0.0053 J		0.0081		0.00260 J		<0.00650 U		<0.00650 U		<0.0130 U		0.0080 J		<0.00580 U	
Isopropylbenzene	mg/kg		<0.00640 U		0.010 J		0.00370 J		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		0.00450 J		<0.00580 U	
Methylene chloride	mg/kg	500 b	<0.00640 U		<0.0130 U		<0.00810 U		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		<0.00810 U		0.00160 J	
Naphthalene	mg/kg	500 b	<0.00640 U		0.0480		0.00630		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		<0.00810 U		<0.00580 U	
n-Propylbenzene	mg/kg	500 b	<0.00640 U		0.0130		0.00480 J		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		0.00410 J		<0.00580 U	
Toluene	mg/kg	500 b	<0.00640 U		<0.0130 U		0.00550 J		<0.00610 U		0.00380 J		<0.00650 U		<0.0130 U		0.0160		0.00420 J	
Trichloroethene	mg/kg	200	<0.00640 U		<0.0130 U		0.0120		0.00370 J		0.0120		0.00860		<0.0130 U		0.0420		0.00510 J	
1,2,4-Trimethylbenzene	mg/kg	190	0.10 J		0.10		0.0830		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		<0.00810 U		<0.00580 U	
1,3,5-Trimethylbenzene	mg/kg	190	0.0740 J		0.0620		<0.00810 U		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		<0.00810 U		<0.00580 U	
m,p-Xylene	mg/kg	500 b	0.00530 J		<0.0130 U		<0.00810 U		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		<0.00810 U		<0.00580 U	
Xylene (Total)	mg/kg	500 b	0.00530 J		<0.0130 U		<0.00810 U		<0.00610 U		<0.00650 U		<0.00650 U		<0.0130 U		<0.00810 U		<0.00580 U	
SVOCs																				
Acenaphthene	mg/kg	500 b	<0.440 U		0.220 J		<0.420 U		<0.410 U		<0.410 U		<0.440 U		0.180 J		1.50		<0.390 U	
Anthracene	mg/kg	500 b	<0.440 U		0.290 J		<0.420 U		<0.410 U		<0.410 U		<0.440 U		0.150 J		1.20		<0.390 U	
Benzo(a)anthracene	mg/kg	5.6	<0.440 U		0.180 J		0.140 J		<0.410 U		<0.410 U		<0.440 U		<0.450 U		0.40 J		<0.390 U	
Benzo(a)pyrene	mg/kg	1 f	<0.440 U		0.10 J		0.120 J		<0.410 U		<0.410 U		<0.440 U		<0.450 U		0.210 J		<0.390 U	
Benzo(b)fluoranthene	mg/kg	5.6	<0.440 U		0.120 J		0.190 J		<0.410 U		<0.410 U		<0.440 U		<0.450 U		0.230 J		<0.390 U	
Bis(2-ethylhexyl)phthalate	mg/kg		<0.440 U		<0.40 U		0.130 J		<0.410 U		<0.410 U		<0.440 U		<0.450 U		<0.470 U		<0.390 U	
Chrysene	mg/kg	56	<0.440 U		0.160 J		0.160 J		<0.410 U		0.140 J		<0.440 U		0.150 J		0.490		<0.390 U	
Dibenzofuran	mg/kg	350	<0.440 U		0.160 J		<0.420 U		<0.410 U		<0.410 U		<0.440 U		<0.450 U		0.290 J		<0.390 U	
Fluoranthene	mg/kg	500 b	<0.440 U		0.520		0.300 J		<0.410 U		0.160 J		<0.440 U		0.180 J		1.10		<0.390 U	
Fluorene	mg/kg	500 b	<0.440 U		0.260 J		<0.420 U		0.120 J		<0.410 U		<0.440 U		<0.450 U		1.70		<0.390 U	
2-Methylnaphthalene	mg/kg		0.10 J		0.480		<0.420 U		<0.410 U		<0.410 U		<0.440 U		0.10 J		0.210 J		<0.390 U	
Naphthalene	mg/kg	500 b	<0.440 U		<0.40 U		<0.420 U		<0.410 U		<0.410 U		<0.440 U		<0.450 U		0.450 J		<0.390 U	
Phenanthrene	mg/kg	500 b	0.150 J		0.990		0.180 J		0.310 J		<0.410 U		<0.440 U		<0.450 U		1.10		<0.390 U	
Pyrene	mg/kg	500 b	<0.440 U		0.390 J		0.220 J		0.120 J		0.140 J		<0.440 U		0.220 J		1.30		<0.390 U	

Notes:
The data presented in this table was obtained from the EA Science and Technology (EA) "Final Site Characterization Report, Power City Warehouse Site (9-32-131), Niagara Falls, Niagara County, New York" dated May 2009.
b - The SCOs for commercial use were capped at a maximum value of 500ppm.
f- For constituents where calculated SCO was lower than the rural soil background concentration as determined by a rural soil survey, the rural soil background concentration is used as the SCO for use at the Site.
U - Analyte not detected above the sample reporting limit.
R - Rejected
J - Estimated value.
[1] = 6 New York Code of Rules and Regulations (NYCRR) Part 375

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Table 5
AMEC Surface Soil Samples
Summary of Analytical Results Detected
Tract I Site - Niagara Falls, New York

Sample Location/Boring I.D.			B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20
Sample Number			B-10-SURF	B-11-SURF	B-12-SURF	B-13-SURF	B-14-SURF	B-15-SURF	B-16-SURF	B-17-SURF	B-18-SURF	B-19-SURF	B-20-SURF
Sample Date			7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
Sample Type			Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil	Surface Soil
Sample Depth			0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"
Parameter	Units	Commercial Standard/ TCLP Standard	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual	Result Value Qual
Metals													
Antimony	mg/kg		101	68.3	15.4	41.2	15.9 U	14.8	14.6 U	63.8	192	29.7	18.6 U
Lead	mg/kg	1,000 a	7,940	6,430	3,130	4,130	1,210	1,660	1,230	2,280	16,900	1,730	2,630
Tin	mg/kg		20.4	9.5	6.7	18.3	50.7	9	6.2	20.8	48.7	53.1	8.8
TCLP													
TCLP-Lead	mg/L	5 b	18.4	46.5	1.5	2.7	1	1.9	1.3	21	69.7	0.6	1.8
pH - standard units (S.U.)													
pH	S.U.		7.8	8.25	7.98	7.89	7.98	7.96	8.04	7.09	7.63	7.16	7.67
XRF Screeing Results													
Lead	ppm	1,000 a	1,073	2,510	NA	NA	NA	NA	NA	NA	NA	1,521	1,772
Tin	ppm		1,263	2,480	NA	NA	NA	NA	NA	NA	NA	5,584	4,158

Notes:
U = Analyte not detected by laboratory above the reporting limit
a = Restricted Use Soil Cleanup Objectives - Commercial Standard - 6 New York Code of Rules and Regulations (NYCRR) Part 375
b = NY DEC Hazardous Waste TCLP Regulatory Action Level
TCLP = Toxicity Characteristic Leaching Procedure
mg/kg = milligrams per kilogram (ppm)
mg/L = milligrams per liter (ppm)
ppm = parts per million
Qual = qualifier

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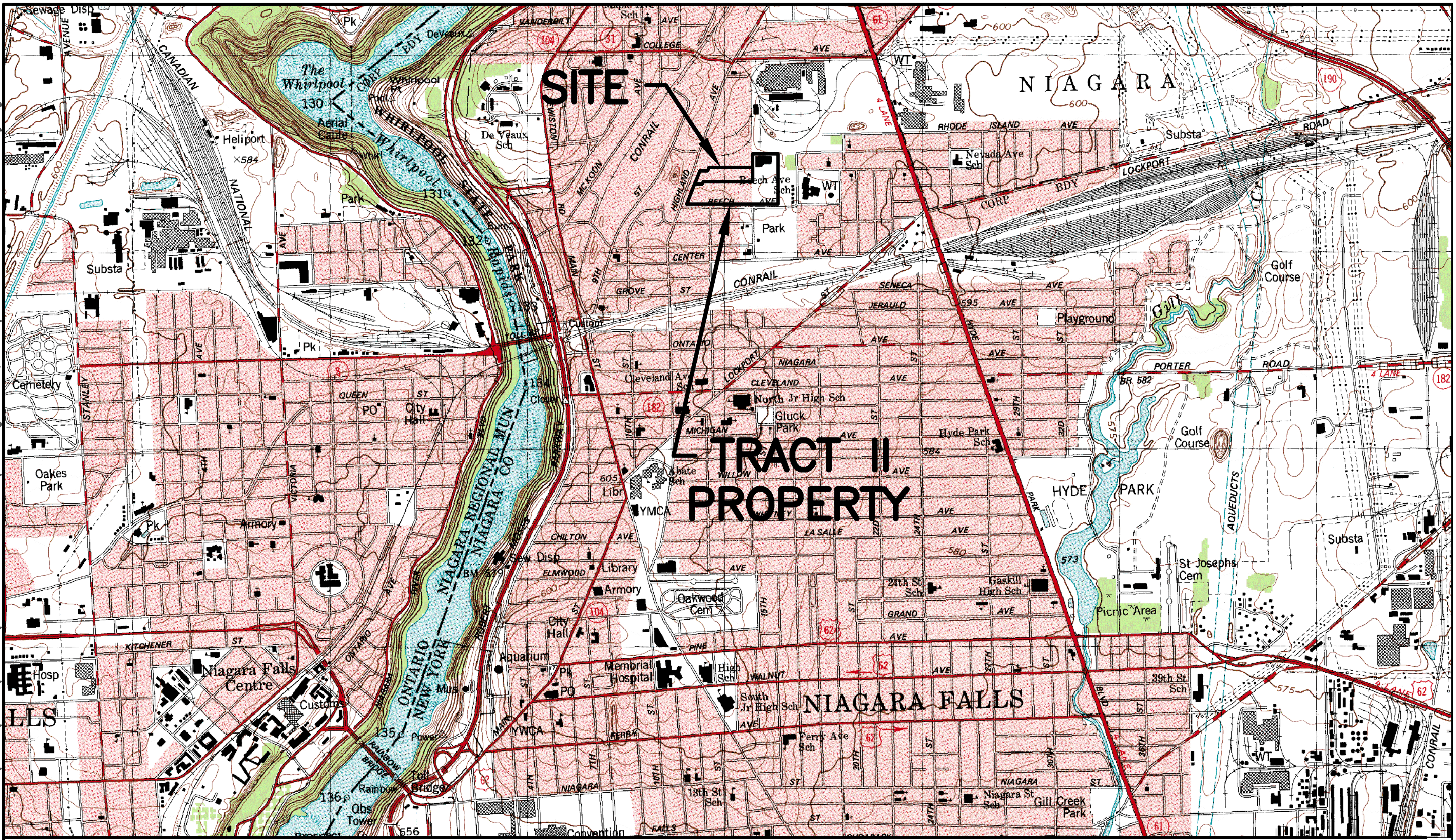
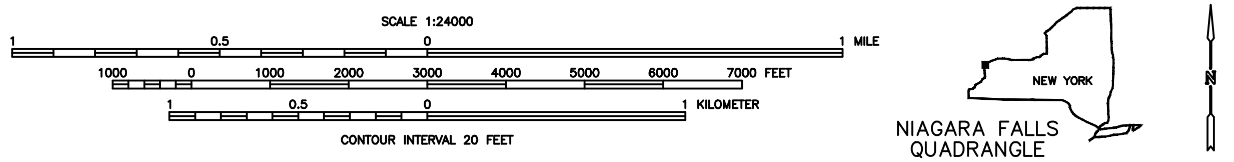
Checked By: TPH

FIGURES

DRAWN BY: NEL 8-13-2009 APPROVED BY: ESW 4-10-2012





HONEYWELL INTERNATIONAL INC. NIAGARA FALLS, NEW YORK Project No.: 3410110832	amec Environment & Infrastructure - Pittsburgh 800 North Bell Avenue, Carnegie, Pennsylvania 15106 2200 Georgetown Drive, Sewickley, Pennsylvania 15143	SITE LOCATION MAP Figure: 1	1

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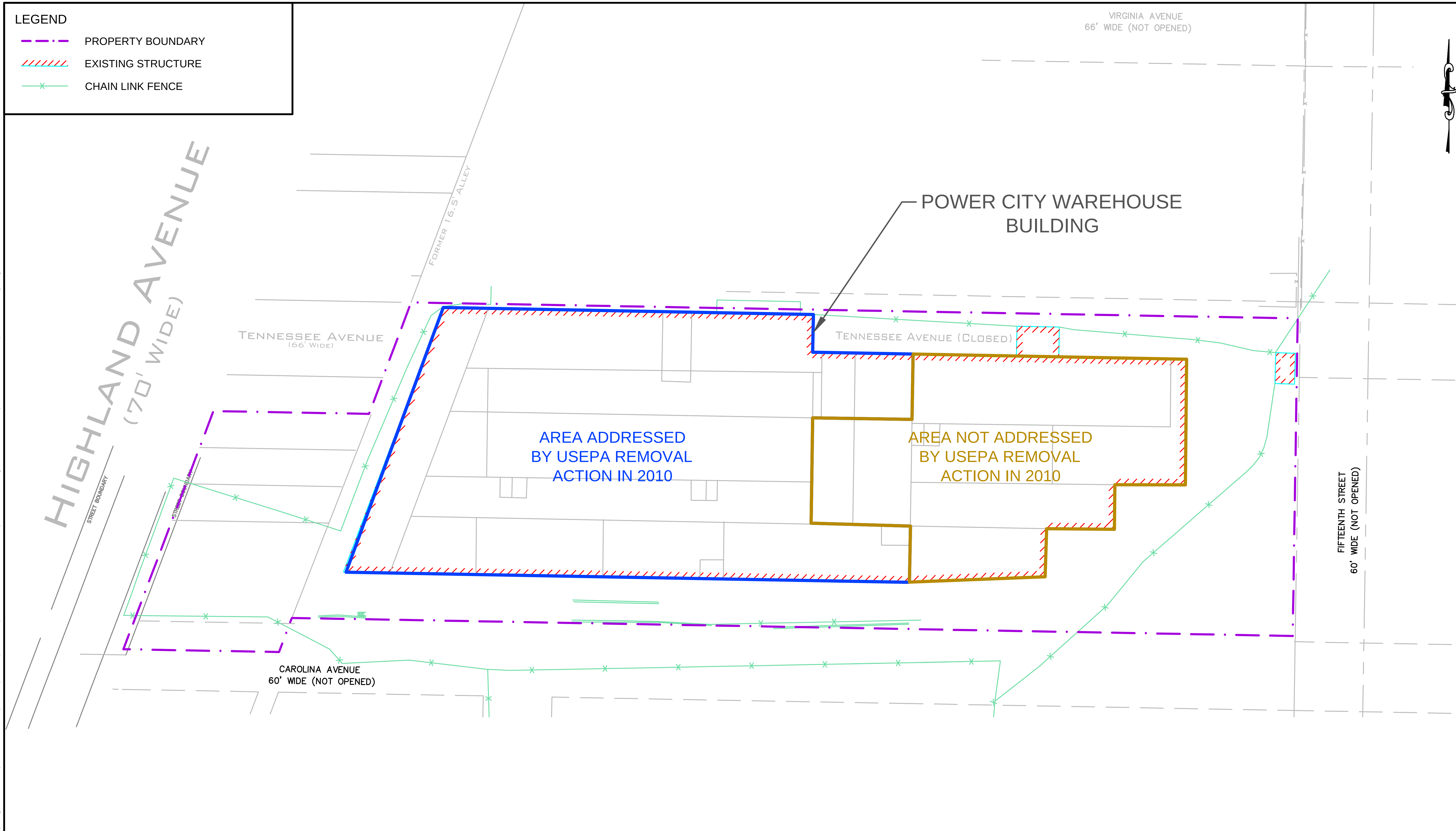
DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 4-10-2012



HONEYWELL INTERNATIONAL INC.
NIAGARA FALLS, NEW YORK

Project No.: 3410110832

amec

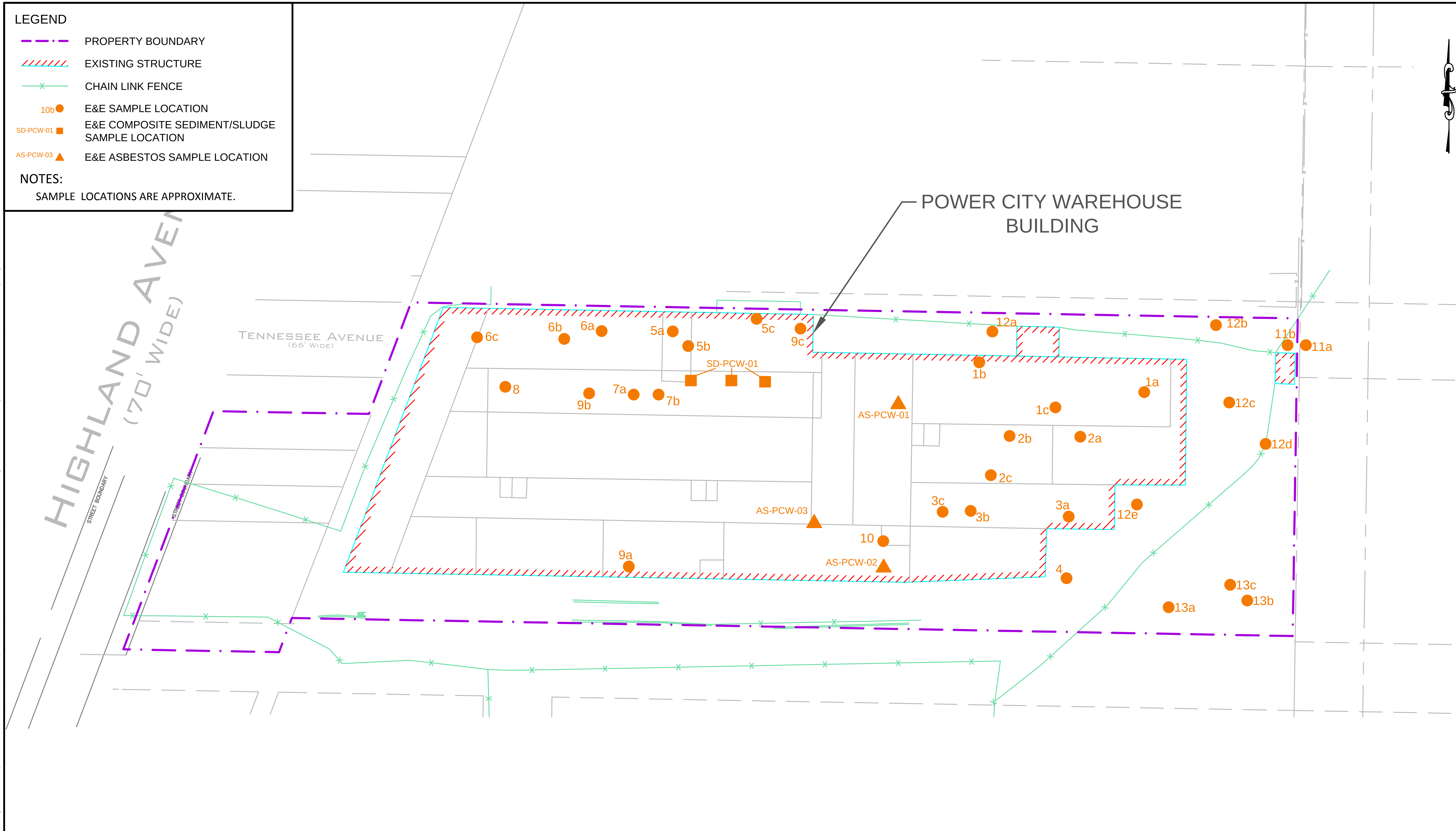
Environment & Infrastructure - Pittsburgh
800 North Bell Avenue, Carnegie, Pennsylvania 15106
2200 Georgetown Drive, Sewickley, Pennsylvania 15143

SITE PLAN

Figure: 2

2

DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 4-10-2012



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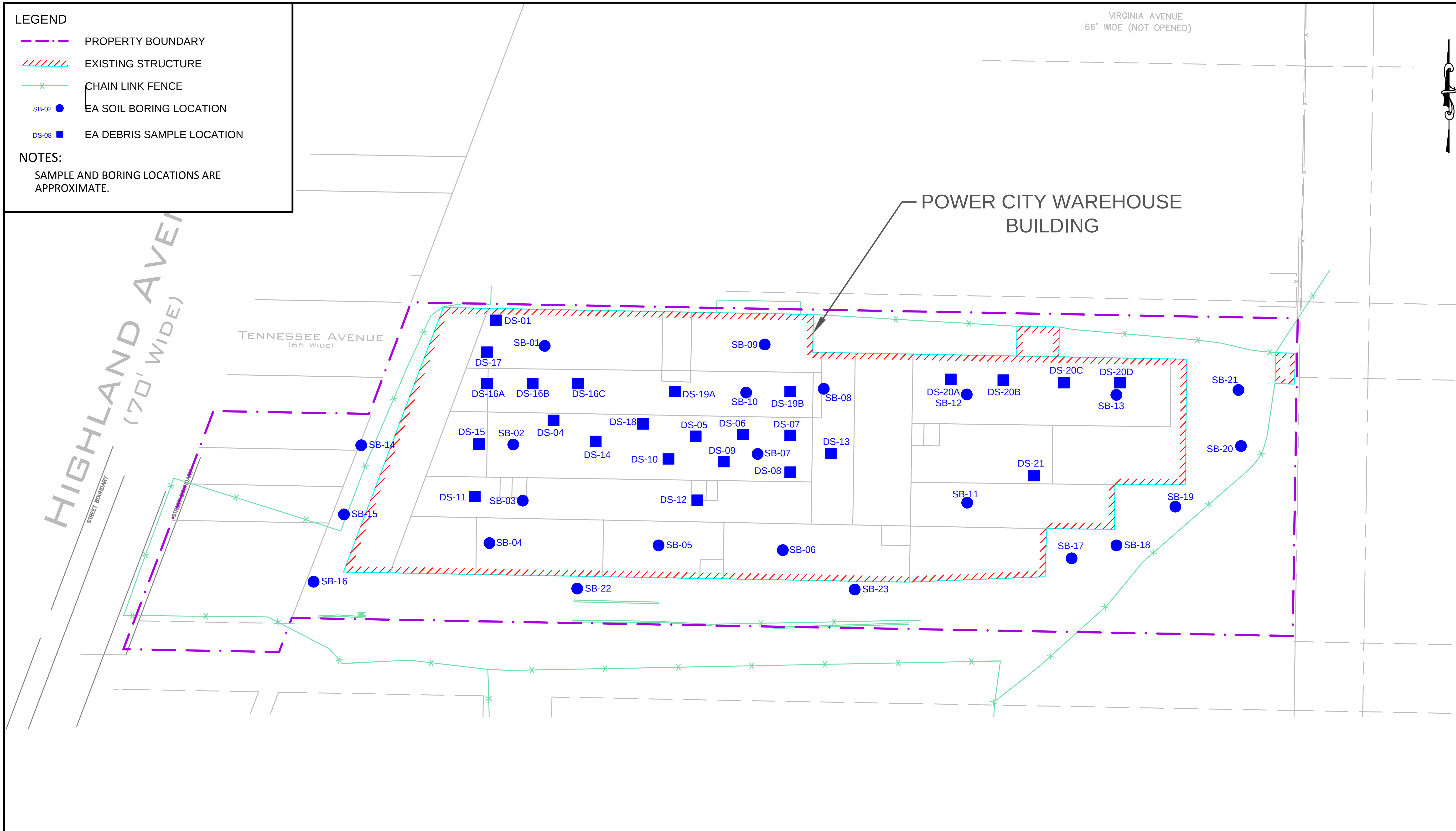
HONEYWELL INTERNATIONAL INC. NIAGARA FALLS, NEW YORK Project No.: 3410110832	amec Environment & Infrastructure - Pittsburgh 800 North Bell Avenue Carnegie, Pennsylvania 15106 2200 Georgetown Drive Sewickley, Pennsylvania 15143	E&E SITE INVESTIGATION SAMPLE LOCATION MAP 1999 Figure: 3	3



80 0 80
SCALE: 1"=80'

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NIAGARA FALLS, NEW YORK

Project No.: 3410110832

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EA SITE CHARACTERIZATION
SAMPLE LOCATION MAP
2007-2008

Figure: 4

4

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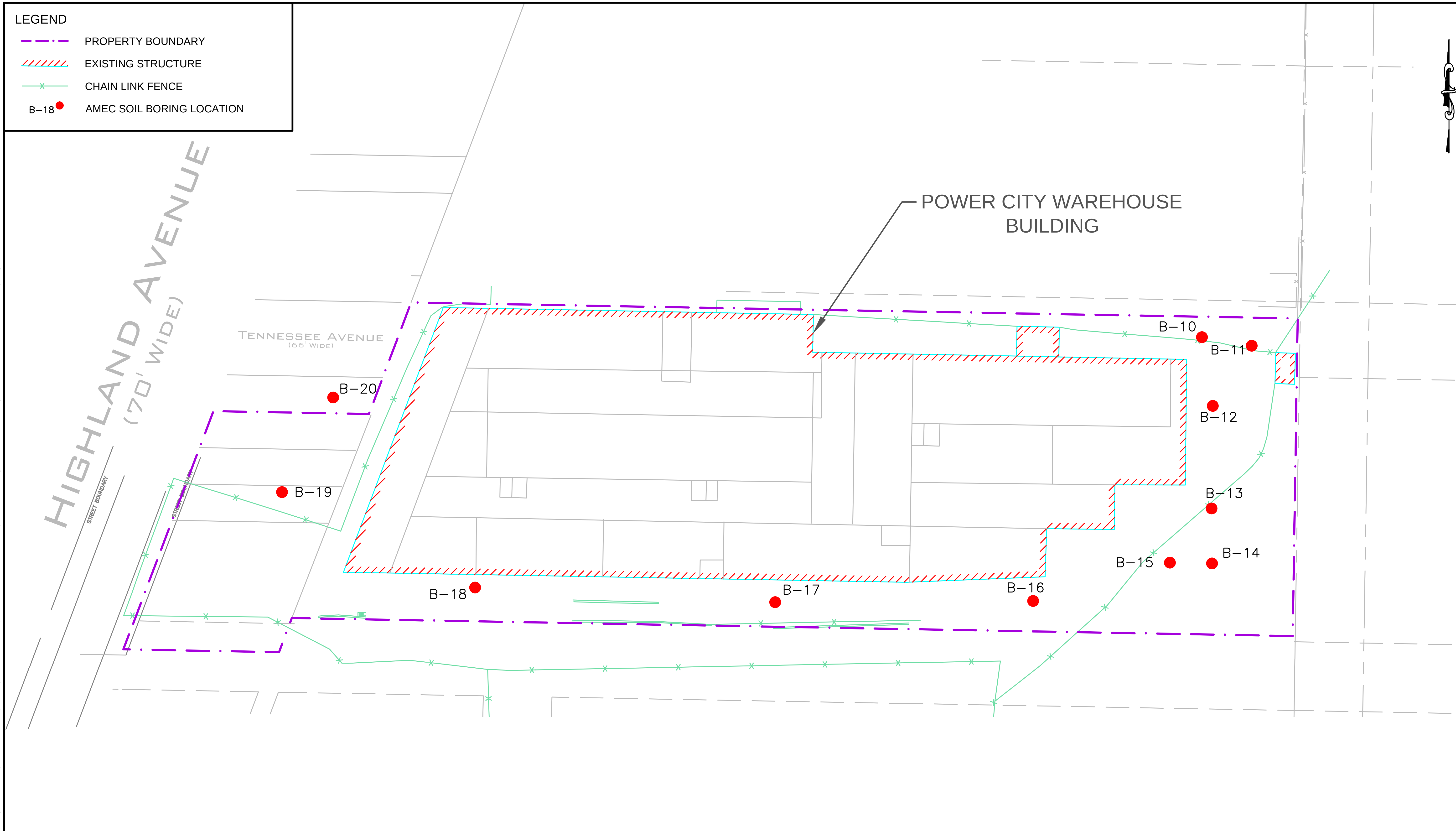
DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 4-10-2012



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SCALE: 1"=80'

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NIAGARA FALLS, NEW YORK

Project No.: 3410110832

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800 North Bell Avenue
Carnegie, Pennsylvania 15106

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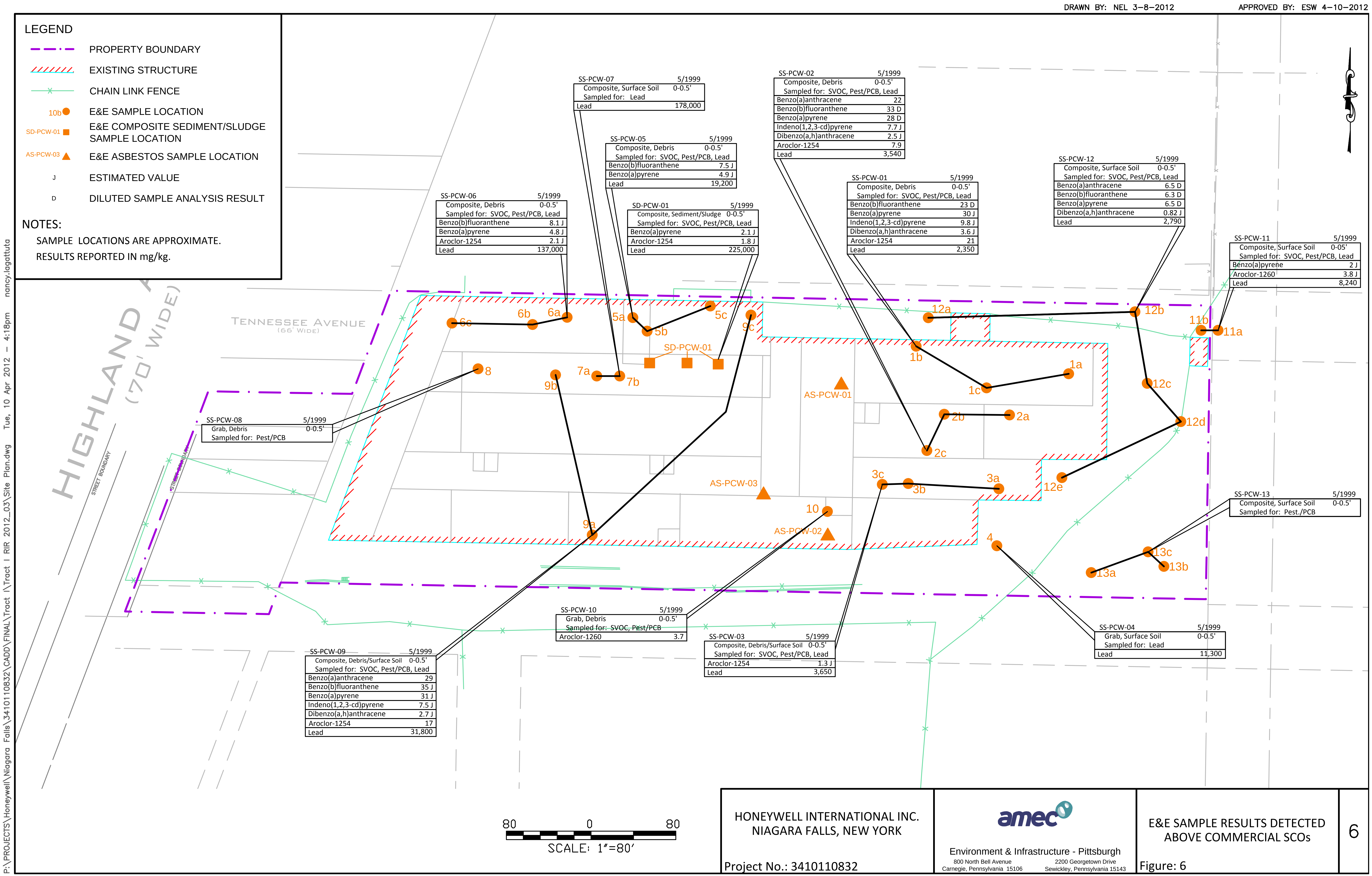
Sewickley, Pennsylvania 15143

AMEC PREDESIGN STUDY
SAMPLE LOCATION MAP
2011

Figure: 5

5


DRAWN BY: NEL 3-8-2012
APPROVED BY: ESW 4-10-2012
LEGEND
PROPERTY BOUNDARY
EXISTING STRUCTURE
CHAIN LINK FENCE
10b E&E SAMPLE LOCATION
SD-PCW-01 E&E COMPOSITE SEDIMENT/SLUDGE SAMPLE LOCATION
AS-PCW-03 E&E ASBESTOS SAMPLE LOCATION
J ESTIMATED VALUE
D DILUTED SAMPLE ANALYSIS RESULT
NOTES:
SAMPLE LOCATIONS ARE APPROXIMATE.
RESULTS REPORTED IN mg/kg.
SS-PCW-07 5/1999
Composite, Surface Soil 0-0.5'
Sampled for: Lead
Lead 178,000
SS-PCW-02 5/1999
Composite, Debris 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(a)anthracene 22
Benzo(b)fluoranthene 33 D
Benzo(a)pyrene 28 D
Indeno(1,2,3-cd)pyrene 7.7 J
Dibenzo(a,h)anthracene 2.5 J
Aroclor-1254 7.9
Lead 3,540
SS-PCW-05 5/1999
Composite, Debris 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(b)fluoranthene 7.5 J
Benzo(a)pyrene 4.9 J
Lead 19,200
SS-PCW-12 5/1999
Composite, Surface Soil 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(a)anthracene 6.5 D
Benzo(b)fluoranthene 6.3 D
Benzo(a)pyrene 6.5 D
Dibenzo(a,h)anthracene 0.82 J
Lead 2,790
SS-PCW-01 5/1999
Composite, Debris 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(b)fluoranthene 23 D
Benzo(a)pyrene 30 J
Indeno(1,2,3-cd)pyrene 9.8 J
Dibenzo(a,h)anthracene 3.6 J
Aroclor-1254 21
Lead 2,350
SS-PCW-06 5/1999
Composite, Debris 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(b)fluoranthene 8.1 J
Benzo(a)pyrene 4.8 J
Aroclor-1254 2.1 J
Lead 137,000
SD-PCW-01 5/1999
Composite, Sediment/Sludge 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(a)pyrene 2.1 J
Aroclor-1254 1.8 J
Lead 225,000
SS-PCW-11 5/1999
Composite, Surface Soil 0-05'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(a)pyrene 2 J
Aroclor-1260 3.8 J
Lead 8,240
TENNESSEE AVENUE
(66' WIDE)
HIGHLAND AVENUE
(70' WIDE)
STREET BOUNDARY
6c 6b 6a 5a 5b 5c 9c 12a 12b 11b 11a 1b 1a 1c 12c 2b 2a 12d 2c 8 7a 7b 9b 9a 3c 3b 3a 12e 10 4 13c 13a 13b
SD-PCW-01
AS-PCW-01
AS-PCW-03
AS-PCW-02
SS-PCW-08 5/1999
Grab, Debris 0-0.5'
Sampled for: Pest/PCB
SS-PCW-13 5/1999
Composite, Surface Soil 0-0.5'
Sampled for: Pest./PCB
SS-PCW-10 5/1999
Grab, Debris 0-0.5'
Sampled for: SVOC, Pest/PCB
Aroclor-1260 3.7
SS-PCW-04 5/1999
Grab, Surface Soil 0-0.5'
Sampled for: Lead
Lead 11,300
SS-PCW-03 5/1999
Composite, Debris/Surface Soil 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Aroclor-1254 1.3 J
Lead 3,650
SS-PCW-09 5/1999
Composite, Debris/Surface Soil 0-0.5'
Sampled for: SVOC, Pest/PCB, Lead
Benzo(a)anthracene 29
Benzo(b)fluoranthene 35 J
Benzo(a)pyrene 31 J
Indeno(1,2,3-cd)pyrene 7.5 J
Dibenzo(a,h)anthracene 2.7 J
Aroclor-1254 17
Lead 31,800
80 0 80
SCALE: 1"=80'
HONEYWELL INTERNATIONAL INC.
NIAGARA FALLS, NEW YORK
Project No.: 3410110832
amec
Environment & Infrastructure - Pittsburgh
800 North Bell Avenue Carnegie, Pennsylvania 15106
2200 Georgetown Drive Sewickley, Pennsylvania 15143
E&E SAMPLE RESULTS DETECTED ABOVE COMMERCIAL SCOs
Figure: 6
6
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DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 4-10-2012

LEGEND

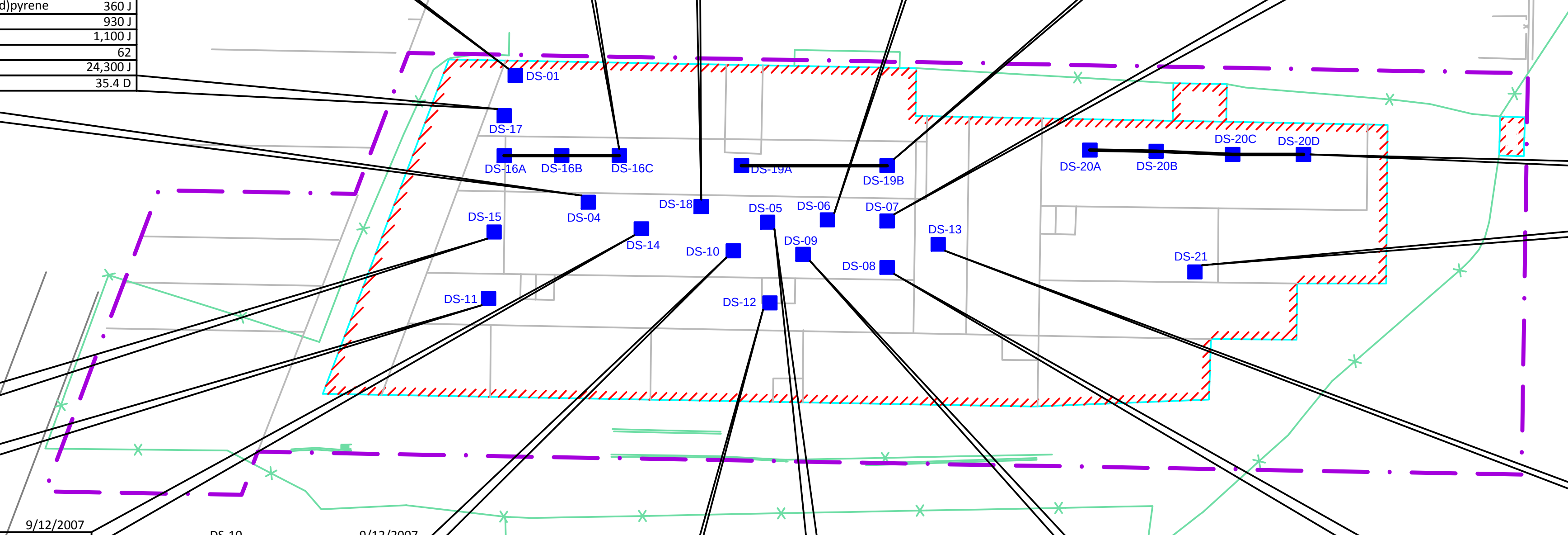
- PROPERTY BOUNDARY
- EXISTING STRUCTURE
- CHAIN LINK FENCE
- DS-08 ■ EA DEBRIS SAMPLE LOCATION
- J ESTIMATED VALUE
- D DILUTED SAMPLE ANALYSIS RESULT

NOTES:

SAMPLE AND BORING LOCATIONS ARE APPROXIMATE.

ALL SAMPLES WERE ANALYZED FOR SVOCs, TAL METALS AND TCLP METALS. LOCATIONS DS-09, DS-13, DS-14, DS-16, AND DS-19 WERE ALSO ANALYZED FOR VOCs.

LEAD RESULTS REPORTED IN mg/kg.
TCLP-LEAD RESULTS REPORTED IN mg/L.



DS-01	9/12/2007
Debris	
Acenaphthene	3,800 JD
Acenaphthylene	1,000 JD
Anthracene	8,900 D
Benzo(a)anthracene	31,000 D
Benzo(a)pyrene	27,000 D
Benzo(b)fluoranthene	39,000 D
Benzo(g,h,i)perylene	17,000 D
Benzo(k)fluoranthene	14,000 D
Chrysene	34,000 D
Dibenzo(a,h)anthracene	5,100 JD
Dibenzofuran	3,300 JD
Fluoranthene	82,000 D
Fluorene	3,400 JD
Indeno(1,2,3-cd)pyrene	15,000 D
Naphthalene	4,100 JD
Phenanthrene	55,000 D
Pyrene	48,000 D
Arsenic	216
Barium	2,920 J
Cadmium	22.6 J
Copper	648 J
Lead	58,800 J
TCLP-Lead	241 D

DS-16	9/12/2007
Composite, Debris	
Acenaphthene	9,300 D
Acenaphthylene	730
Anthracene	20,000 D
Benzo(a)anthracene	28,000 D
Benzo(a)pyrene	22,000 D
Benzo(b)fluoranthene	28,000 D
Benzo(g,h,i)perylene	13,000 D
Benzo(k)fluoranthene	7,300 J
Chrysene	26,000 D
Dibenzo(a,h)anthracene	3,900 J
Dibenzofuran	7,100 JD
Fluoranthene	85,000 D
Fluorene	8,800 JD
Indeno(1,2,3-cd)pyrene	12,000 JD
4-Methylphenol (p-cresol)	5,800 JD
Naphthalene	5,800 J
Phenanthrene	79,000 JD
Pyrene	56,000 JD
Arsenic	445
Barium	1,050 J
Cadmium	11 J
Lead	73,500 J
TCLP-Lead	1,510 D

DS-18	9/12/2007
Debris	
Acenaphthene	5,000 J
Acenaphthylene	970 J
Anthracene	10,000
Benzo(a)anthracene	24,000
Benzo(a)pyrene	19,000
Benzo(b)fluoranthene	24,000
Benzo(g,h,i)perylene	10,000
Benzo(k)fluoranthene	11,000
Chrysene	21,000
Dibenzo(a,h)anthracene	3,300 J
Dibenzofuran	5,400 J
Fluoranthene	62,000
Fluorene	4,700 J
Indeno(1,2,3-cd)pyrene	9,400
Naphthalene	7,800
Phenanthrene	50,000
Pyrene	37,000
Arsenic	128
Barium	733 J
Lead	59,400 J
TCLP-Lead	1,520 D

DS-06	9/12/2007
Debris	
Anthracene	920 J
Benzo(a)anthracene	1,900
Benzo(a)pyrene	1,600
Benzo(b)fluoranthene	2,000
Benzo(g,h,i)perylene	1,500
Benzo(k)fluoranthene	1,400
Chrysene	2,100
Dibenzo(a,h)anthracene	320 J
Fluoranthene	5,800
Indeno(1,2,3-cd)pyrene	1,100 J
Phenanthrene	2,900
Pyrene	2,500
Arsenic	139
Barium	3,060 J
Cadmium	11.9 J
Lead	64,200 J
Mercury	3.2 J
TCLP-Lead	190 D

DS-19	9/12/2007
Composite, Debris	
Acenaphthene	290,000 D
Acenaphthylene	28,000
Anthracene	520,000 D
Benzo(a)anthracene	820,000 D
Benzo(a)pyrene	570,000 D
Benzo(b)fluoranthene	700,000 D
Benzo(g,h,i)perylene	290,000 D
Benzo(k)fluoranthene	310,000 D
Chrysene	680,000 D
Dibenzo(a,h)anthracene	99,000
Dibenzofuran	330,000 D
Fluoranthene	2,100,000 D
Fluorene	300,000 D
Indeno(1,2,3-cd)pyrene	270,000 D
2-Methylphenol (o-cresol)	21,000
4-Methylphenol (p-cresol)	62,000
Naphthalene	570,000 D
Phenanthrene	2,500,000 D
Phenol	27,000
Pyrene	1,300,000 D
Arsenic	80.4
Barium	2,260 J
Lead	95,900 J
TCLP-Lead	1,630 D

DS-07	9/12/2007
Debris	
Acenaphthene	8,900
Acenaphthylene	1,600
Anthracene	18,000 D
Benzo(a)anthracene	32,000 D
Benzo(a)pyrene	24,000 D
Benzo(b)fluoranthene	34,000 D
Benzo(g,h,i)perylene	14,000 D
Benzo(k)fluoranthene	12,000
Chrysene	30,000 D
Dibenzo(a,h)anthracene	4,300 JD
Dibenzofuran	8,300
Fluoranthene	82,000 D
Fluorene	9,100
Indeno(1,2,3-cd)pyrene	13,000 D
4-Methylphenol (p-cresol)	820 J
Naphthalene	11,000
Phenanthrene	79,000 D
Pyrene	51,000 D
Arsenic	537
Barium	1,340 J
Cadmium	29.5 J
Lead	60,100 J
Mercury	3 J
Zinc	17,000
TCLP-Lead	158 D

DS-20	9/12/2007
Composite, Debris	
Acenaphthene	1,700 JD
Anthracene	5,400 JD
Benzo(a)anthracene	15,000 D
Benzo(a)pyrene	14,000 D
Benzo(b)fluoranthene	20,000 D
Benzo(g,h,i)perylene	10,000 D
Benzo(k)fluoranthene	8,300 D
Chrysene	16,000 D
Dibenzo(a,h)anthracene	2,300 JD
Dibenzofuran	1,100 JD
Fluoranthene	38,000 D
Fluorene	1,700 JD
Indeno(1,2,3-cd)pyrene	8,900 D
Phenanthrene	22,000 D
Pyrene	28,000 D
Arsenic	115
Copper	297 J
Lead	4,890 J
TCLP-Lead	5.31 D

DS-17	9/12/2007
Debris	
Benzo(a)anthracene	880 J
Benzo(a)pyrene	660 J
Benzo(b)fluoranthene	780 J
Benzo(g,h,i)perylene	530 J
Benzo(k)fluoranthene	430 J
Chrysene	740 J
Fluoranthene	2,000
Indeno(1,2,3-cd)pyrene	360 J
Phenanthrene	930 J
Pyrene	1,100 J
Arsenic	62
Lead	24,300 J
TCLP-Lead	35.4 D

DS-04	9/12/2007
Debris	
Acenaphthene	78,000
Acenaphthylene	20,000
Anthracene	150,000 D
Benzo(a)anthracene	340,000 D
Benzo(a)pyrene	270,000 D
Benzo(b)fluoranthene	310,000 D
Benzo(g,h,i)perylene	140,000 D
Benzo(k)fluoranthene	73,000
Chrysene	300,000 D
Dibenzo(a,h)anthracene	55,000
Dibenzofuran	73,000 JD
Fluoranthene	790,000 D
Fluorene	77,000
Indeno(1,2,3-cd)pyrene	140,000 D
2-Methylphenol (o-cresol)	3,400 J
4-Methylphenol (p-cresol)	9,900
Naphthalene	110,000 D
Phenanthrene	690,000 D
Phenol	4,000 J
Pyrene	520,000 D
Arsenic	153
Barium	2,200 J
Lead	74,200 J
Mercury	6.1 J
TCLP-Lead	377 D

DS-15	9/12/2007
Debris	
Acenaphthylene	1,400
Anthracene	2,900
Benzo(a)anthracene	9,300 D
Benzo(a)pyrene	8,100 D
Benzo(b)fluoranthene	10,000 D
Benzo(g,h,i)perylene	4,600
Benzo(k)fluoranthene	4,100
Chrysene	8,400 D
Dibenzo(a,h)anthracene	1,600
Fluoranthene	18,000 D
Indeno(1,2,3-cd)pyrene	4,800
Phenanthrene	6,300 D
Pyrene	14,000 D
Arsenic	41.6
Barium	445 J
Copper	286 J
Lead	48,300 J
TCLP-Lead	56.2 D

DS-21	9/12/2007
Debris	
Benzo(a)anthracene	1,300 J
Benzo(a)pyrene	1,000 J
Benzo(b)fluoranthene	1,600
Benzo(g,h,i)perylene	780 J
Benzo(k)fluoranthene	750 J
Chrysene	1,600
Dibenzo(a,h)anthracene	190 J
Fluoranthene	5,400
Hexachlorobenzene	380 J
Indeno(1,2,3-cd)pyrene	590 J
Phenanthrene	3,500
Pyrene	2,800
Arsenic	27.1
Copper	312
Lead	48,700
TCLP-Lead	1,050 D

DS-11	9/12/2007
Debris	
Acenaphthene	53,000 D
Acenaphthylene	3,200
Anthracene	110,000 D
Benzo(a)anthracene	180,000 D
Benzo(a)pyrene	140,000 D
Benzo(b)fluoranthene	160,000 D
Benzo(g,h,i)perylene	82,000 D
Benzo(k)fluoranthene	88,000 D
Chrysene	170,000 D
Dibenzo(a,h)anthracene	22,000
Dibenzofuran	36,000 D
Fluoranthene	640,000 D
Fluorene	51,000 D
Indeno(1,2,3-cd)pyrene	73,000 D
4-Methylphenol (p-cresol)	1,100 J
Naphthalene	40,000 JD
Phenanthrene	570,000 D
Phenol	960 J
Pyrene	410,000 D
Arsenic	66.6
Barium	2,320 J
Lead	71,400 J
Mercury	19.9 J
TCLP-Lead	780 D

DS-14	9/12/2007
Debris	
Acenaphthene	78,000 JD
Acenaphthylene	12,000
Anthracene	150,000 D
Benzo(a)anthracene	280,000 D
Benzo(a)pyrene	210,000 D
Benzo(b)fluoranthene	280,000 D
Benzo(g,h,i)perylene	110,000 D
Benzo(k)fluoranthene	72,000
Chrysene	240,000 D
Dibenzo(a,h)anthracene	41,000
Dibenzofuran	88,000 JD
Fluoranthene	690,000 D
Fluorene	78,000 JD
Indeno(1,2,3-cd)pyrene	110,000 D
2-Methylphenol (o-cresol)	4,500
4-Methylphenol (p-cresol)	13,000
Naphthalene	140,000 D
Phenanthrene	730,000 D
Phenol	5,600
Pyrene	440,000 D
Arsenic	79.8
Barium	3,980 J
Lead	66,000 J
TCLP-Lead	169 D

DS-10	9/12/2007
Debris	
Anthracene	770
Benzo(a)anthracene	2,700
Benzo(a)pyrene	2,600
Benzo(b)fluoranthene	3,600
Benzo(g,h,i)perylene	1,400
Benzo(k)fluoranthene	2,000
Chrysene	2,700
Dibenzo(a,h)anthracene	430
Fluoranthene	6,100
Indeno(1,2,3-cd)pyrene	1,300
Phenanthrene	2,200
Pyrene	3,700
Arsenic	81.7
Barium	3,640 J
Lead	66,500 J
TCLP-Lead	82.1 D

DS-12	9/12/2007
Debris	
Acenaphthylene	570 J
Anthracene	890 J
Benzo(a)anthracene	3,600
Benzo(a)pyrene	3,200
Benzo(b)fluoranthene	4,400
Benzo(g,h,i)perylene	2,400
Benzo(k)fluoranthene	1,800
Chrysene	2,900
Dibenzo(a,h)anthracene	570 J
Fluoranthene	6,000
Indeno(1,2,3-cd)pyrene	2,200
Phenanthrene	2,200
Pyrene	4,000
Arsenic	217
Barium	674 J
Cadmium	22.8 J
Lead	8,910 J
TCLP-Lead	126 D

DS-05	9/12/2007
Debris	
Acenaphthene	7,600 JD
Acenaphthylene	1,300 JD
Anthracene	19,000 D
Benzo(a)anthracene	38,000 D
Benzo(a)pyrene	30,000 D
Benzo(b)fluoranthene	41,000 D
Benzo(g,h,i)perylene	17,000 D
Benzo(k)fluoranthene	15,000 D
Chrysene	35,000 D
Dibenzo(a,h)anthracene	5,300 JD
Dibenzofuran	6,200 JD
Fluoranthene	94,000 D
Fluorene	7,300 JD
Indeno(1,2,3-cd)pyrene	16,000 D
Naphthalene	7,000 JD
Phenanthrene	73,000 D
Pyrene	55,000 JD
Arsenic	291
Barium	540 J
Cadmium	16.3 J
Copper	329 J
Lead	70,100 J
Mercury	2.9 J
Zinc	14,000
TCLP-Lead	1,030 D

DS-09	9/12/2007
Debris	
Anthracene	1,200 D
Benzo(a)anthracene	4,100 D
Benzo(a)pyrene	3,700 D
Benzo(b)fluoranthene	5,200 D
Benzo(g,h,i)perylene	2,000 D
Benzo(k)fluoranthene	1,900 D
Chrysene	4,100 D
Dibenzo(a,h)anthracene	630 JD
Fluoranthene	10,000 D
Indeno(1,2,3-cd)pyrene	1,900 D
Phenanthrene	4,000 D
Pyrene	5,600 D
Arsenic	125
Barium	2.570 J
Cadmium	13.4 J
Lead	74,300 J
TCLP-Lead	395 D

DS-08	9/12/2007
Debris	
Benzo(b)fluoranthene	3,300 JD
Chrysene	2,700 JD
Fluoranthene	3,000 JD
Phenanthrene	1,900 JD
Pyrene	2,200 JD
Arsenic	184
Barium	2,570 J
Cadmium	22.5 J
Copper	6,120 J
Lead	56,500 J
Mercury	4.4 J
TCLP-Lead	75.5 D

DS-13	9/12/2007
Debris	
Acenaphthylene	970 J
Anthracene	1,500 J
Benzo(a)anthracene	5,200
Benzo(a)pyrene	3,100
Benzo(b)fluoranthene	6,000
Benzo(g,h,i)perylene	1,800
Benzo(k)fluoranthene	2,700
Chrysene	6,100
Dibenzo(a,h)anthracene	640 J
Dibenzofuran	460 JD
Fluoranthene	18,000
Indeno(1,2,3-cd)pyrene	1,800
Phenanthrene	8,200
Pyrene	7,400
Arsenic	44.0
Lead	75,000 J
Mercury	11.7 J
TCLP-Lead	99.4 D

120 0 120
SCALE: 1"=120'

HONEYWELL INTERNATIONAL INC.
NIAGARA FALLS, NEW YORK

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EA DEBRIS SAMPLE RESULTS DETECTED ABOVE COMMERCIAL SCOs AND TCLP STANDARDS

Figure: 7

7

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DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 5-21-2012

LEGEND

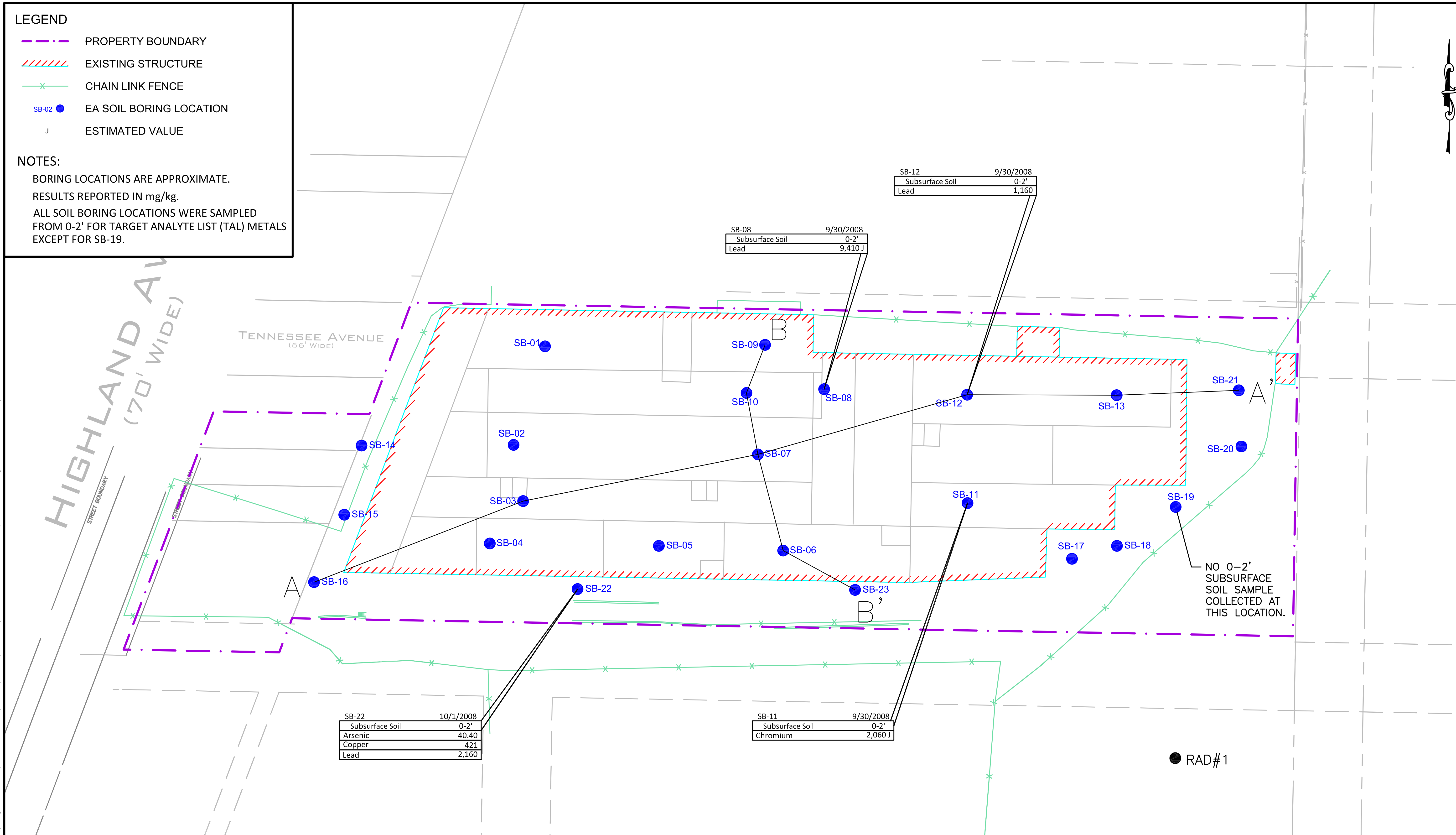
- PROPERTY BOUNDARY
- EXISTING STRUCTURE
- CHAIN LINK FENCE
- SB-02 ● EA SOIL BORING LOCATION
- J ESTIMATED VALUE

NOTES:

BORING LOCATIONS ARE APPROXIMATE.

RESULTS REPORTED IN mg/kg.

ALL SOIL BORING LOCATIONS WERE SAMPLED FROM 0-2' FOR TARGET ANALYTE LIST (TAL) METALS EXCEPT FOR SB-19.



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EA SUBSURFACE SOIL SAMPLE RESULTS DETECTED ABOVE COMMERCIAL SCOs AND CROSS SECTION LOCATIONS

Figure: 8

8

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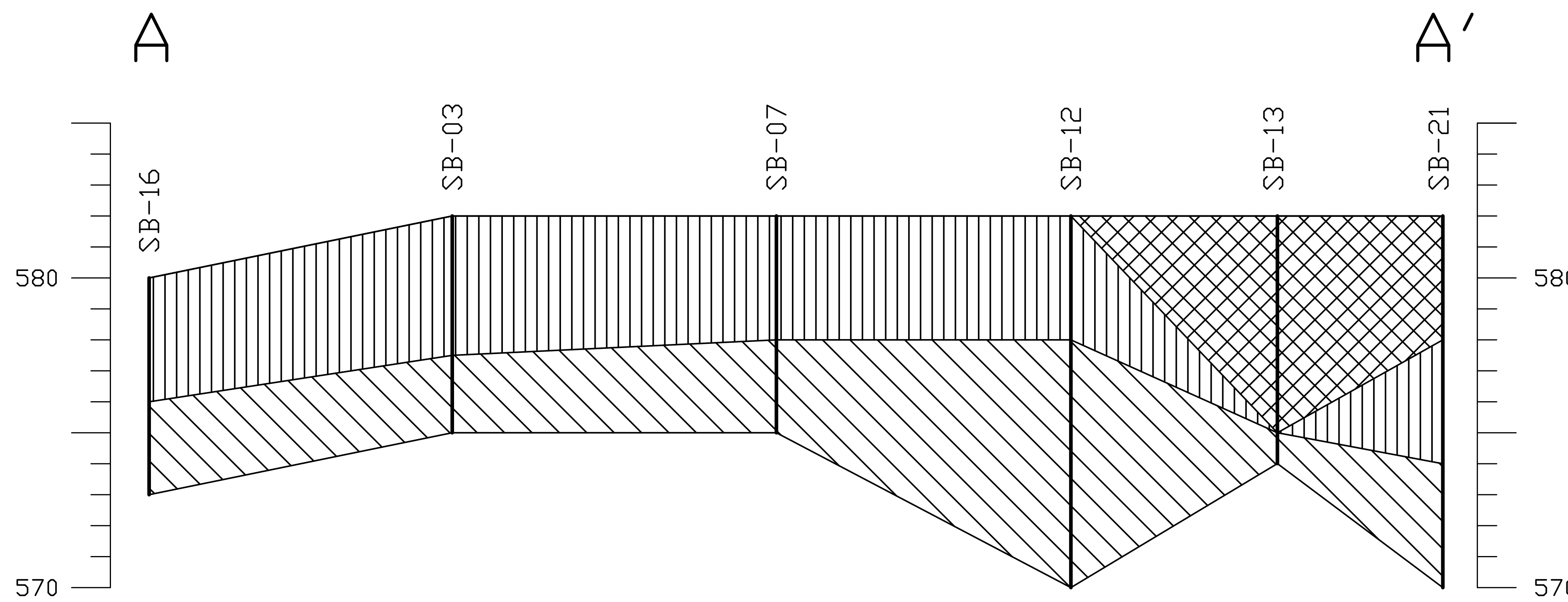
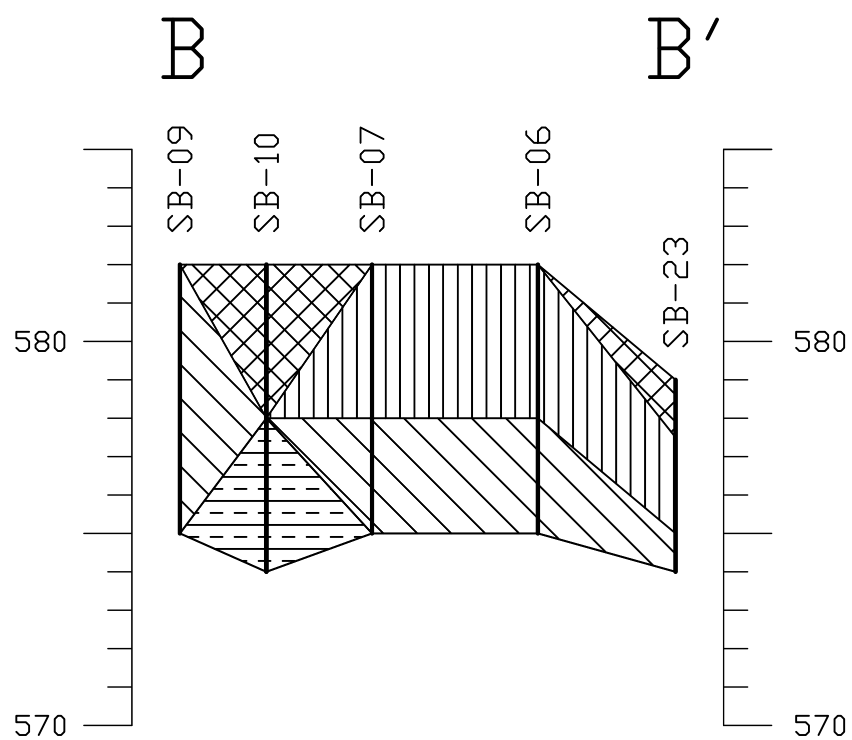
CROSS SECTION A-A'

HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=5'





CROSS SECTION B-B'

HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=5'

LEGEND

SOIL BORING LOCATION - BACKFILLED

FILL-SILT, GRAVEL, SAND, LOCALIZED BRICK, NOT SPECIFIED

SILT-BROWN, DENSE, LOCALIZED FINE SAND, CLAY, GRAVEL

CLAY-BROWN TO GRAY, LOCALIZED DENSE, MOTTLING, ORGANICS, STAINING, ODOR, MOIST TO WET

SILTY CLAY-BROWN, DENSE

HONEYWELL INTERNATIONAL, INC.
NIAGARA FALLS, NEW YORK

Project No.: 3410110832

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CROSS SECTIONS A-A' AND B-B'

Figure: 9

9

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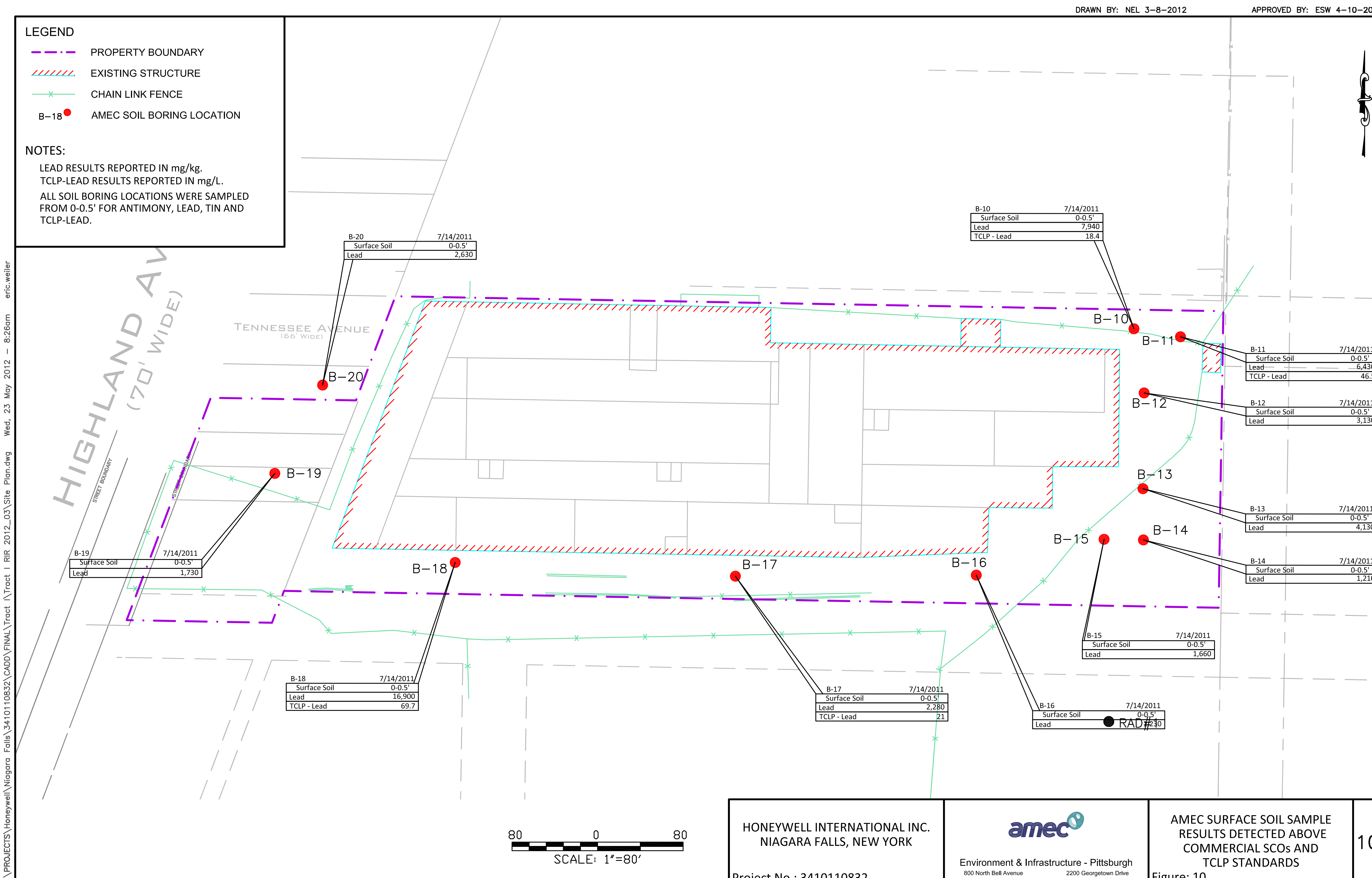

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Project No.: 3410110832

amec

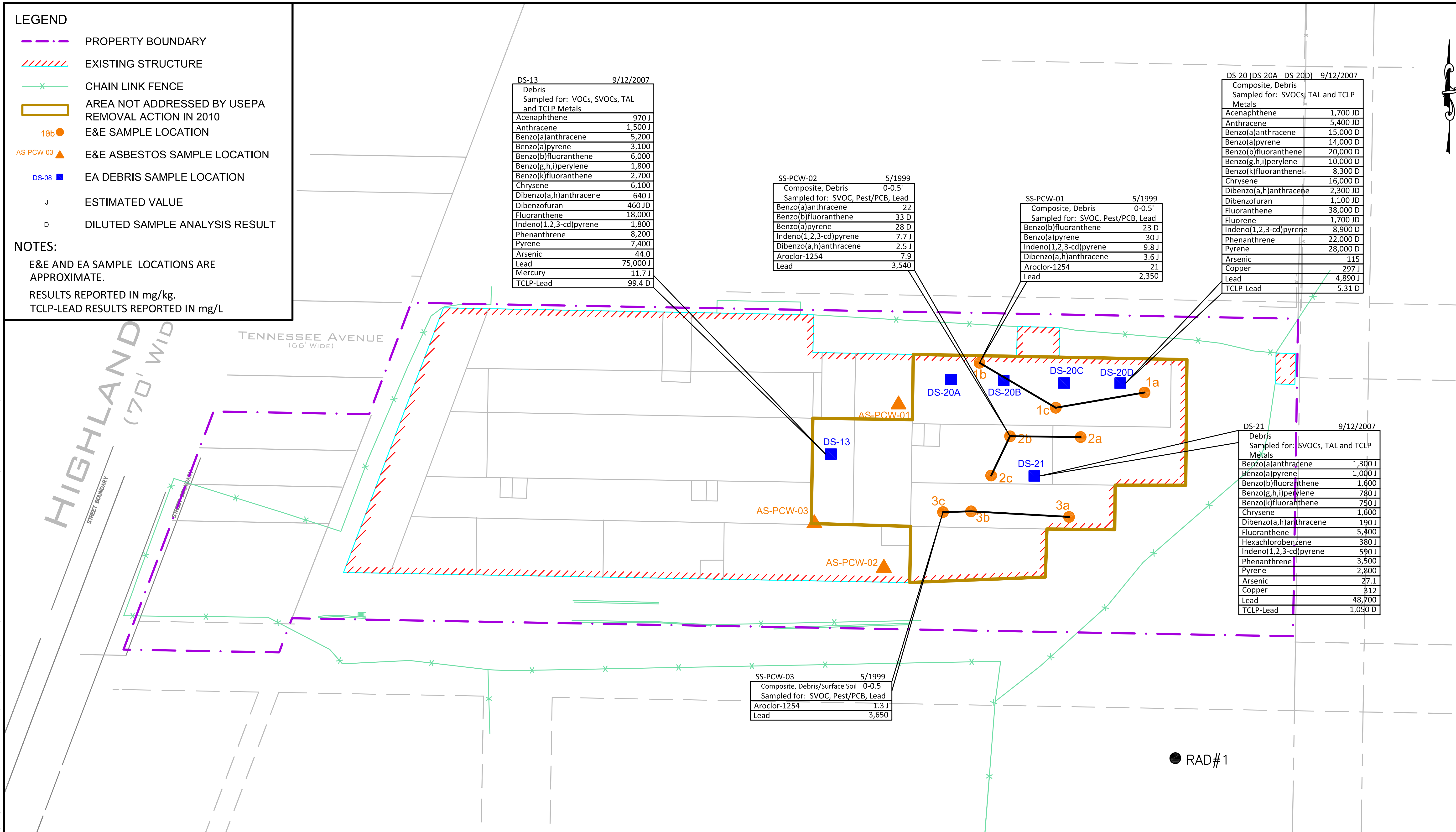
Environment & Infrastructure - Pittsburgh
800 North Bell Avenue, Carnegie, Pennsylvania 15106
2200 Georgetown Drive, Sewickley, Pennsylvania 15143

AMEC SURFACE SOIL SAMPLE RESULTS DETECTED ABOVE COMMERCIAL SCOs AND TCLP STANDARDS

Figure: 10

10

DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 4-10-2012



DS-13 9/12/2007

Debris Sampled for: VOCs, SVOCs, TAL and TCLP Metals	
Acenaphthene	970 J
Anthracene	1,500 J
Benzo(a)anthracene	5,200
Benzo(a)pyrene	3,100
Benzo(b)fluoranthene	6,000
Benzo(g,h,i)perylene	1,800
Benzo(k)fluoranthene	2,700
Chrysene	6,100
Dibenzo(a,h)anthracene	640 J
Dibenzofuran	460 JD
Fluoranthene	18,000
Indeno(1,2,3-cd)pyrene	1,800
Phenanthrene	8,200
Pyrene	7,400
Arsenic	44.0
Lead	75,000 J
Mercury	11.7 J
TCLP-Lead	99.4 D

SS-PCW-02 5/1999

Composite, Debris Sampled for: SVOC, Pest/PCB, Lead	0-0.5'
Benzo(a)anthracene	22
Benzo(b)fluoranthene	33 D
Benzo(a)pyrene	28 D
Indeno(1,2,3-cd)pyrene	7.7 J
Dibenzo(a,h)anthracene	2.5 J
Aroclor-1254	7.9
Lead	3,540

SS-PCW-01 5/1999

Composite, Debris Sampled for: SVOC, Pest/PCB, Lead	0-0.5'
Benzo(b)fluoranthene	23 D
Benzo(a)pyrene	30 J
Indeno(1,2,3-cd)pyrene	9.8 J
Dibenzo(a,h)anthracene	3.6 J
Aroclor-1254	21
Lead	2,350

DS-20 (DS-20A - DS-20D) 9/12/2007

Composite, Debris Sampled for: SVOCs, TAL and TCLP Metals	
Acenaphthene	1,700 JD
Anthracene	5,400 JD
Benzo(a)anthracene	15,000 D
Benzo(a)pyrene	14,000 D
Benzo(b)fluoranthene	20,000 D
Benzo(g,h,i)perylene	10,000 D
Benzo(k)fluoranthene	8,300 D
Chrysene	16,000 D
Dibenzo(a,h)anthracene	2,300 JD
Dibenzofuran	1,100 JD
Fluoranthene	38,000 D
Fluorene	1,700 JD
Indeno(1,2,3-cd)pyrene	8,900 D
Phenanthrene	22,000 D
Pyrene	28,000 D
Arsenic	115
Copper	297 J
Lead	4,890 J
TCLP-Lead	5.31 D

DS-21 9/12/2007

Debris Sampled for: SVOCs, TAL and TCLP Metals	
Benzo(a)anthracene	1,300 J
Benzo(a)pyrene	1,000 J
Benzo(b)fluoranthene	1,600
Benzo(g,h,i)perylene	780 J
Benzo(k)fluoranthene	750 J
Chrysene	1,600
Dibenzo(a,h)anthracene	190 J
Fluoranthene	5,400
Hexachlorobenzene	380 J
Indeno(1,2,3-cd)pyrene	590 J
Phenanthrene	3,500
Pyrene	2,800
Arsenic	27.1
Copper	312
Lead	48,700
TCLP-Lead	1,050 D

SS-PCW-03 5/1999

Composite, Debris/Surface Soil Sampled for: SVOC, Pest/PCB, Lead	0-0.5'
Aroclor-1254	1.3 J
Lead	3,650

HONEYWELL INTERNATIONAL INC.
NIAGARA FALLS, NEW YORK

Project No.: 3410110832

amec

Environment & Infrastructure - Pittsburgh
800 North Bell Avenue Carnegie, Pennsylvania 15106
2200 Georgetown Drive Sewickley, Pennsylvania 15143

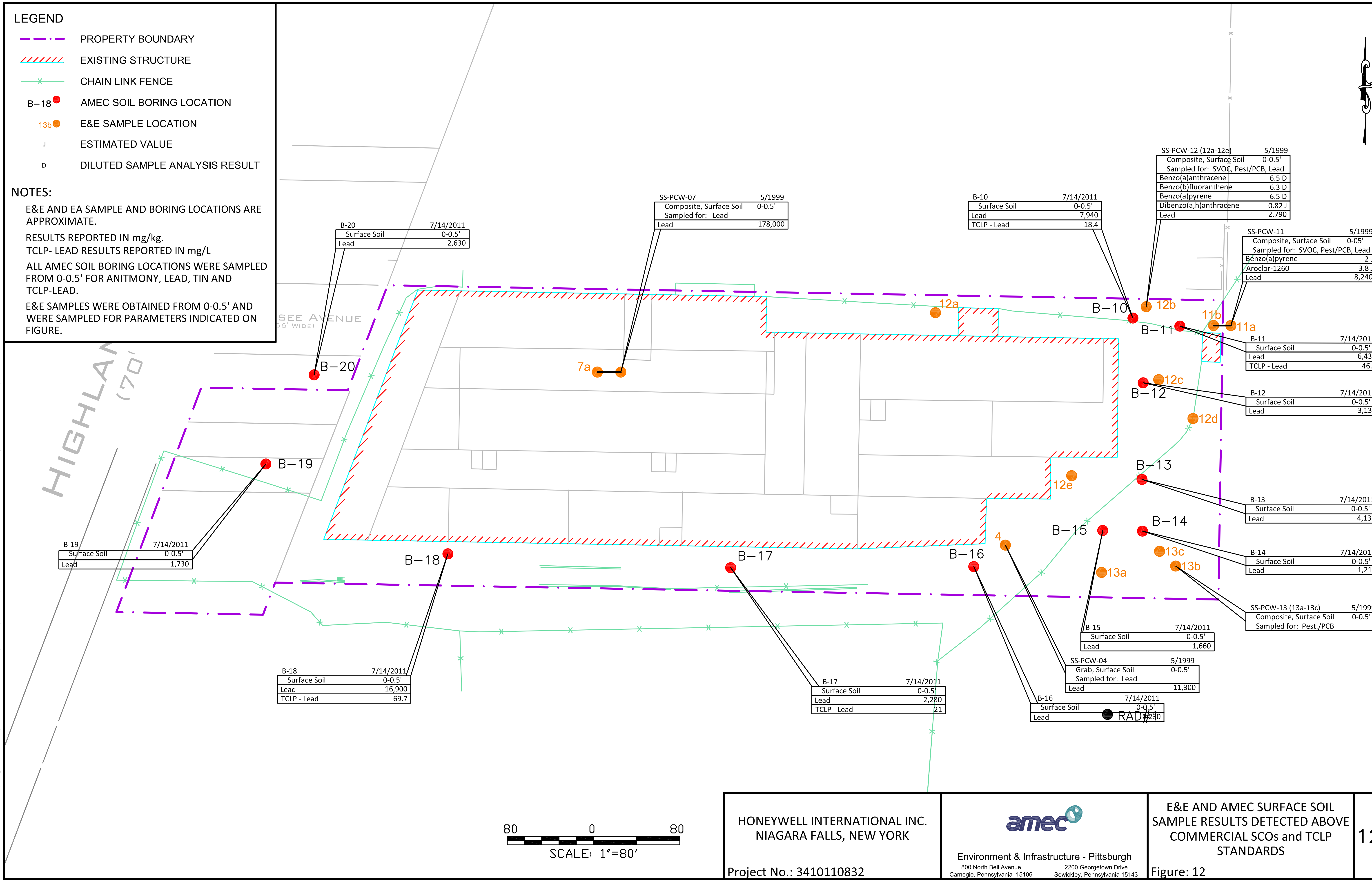
E&E AND EA DEBRIS SAMPLE RESULTS DETECTED ABOVE COMMERCIAL SCOs AND TCLP STANDARDS (AREA NOT ADDRESSED BY USEPA)

Figure: 11

11

P:\PROJECTS\Honeywell\Niagara Falls\3410110832\CADD\FINAL\Tract I\Tract I RIR 2012_03\Site Plan.dwg Wed, 23 May 2012 - 8:26am eric.weiler

DRAWN BY: NEL 3-8-2012 APPROVED BY: ESW 4-10-2012



HONEYWELL INTERNATIONAL INC.
NIAGARA FALLS, NEW YORK

Project No.: 3410110832

amec

Environment & Infrastructure - Pittsburgh
800 North Bell Avenue, Carnegie, Pennsylvania 15106
2200 Georgetown Drive, Sewickley, Pennsylvania 15143

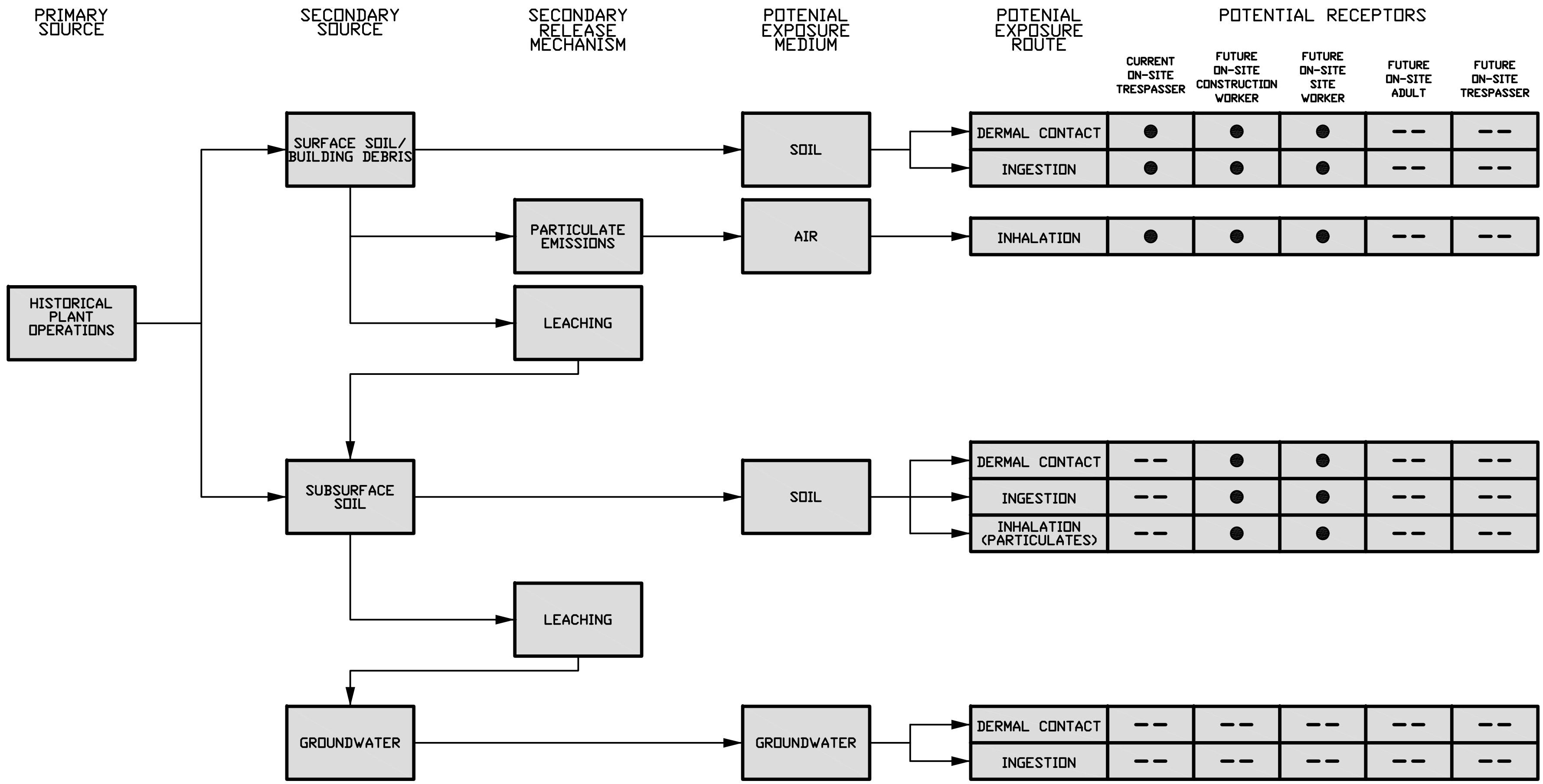
E&E AND AMEC SURFACE SOIL SAMPLE RESULTS DETECTED ABOVE COMMERCIAL SCOs and TCLP STANDARDS

Figure: 12

12

P:\PROJECTS\Honeywell\Niagara Falls\3410110832\CADD\FINAL\Tract I\Tract I RIR 2012_03\Site Plan.dwg Wed, 23 May 2012 - 8:27am eric.weiler

DRAWN BY: NEL 3-13-2012 APPROVED BY: ESW 4-10-2012



Medium	Potential Exposure Route	CURRENT ON-SITE TRESPASSER	FUTURE ON-SITE CONSTRUCTION WORKER	FUTURE ON-SITE SITE WORKER	FUTURE ON-SITE ADULT	FUTURE ON-SITE TRESPASSER
SOIL	DERMAL CONTACT	●	●	●	--	--
SOIL	INGESTION	●	●	●	--	--
AIR	INHALATION	●	●	●	--	--
SOIL	DERMAL CONTACT	--	●	●	--	--
SOIL	INGESTION	--	●	●	--	--
SOIL	INHALATION (PARTICULATES)	--	●	●	--	--
GROUNDWATER	DERMAL CONTACT	--	--	--	--	--
GROUNDWATER	INGESTION	--	--	--	--	--

● INDICATES POTENTIALLY COMPLETE EXPOSURE PATHWAY

-- INDICATES INCOMPLETE EXPOSURE PATHWAY BASED ON CURRENT SITE USE AND THE ANTICIPATED FUTURE COMMERCIAL USE SCENARIO

HONEYWELL INTERNATIONAL INC.
NIAGARA FALLS, NEW YORK

Project No.: 3410110832

amec

Environment & Infrastructure
800 North Bell Avenue, Suite 200
Pittsburgh, Pennsylvania 15106

CONCEPTUAL SITE MODEL

Figure: 13

13

APPENDIX A

USEPA Pollution Reports

EPA to Begin Clean up in Power City Warehouse Buildings in Niagara Falls, New York

Community Update **April 2010**

TIMELINE:

- EPA has fenced and secured the former Power City Warehouse and former Tract 2 buildings in Niagara Falls, New York. Securing activities started at both buildings in October 2009 and were completed in December 2009
- EPA cleaned up PCB contamination within the Tract 2 building, completing the work in February 2010
- Cleanup work will begin for the Power City Warehouse building in May 2010

OUR GOAL IS TO KEEP YOU INFORMED

Public participation is essential to the success of EPA's community involvement program. If you have any questions regarding EPA's cleanup activities at this site, please contact :

Mike Basile, EPA Community Involvement Coordinator, at **(716) 551-4410,** or by e-mail to:

basile.michael@epa.gov

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has begun clean up actions within the former Power City Warehouse building, located at 3123 Highland Avenue, Niagara Falls, New York.

CURRENT ACTIVITIES

EPA has obtained funding to clean up the former Power City Warehouse building. The clean up work will begin in May 2010 and will be completed in the fall of 2010. The cleanup work will involve the proper removal of asbestos, lead contaminated sediment and debris within the building, and removal of any containers of hazardous materials on the property. In addition, certain sections of collapsed building areas will be removed or stabilized. EPA will oversee the cleanup work and will monitor the air to ensure the cleanup is being performed in a safe manner for the community.

Project trailers will be brought to the site in May 2010. EPA will use the trailers to support the cleanup activities. Residents may visit the EPA project trailer to inquire about the cleanup actions that will occur.

PREVIOUS ACTIVITIES

EPA has completely secured both the Power City Warehouse and Tract 2 buildings. Warning signs are posted to prevent access. EPA also properly removed polychlorinated biphenyls (PCBs) within the Tract 2 building.

HISTORICAL BACKGROUND

The Power City Warehouse site is the location of a former battery manufacturer and is no longer in operation. The warehouse building is located at 3123 Highland Avenue and covers approximately 400,000 square feet. The City of Niagara Falls is the owner of this site building and with the New York State Department of Environmental Conservation (NYSDEC), requested that EPA secure the site and evaluate the need for a cleanup in the building.

The Tract 2 site is a the location of a former printing company and consists of an underground parking garage located at 3001 Highland Avenue and extends along the southern border of Beech Avenue and a building in the rear of the Power City Warehouse site. The City of Niagara Falls owns this property and along with the NYSDEC, requested that EPA secure the site and evaluate if a cleanup is needed within the former parking garage and rear building.

United States Environmental Protection Agency
Region II
POLLUTION REPORT

Date: Thursday, May 06, 2010
From: Kevin Matheis, OSC

Subject: Initial POLREP Power City Warehouse Cleanup Actions
Power City Warehouse
3123 Highland Avenue, Niagara Falls, NY
Latitude: 43.0659370
Longitude: -79.0247790

POLREP No.:	1	**Site #:**	A224
Reporting Period:	03/30/2010 - 05/06/2010	**D.O. #:**	084
Start Date:	5/5/2010	**Response Authority:**	CERCLA
Mob Date:	5/4/2010	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	NYC200400281	**Contract #**	EP-W-04-055
RCRIS ID #:	NYC200400281		

Site Description

The Power City Warehouse Site is located at 3123 Highland Avenue, Niagara Falls, New York. According to information provided by the NYSDEC and the City of Niagara Falls, the Power City Warehouse was used as a battery manufacturing facility. In or about 1910, U.S. Light and Heat began automotive, truck, and tractor battery manufacturing. The Prestolite Company acquired the facility in the mid-1960's and retooled the operation for manufacturing of hard rubber battery cases, filling of batteries with sulfuric acid, and subsequent battery charging.

Operations at the facility ceased in the mid-1980's; the Site has been vacant since that time. In October 1989, the City of Niagara Falls obtained ownership of the Site in a tax foreclosure.

Of the 4-acre Site, most of the property is covered by a site building. In May, 2009, The New York State Department of Environmental Conservation (NYSDEC) referred the Site to EPA for consideration of a cleanup. The subject of the NYSDEC referral was the threat posed by extremely high levels of lead contamination found in several building sumps, suspected asbestos found throughout the site building, and the overall poor building conditions that could contribute to a release of hazardous substances from the Site. The site building has multiple floors and covers approximately 400,000 square feet. This building is comprised of assorted construction types that are in various degrees of disrepair. The building exterior is constructed of brick with wooden roofs and trusses, all of which have deteriorated due to neglect and age. The central portion of the site building is constructed of concrete that is structurally sound. The roof over the area is intact and shows no evidence of structural stress.

As a result, EPA performed an assessment of the Site and approved funding in an Action Memorandum ter dated September 25, 2009 to secure the Site property for direct access. EPA initiated a fencing and security action at the site that was completed on November 19, 2009.

EPA approved a second Action Memorandum on March 30, 2010. This Action Memorandum provides funding to address the cleanup of lead, asbestos, and other hazardous substances within the Site building.

Current Activities

1. EPA mobilized its cleanup contractor to the Site on May 4, 2010. An on-site meeting was held with the cleanup contractor response manager on May 5, 2010, marking the start date for the cleanup.

2. EPA is in the process of establishing site command post and support operations. Site preparation for trailers, electric installation, and other support functions are underway. Trailers are expected to be on-site around May 14.

3. EPA participated in a public meeting held on April 26 in conjunction with the NYSDEC. The community was informed about EPA's forthcoming actions at the Site. EPA also mailed fact sheets to mailing lists provided by the NYSDEC. On May 6, 2010, EPA also went door-to-door to the surrounding community and delivered information sheets about the cleanup. Over 100 residences were provided with site information, in addition to the residents that received information sheets from EPA mailings. Key elected officials were also provided with EPA information sheets.

4. EPA met with the adjacent business to discuss cleanup and equipment logistics to ensure the business operations were not disrupted.

Planned Removal Actions

Actions approved in the March 30, 2010 Action Memorandum include the following:

• EPA will abate the asbestos. Asbestos abatement will involve the use of glove bags, containment structures, elevated boom lifts and asbestos encapsulant. EPA will remove asbestos that is in poor condition. In the event some of the asbestos is in good condition, EPA will consider the use of asbestos encapsulant. Use of encapsulant will seal and bind the asbestos fibers that are contained within the pipe wrap that may become friable. Encapsulation may be necessary when asbestos is in good condition so that cleanup resources can focus on the poor condition asbestos.

• EPA will remove the lead-contaminated debris impediments from within the site buildings in order to limit releases of hazardous substances and to facilitate access to other areas of the building. This removal will be accomplished by physical sweeping of the materials. Any movement of the material will be accomplished by wet sweeping techniques or using vacuums with High Efficiency Particulate Air (HEPA) filters as needed. Materials accumulated from the cleanup will be containerized, pending sampling and off-site disposal.

• Upon completion of the removal of lead contaminated debris from the floor areas, the sumps will then be excavated and cleaned of lead sediments and debris. Sumps that are flooded will be pumped and the water will be containerized or discharged directly into the sewer system, depending upon sampling results and coordination with the City of Niagara Falls Sewer Authority.

• The basement area will be pumped, water disposed as appropriate, and the lead contaminated debris will be removed from the floor areas.

• The collapsed building area will be wetted and debris will be excavated, sorted as appropriate, and disposed as ACM debris.

• Air monitoring for fugitive dust emissions will also be conducted within the site buildings during the lead and asbestos removal process.

• The building will be investigated for the presence of other drums and containers of hazardous materials that may be within the site buildings. These may include maintenance chemicals, paints, unknown materials within containers, empty drums and spent chemical containers. These materials will be placed into a consolidation area and separated by hazard classes. This container collection will also include PCB light ballasts, metal-halide bulbs and lamps, and any mercury-containing switches.

• EPA will sample the accumulated waste materials as necessary. Any sampling conducted will follow EPA Quality Assurance/Quality Control (QA/QC) protocol. Disposal will occur for these materials once the container collection is complete.

• Materials generated from the lead contaminated debris and sediment removal, waste water disposal, and the asbestos abatement will be sampled as appropriate, placed into Department of Transportation-approved shipping containers, and sent off-site for disposal at a facility in compliance with EPA's Off-Site Disposal Policy. EPA is anticipating the generation of over 1,000 cubic yards of asbestos waste, lead contaminated debris, and lead contaminated sediment.

• Upon completion of the cleanup, the Site will be secured and the appropriate City authorities will be notified of the completion of the cleanup.

Next Steps

1. EPA will continue with installation of electric and phone service to site trailers. Site security for after-hours work will begin when trailers and equipment are on-site.

2. Site support functions for cleanup personnel entering and exiting the building will begin. This will include decontamination areas, making a safe passage-way into the Site buildings for entry and exit, and securing of unsafe conditions within the site buildings. Unsafe conditions include openings in floor areas where sewer lids were removed, areas on second and third floors that have floor and wall openings that are unsecured, areas of collapsed building areas that are off-limits, and shoring of beams that are currently compromised.

3. Asbestos cleanup contractors will be contacted for potential subcontracting opportunities. Cleanup work for the asbestos abatement will begin after subcontractor selection and site preparatory work is completed. Most likely time-frame to begin asbestos abatement will be June.

4. EPA's technical contractor is preparing quality assurance project plans, procuring a laboratory for air sampling operations, and making preparations for independent oversight of asbestos cleanup operations.

Key Issues

None.

United States Environmental Protection Agency
Region II
POLLUTION REPORT

Date: Friday, June 11, 2010
From: Kevin Matheis, OSC

Subject: Phase 2 Actions
Power City Warehouse
3123 Highland Avenue, Niagara Falls, NY
Latitude: 43.0659370
Longitude: -79.0247790

POLREP No.:	2	**Site #:**	A224
Reporting Period:	05/06/10 - 06/11/10	**D.O. #:**	084 and 001
Start Date:	5/5/2010	**Response Authority:**	CERCLA
Mob Date:	5/4/2010	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	NYC200400281	**Contract #**	EP-W-04-055 and EP-S2-10-01
RCRIS ID #:	NYC200400281		

Site Description
See POLREP 1, dated 05/06/10

Current Activities

1. EPA's cleanup contractor (AECOM) mobilized personnel to begin site set-up operations. Site area was prepared, the area for support zone functions was fenced, and the electric was installed.

2. EPA's cleanup contractor (AECOM), provided personnel and equipment to enhance safety within the site building. Areas of open floor pits were covered, collapsed building sections were placed off-limits to personnel, several sagging beams were reinforced with posts, and site entry / exit areas were prepared.

3. EPA's cleanup contractor (AECOM), demolished a partial garage structure on the southwestern corner of the property. The concrete pad beneath the removed structure was the former shipping and receiving loading ramp, and will be used for site entry and exit.

4. During the demolition of the partial structure, EPA's technical contractor (Weston Solutions), provided air monitoring for asbestos and RCRA metals (which includes lead and arsenic). Air monitoring results were non-detect for the metals and asbestos. The structure did not contain asbestos, but data was collected for background purposes.

5. EPA's technical contractor also collected background samples inside of the site building and

around the site perimeter for RCRA metals (includes lead and arsenic), and for asbestos. All background samples were non-detect for metals and asbestos fibers. Background samples were collected when no activities were being performed in the site buildings.

6. EPA's cleanup contractor (AECOM), is a Region 2 contractor whose present contractor expires with EPA on June 26, 2010. As a result, EPA has been transitioning to a new Region 2 EPA contractor (KEMRON).

7. EPA's cleanup contractor (KEMRON), is transitioning operations with AECOM, and all utilities and support functions are being put into the new contract.

8. Site security is in place at the site during hours that the cleanup contractor is non-working on-site.

Planned Removal Actions

1. Site asbestos abatement operations will begin the week on June 14. Operations will involve the setup of decontamination trailer, entry exit zones, and mobilization of equipment and supplies for abatement.

2. The week of June 21, asbestos abatement personnel will begin the removal of asbestos in the site buildings. EPA's technical contractor (Weston Solutions), will provide third-party asbestos air monitoring in accordance with New York State Department of Labor requirements, to the extent practical. Asbestos samples will be analyzed to monitor the contractor performance and daily reports will be prepared. In the unlikely event of any exceedances of site action levels for asbestos, additional engineering controls will be implemented to address problems immediately.

3. During the week of June 14, EPA's cleanup contractor (KEMRON) will mobilize personnel to begin lead cleanup operations in areas where asbestos is not present. EPA's technical contractor will provide air monitoring for appropriate RCRA metals. Lead and arsenic will be monitored in the work zones. In the unlikely event that site action levels are exceeded, then additional engineering controls will be implemented during the cleanup operations. Daily reports will also be prepared for air monitoring for metals.

Next Steps

Debris contaminated with lead and asbestos are being cleaned up by EPA's cleanup contractor with third-party technical oversight. Operations will continue until completed.

Key Issues

None

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor AECOM	$500,000.00	$80,000.00	$420,000.00	84.00%
ERRS - Cleanup Contractor KEMRON	$500,000.00	$2,000.00	$498,000.00	99.60%

RST Contractor - Weston Solutions	$100,000.00	$20,000.00	$100,000.00	80.00%
Intramural Costs				
USEPA - Direct	$100,000.00	$10,000.00	$90,000.00	90.00%
Total Site Costs	$1,200,000.00	$112,000.00	$1,088,000.00	90.67%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.org/powercity

United States Environmental Protection Agency
Region II
POLLUTION REPORT

Date: Tuesday, July 20, 2010
From: Kevin Matheis, OSC

Subject: Phase 2 Actions
Power City Warehouse
3123 Highland Avenue, Niagara Falls, NY
Latitude: 43.0659370
Longitude: -79.0247790

POLREP No.:	3	**Site #:**	A224
Reporting Period:	06/11/10 - 07/20/10	**D.O. #:**	084 and 001
Start Date:	5/5/2010	**Response Authority:**	CERCLA
Mob Date:	5/4/2010	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	NYC200400281	**Contract #**	EP-W-04-055 and EP-S2-10-01
RCRIS ID #:	NYC200400281		

Site Description
See POLREP 1, dated 05/06/10

Current Activities

1. Cleanup of lead contaminated sediment and debris continues in the warehouse. Non-hazardous debris, which is an impediment to the cleanup of the lead contaminated debris and sediment, is being separated from the contaminated materials. The non-regulated debris is being placed into roll-off containers for disposal. A total of 60 cubic yards of debris has been shipped off-site for disposal to date. Debris is being removed from the site for disposal at Modern Disposal, located in Model City, New York.

2. An asbestos subcontractor was selected and work on asbestos abatement will begin the week of July 26. The abatement work will involve the removal of asbestos from floor areas, overhead piping, and asbestos that had fell to the ground. Asbestos will be encapsulated, wrapped, glove-bagged or the pipe will be cut intact. All asbestos will be labeled, double-bagged, and staged for future disposal. Asbestos work should be completed by the end of August.

3. The third-floor area has been completely cleaned, and work is progressing on the main floor and the second floor areas. A water sample has been collected from the basement area and submitted for disposal analysis. Based upon the sampling results, the water will be disposed. EPA has made contact with the City of Niagara Falls waste water treatment plant, and if the water is acceptable for discharge into the sewer system, EPA will obtain a permit for discharge.

4. During the cleanup work, EPA's technical contractor (Weston Solutions), continues to provide air monitoring for asbestos and lead. Air monitoring results to date have been essentially non-detect for lead and asbestos, and all other RCRA metals. Any detectable levels of metals have been well-below the site action levels. The data that is available is prepared in daily reports and are available in the EPA web site in the documents section at www.epaosc.net/powercity.

5. Several floor samples were collected from the floor areas to ensure asbestos was not present in the lead-debris cleanup areas. These samples were non-detect for asbestos.

6. The site transition to a new EPA contractor has been completed. Kemron is the EPA cleanup contractor.

8. Site security is in place at the site during hours that the cleanup contractor is non-working on-site.

Planned Removal Actions
1. Additional non-hazardous debris will be shipped for off-site disposal.

2. Lead contaminated debris will continue to be remediated and disposal of waste materials is forthcoming.

2. Asbestos abatement will continue and should be completed by the end of August. EPA will continue to provide a contractor for third-party air monitoring. EPA's technical contractor (Weston Solutions), will provide third-party asbestos air monitoring in accordance with New York State Department of Labor requirements, to the extent practical. Asbestos samples will be analyzed to monitor the contractor performance and daily reports will be prepared. In the unlikely event of any exceedances of site action levels for asbestos, additional engineering controls will be implemented to address problems immediately.

3. Based upon the sampling results of the basement water, the discharge and disposal of the basement water will commence. EPA anticipates obtaining a permit for discharge from the City of Niagara Falls sewer system.

Next Steps
Debris contaminated with lead and asbestos are being cleaned up by EPA's cleanup contractor with third-party technical oversight. Operations will continue until completed.

Key Issues
None

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor AECOM	$500,000.00	$80,000.00	$420,000.00	84.00%
ERRS - Cleanup Contractor	$500,000.00	$200,000.00	$300,000.00	60.00%

KEMRON				
RST Contractor - Weston Solutions	$250,000.00	$50,000.00	$250,000.00	80.00%
Intramural Costs				
USEPA - Direct	$100,000.00	$25,000.00	$75,000.00	75.00%
Total Site Costs	$1,350,000.00	$355,000.00	$995,000.00	73.70%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.org/powercity

United States Environmental Protection Agency
Region II
POLLUTION REPORT

Date: Friday, August 13, 2010
From: Kevin Matheis, OSC

Subject: POLREP 4
Power City Warehouse
3123 Highland Avenue, Niagara Falls, NY
Latitude: 43.0659370
Longitude: -79.0247790

POLREP No.:	4	**Site #:**	A224
Reporting Period:	07/21/10 - 08/13/10	**D.O. #:**	084 and 001
Start Date:	5/5/2010	**Response Authority:**	CERCLA
Mob Date:	5/4/2010	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	NYC200400281	**Contract #**	EP-W-04-055 and EP-S2-10-01
RCRIS ID #:	NYC200400281		

Site Description
See POLREP 1, dated 05/06/10

Current Activities

1. Cleanup of lead contaminated sediment and debris continues in the warehouse. Non-hazardous debris, which is an impediment to the cleanup of the lead contaminated debris and sediment, is being separated from the contaminated materials. The non-regulated debris is being placed into roll-off containers for disposal. A total of 180 cubic yards of debris has been shipped off-site for disposal to date. Debris is being removed from the site for disposal at Modern Disposal, located in Model City, New York.

2. Asbestos abatement was completed on August 12. A total of 1294 linear feet of pipe insulation were abated. Floor areas contaminated with asbestos were also HEPA vacuumed and debris was bagged and wetted, per asbestos handling regulations. A total of 3 roll-off trucks of asbestos materials were shipped off-site for disposal at Republic landfill, located in Niagara Falls, NY.

3. Cleanup work on the second and third-floor production areas are complete. Cleanup work is proceeding in the main floor of the warehouse. Shipment of the accumulated lead waste and debris will occur when disposal facility approvals are received.

4. Analytical data from the sampling of the basement water has been received, and a permit for discharge into the Niagara Falls waste water treatment plant is being sought. Pending NYSDEC

and Niagara Falls approval, the basement water will be pumped and discharged in accordance with the permit.

5. During the cleanup work, EPA's technical contractor (Weston Solutions), continues to provide air monitoring for asbestos and lead. Air monitoring results to date have been essentially non-detect for lead and asbestos, and all other RCRA metals. Any detectable levels of metals have been well-below the site action levels. The data that is available is prepared in daily reports and are available in the EPA web site in the documents section at www.epaosc.net/powercity.

5. Several floor samples were collected from the building debris to better evaluate the asbestos content within area J of the main production building.

6. Site security is in place at the site during hours that the cleanup contractor is non-working on-site.

Planned Removal Actions

1. Additional non-hazardous debris will be shipped for off-site disposal.

2. Lead contaminated debris will continue to be remediated and disposal of waste materials is forthcoming.

3. Upon completion of the discharge of basement water, cleanup of the lead debris and sediment will commence.

4. Removal of the building debris containing asbestos is forthcoming. Disposal approvals at the facility are forthcoming.

Next Steps

Continue with the cleanup of the lead contaminated trenches and sumps, begin cleanup of the basement area once the water has been removed, and remove the asbestos contaminated collapsed building area.

Key Issues

The OSC attended a public meeting on August 4. The meeting was held at the Doris Jones Community Resource Center. The meeting was held to provide residents and concerned citizens with information about health affects of lead. The NYSDOH and Niagara County Health Department spoke to health issues. EPA spoke about the progress of the cleanup in the site building.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor AECOM	$500,000.00	$80,000.00	$420,000.00	84.00%
ERRS - Cleanup Contractor KEMRON	$500,000.00	$300,000.00	$200,000.00	40.00%
RST Contractor - Weston				

Solutions	$250,000.00	$90,000.00	$250,000.00	64.00%
Intramural Costs				
USEPA - Direct	$100,000.00	$40,000.00	$60,000.00	60.00%
Total Site Costs	$1,350,000.00	$510,000.00	$840,000.00	62.22%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.org/powercity

United States Environmental Protection Agency
Region II
POLLUTION REPORT

Date: Thursday, September 23, 2010
From: Kevin Matheis, OSC

Subject: POLREP 5
Power City Warehouse
3123 Highland Avenue, Niagara Falls, NY
Latitude: 43.0659370
Longitude: -79.0247790

POLREP No.:	5	**Site #:**	A224
Reporting Period:	08/14/10 - 09/22/10	**D.O. #:**	084 and 001
Start Date:	5/5/2010	**Response Authority:**	CERCLA
Mob Date:	5/4/2010	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	NYC200400281	**Contract #**	EP-W-04-055 and EP-S2-10-01
RCRIS ID #:	NYC200400281		

Site Description
See POLREP 1, dated 05/06/10

Current Activities
1. Cleanup of lead contaminated sediment and debris has been essentially completed. Non-hazardous debris was separated from the hazardous debris and soil and sent off-site in appropriate waste groups. A total of 340 cubic yards of debris has been shipped off-site for disposal to date. Debris is being removed from the site for disposal at Modern Disposal, located in Model City, New York.

2. The lead contaminated debris and soil was containerized and shipped off-site for stabilization and/or macroencapsulation for landfill disposal at a secure chemical disposal facility. A total of 60 cubic yard boxes were shipped off-site to Envirosafe, located in Oregon, Ohio.

3. Work is continuing in the area of the collapsed building debris containing asbestos. The non-hazardous debris was separated from the asbestos-containing building debris and shipped off-site for disposal. The ACM debris was loaded into lined and sealed roll-off containers for disposal at Modern Landfill, located in Model City, NY. A total of 240 cubic yards of asbestos containing debris has been shipped off-site to date.

4. Approval for discharge of the 100,000 gallons of flood water in the basement at the site was

authorized by the City of Niagara Falls POTW. The permit granted to EPA allows for discharge of 25,000 gallons per day. EPA has essentially completed the pumping as of September 22 and cleanup personnel are within the basement of the building performing a cleanup. If rainwater infiltrates the basement prior to the completion of the cleanup, additional pumping of the basement may be required.

5. The basement will be remediated by cleanup personnel. The sediment and debris from the basement will be staged in 55 gallon drums, pending disposal. The debris will be segregated and disposed with the appropriate debris disposal profile.

6. Asbestos abatement was completed on August 12. A total of 1294 linear feet of pipe insulation were abated. Floor areas contaminated with asbestos were also HEPA vacuumed and debris was bagged and wetted, per asbestos handling regulations. A total of 3 roll-off trucks of asbestos materials were shipped off-site for disposal at Republic landfill, located in Niagara Falls, NY.

5. During the cleanup work, EPA's technical contractor (Weston Solutions), continues to provide air monitoring for asbestos and lead. Air monitoring results to date have been essentially non-detect for lead and asbestos, and all other RCRA metals. Any detectable levels of metals have been well-below the site action levels. The data that is available is prepared in daily reports and are available in the EPA web site in the documents section at www.epaosc.net/powercity.

6. Site security is in place at the site during hours that the cleanup contractor is non-working on-site.

7. Paint-related materials, PCB light ballasts, batteries, and mercury switches from the facility have been containerized and are pending disposal.

Planned Removal Actions

1. Cleanup personnel will remove the sediment and debris from the lead-contaminated basement area.

2. Disposal of generated waste materials from basement will occur upon receipt of analytical testing and profiling into waste disposal facilities.

3. Limited asbestos abatement will be completed in areas that were previously inaccessible due to collapsed building structures, which have now been removed.

4. Trenches excavated from the cleanup will be filled with concrete to prevent falling hazards in the site building.

5. Site areas of poor condition buildings will be secured, fenced, and warning signs posted to prevent public access.

Key Issues

AECOM, the previous cleanup contractor, has nearly finished the billing EPA for the cleanup. A total of $375,000 was de-obligated from the cleanup contract for the site.

An additional $447,000 was obligated into the current cleanup contractor project ceiling.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor AECOM	$125,000.00	$110,000.00	$15,000.00	12.00%
ERRS - Cleanup Contractor KEMRON	$997,000.00	$650,000.00	$347,000.00	34.80%
RST Contractor - Weston Solutions	$250,000.00	$110,000.00	$140,000.00	56.00%
Intramural Costs				
USEPA - Direct	$100,000.00	$50,000.00	$50,000.00	50.00%
Total Site Costs	$1,472,000.00	$920,000.00	$552,000.00	37.50%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.org/powercity

United States Environmental Protection Agency
Region II
POLLUTION REPORT

Date: Monday, November 15, 2010
From: Kevin Matheis, OSC

Subject: POLREP 6
Power City Warehouse
3123 Highland Avenue, Niagara Falls, NY
Latitude: 43.0659370
Longitude: -79.0247790

POLREP No.:	6	**Site #:**	A224
Reporting Period:	09/23/10 - 11/12/10	**D.O. #:**	084 and 001
Start Date:	5/5/2010	**Response Authority:**	CERCLA
Mob Date:	5/4/2010	**Response Type:**	Time-Critical
Demob Date:	11/9/2010	**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	NYC200400281	**Contract #**	EP-W-04-055 and EP-S2-10-01
RCRIS ID #:	NYC200400281		

Site Description
See POLREP 1, dated 05/06/10

Current Activities

1. All waste generated as a result of cleanup operations has been shipped off-site. On November 10, 21 drums of lead contaminated sludge was shipped to EQ, located in Detroit Michigan for treatment and disposal. This waste material was generated from the cleanup of the basement.

2. Trailers and site equipment have also been demobilized.

3. The basement cleanup operations involved the following operations - Sampling the water, submitting permit application to the CIty of Niagara Falls Water Treatment plant for permission to discharge the water, pumping the 100,000 of water into the system in accordance with the discharge permit, then removal of the contaminated debris, piping, and sediment from the basement.

4. Water was the basement was discharged under a the permit to discharge issued by the Niagara Falls Water Board. Approximately 25,000 gallons of water per day was discharged beginning September 21, and completed on September 29.

5. 20 cubic yards of lead contaminated piping and metal debris was removed from the basement. The contaminated piping was sent off-site to Michigan Disposal, located in Belleville,

Michigan for microencapsulation and landfill disposal.

6. Two additional waste groups of materials were removed from the basement. 35 drums of lead contaminated debris was shipped for stabilization and landfill at Envirosafe, located in Oregon, Ohio. 21 drums of lead contaminated sludge was shipped for treatment and disposal at EQ, located in Detroit, Michigan.

7. Two drums of PCB light ballasts were shipped for disposal at CWM Chemical Services, located in Model City, NY.

8. One cubic yard box of waste paints were shipped for incineration at Ross Incineration, located in Grafton, Ohio.

9. The cleanup of the ACM debris has been completed. The adjacent building is in poor structural condition, but EPA cleanup personnel reached a point where additional building removal will only compound the problem with the structure of the building. The building has been fenced with warning signs, and the owner of the building (the City of Niagara Falls), has been notified and EPA met with Niagara Falls at the site to brief them about the situation.

10. EPA has completed repairs to the perimeter fencing and warning signs have been posted. Windows have been boarded up to accessible window entry areas to the site building.

11. The EPA-OSC held holding a site meeting / open house at the site on 10/20 with the TAG / EJ group from Niagara Falls. The OSC and Buffalo PAD distributed updated information sheets to the surrounding community and to key officials in the area.

11. A media availability session was held on November 4. Fact sheets and a summary of cleanup actions were distributed to attendees. A site tour was also provided.

Planned Removal Actions

1. None at this time.

Next Steps

1. None at this time.

Key Issues

The site task order for Kemron will remain open for several months. The OSC has informed the City of Niagara Falls about the availability of EPA to remove additional waste materials from the building if discovered, but Niagara Falls would need to demolish areas of the facility in order for EPA to further assist. This is due to the dangerous conditions of several building areas. Waste that may require additional cleanup could include additional PCB light ballasts, floor materials contaminated with lead, and friable asbestos materials, if discovered. The site will be closed out in the early summer of 2011.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				

ERRS - Cleanup Contractor AECOM	$125,000.00	$110,000.00	$15,000.00	12.00%
ERRS - Cleanup Contractor KEMRON	$997,000.00	$709,000.00	$288,000.00	28.89%
RST Contractor - Weston Solutions	$250,000.00	$130,000.00	$120,000.00	48.00%
Intramural Costs				
USEPA - Direct	$100,000.00	$70,000.00	$30,000.00	30.00%
Total Site Costs	$1,472,000.00	$1,019,000.00	$453,000.00	30.77%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

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APPENDIX B

TestAmerica Analytical Data Reports (CD)

APPENDIX C

Amec Data Validation Summary Report

DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL – NIAGARA FALLS
NIAGARA, NEW YORK

1.0 INTRODUCTION

Data validation was completed on soil samples collected in July 2011. Samples were analyzed by TestAmerica Laboratories in Amherst, New York (TAL-Buffalo) and reported in data sets 480-7266-1, 480-7271-1, 480-7449-1, and 480-7723-1. The following U.S. Environmental Protection Agency (USEPA) analytical methods (USEPA, 1996) were performed:

Soil:

- Metals (antimony, lead, and tin) by USEPA Method SW846 6010B/6020
- Mercury by USEPA Method 7471
- Volatile organic compounds (VOCs) by USEPA Method SW846 8260
- Semivolatile organic compounds (SVOCs) by USEPA Method SW846 8270
- Percent Solids by ASTM Method D2216
- pH by USEPA Method SW846 9045

Waste Characterization:

- Toxicity Characteristics Leaching Procedure (TCLP) Metals by USEPA Method SW846 1311/3010A/6010B
- TCLP Mercury by USEPA Method 1311/7470
- TCLP Volatile organic compounds (VOCs) by USEPA Method SW846 1311/8260
- TCLP Semivolatile organic compounds (SVOCs) by USEPA Method SW846 1311/8270
- Herbicides by USEPA Method SW846 8151
- Pesticides by USEPA Method SW846 8081
- Aroclors by USEPA Method SW846 8082
- Cyanide by USEPA Method SW846 9012
- Reactive Sulfide by USEPA Method SW846 7.3.4.2
- pH by USEPA Method SW846 9045
- Flashpoint by USEPA Method SW846 1010

A summary of the data deliverable groups, samples, and analytical parameters is presented on Table 1. Data validation was completed for Method 6010B/6020 (antimony, lead, and tin) and TCLP lead by the AMEC project chemist in accordance with the Honeywell Remediation program Level II data validation procedures and the NYSDEC Data Usability Summary Report (DUSR) guidelines (NYSDEC, 2010). Data were reviewed using precision and accuracy control limits presented in Table 2. Data quality reviews for the items listed above were completed using professional judgment and general procedures found in the following guidelines:

- U.S. Environmental Protection Agency (USEPA) Region II, 2006. "Validation of Metals Data for the Contract Laboratory Program (CLP)"; SOP No. HW-2, Revision 13; September 2006.

- U.S. Environmental Protection Agency (USEPA) Region II, 2010. "USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review"; OSWER No. 9240.1-51, USEPA No. 540-R-10-011; January 2010.

A summary of validation data qualification actions is presented on Table 3. Final results including un-validated data are presented on Table 4.

During the Level II data validation the following data quality indicators were reviewed:

- Case Narrative
- Sample Collection and Holding Times
- Quality Control Blanks
- Laboratory Control Samples (LCS)
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Laboratory and Field Duplicates
- Reporting Limits
- Data Completeness
- Electronic Data Verification

The following additional checks were added to the Level II review based on data review procedures included in the NYSDEC DUSR guidance:

- Initial Calibrations
- Continuing Calibrations
- Interference Check Standard
- Serial Dilutions
- Percent Solids Evaluation
- Raw Data review and Calculations

Data qualifications were completed if necessary in accordance with the guidelines and professional judgment using the following qualifiers:

U = The target compound was not detected at concentrations greater than the associated quantitation limit
J = The reported concentration is considered an estimated value

Data validation was not completed on the remaining analytical samples. Results for all other methods remain as reported by the laboratory including laboratory data qualifiers.

2.0 METALS

With the exception of items discussed below, results are interpreted to be usable as reported by the laboratory.

Quality Control Blanks

SDG 480-7266-1

Total lead (0.00691 mg/L) was reported in the continuing calibration blank (CCB) associated with a subset of samples. An action level was established at ten times the reported CCB lead concentration. The sample raw data was reviewed. All raw sample results were greater than the action level; no qualification was required.

TCLP lead (0.00956 µg/L and 0.00589 µg/L) was reported in the CCBs associated with samples. An action level was established at ten times the highest reported CCB lead concentration. All sample results were greater than the action level; no qualification was required.

Interference Check Standard

SDG 480-7266-1

During the ICP-MS (6020) analysis for lead, ICSA (0.193 µg/L) and ICSAB (0.132 µg/L) results for lead were greater than two times the method detection limit (MDL). The sample raw data results were reviewed. Sample results for lead were significantly great than the interference; no qualification was required.

Matrix Spike / Matrix Spike Duplicate

A subset of sample results was qualified due to matrix spike recoveries and relative percent differences (RPD) outside QC limits. Samples results are summarized on Table 3 with reason codes MSH, MSL, and MSDP. Detailed discussions are provided below:

SDG 480-7266-1

In the MS/MSD analysis of sample MTP-1-0711, the MS and/or MSD percent recoveries of antimony (2092 and 4418), lead (28904 and 34691), and tin (223) exceeded the QC limits. The RPD for antimony (65) and tin (69) exceeded the QC limit of 20. Antimony and tin detections and reporting limits in associated samples MTP-1-0711 and MTP-2-0711 were qualified estimated (J/UJ). The unspiked sample concentration for lead was greater than four times the spiking concentration; no qualification was required. However, these large recoveries indicate that there could be a wide range of lead concentrations in the vicinity of MTP-1. The laboratory attributes the high matrix spike recoveries to a non-homogenous matrix.

SDG 480-7449-1

In the MS/MSD analysis of sample B-5-0002, the MS/MSD percent recoveries of tin (172 and 256) exceeded the QC limits. The sample results for tin were qualified estimated (J).

SDG 480-7723-1

In the MS/MSD analysis of sample B-2-0204, the MS/MSD percent recoveries of lead (184 and 69) were outside of the QC limits. The sample results for lead were qualified estimated (J).

References:

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

U.S. Environmental Protection Agency (USEPA), 2006. "Validation of Metals Data for the Contract Laboratory Program (CLP)"; USEPA Region II; HW-2; Revision 13; September 2006.

U.S. Environmental Protection Agency (USEPA) Region II, 2010. "USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review"; OSWER No. 9240.1-51, USEPA No. 540-R-10-011; January 2010.

Data Validator: Wolfgang Calicchio

Date: September 28, 2011

Senior Chemist: Chris Ricardi, NRCC-EAC

Date: October 18, 2011

TABLE 1 - SUMMARY OF SAMPLES
DATA VALIDATION SUMMARY REPORT
JULY SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

					ASTM D2216	SW6010	SW6020	SW7471	SW8260	SW8270	SW9045
Sample ID	Date	Type	SDG	Lab Id	Solids	Metal	Metal	Mercury	VOC	SVOC	pH
B-6-0.5-0711	07/13/11	REG	480-7266-1	480-7266-1	2	3	1				1
B-15-SURF	07/14/11	REG	480-7266-1	480-7266-10	2	3	1				1
B-13-SURF	07/14/11	REG	480-7266-1	480-7266-11	2	3	1				1
B-14-SURF	07/14/11	REG	480-7266-1	480-7266-12	2	3	1				1
B-12-SURF	07/14/11	REG	480-7266-1	480-7266-13	2	3	1				1
B-16-SURF	07/14/11	REG	480-7266-1	480-7266-14	2	3	1				1
B-17-SURF	07/14/11	REG	480-7266-1	480-7266-15	2	3	1				1
B-18-SURF	07/14/11	REG	480-7266-1	480-7266-16	2	3	1				1
B-21-SURF	07/14/11	REG	480-7266-1	480-7266-17	2	3	1				1
B-8-0.5-0711	07/13/11	REG	480-7266-1	480-7266-2	2	3	1				1
MTP-1-0711	07/13/11	REG	480-7266-1	480-7266-3	2	3	1				1
MTP-2-0711	07/13/11	REG	480-7266-1	480-7266-4	2	3	1				1
B-3-0.5-0711	07/13/11	REG	480-7266-1	480-7266-5	2	3	1				1
B-19-SURF	07/14/11	REG	480-7266-1	480-7266-6	2	3	1				1
B-20-SURF	07/14/11	REG	480-7266-1	480-7266-7	2	3	1				1
B-11-SURF	07/14/11	REG	480-7266-1	480-7266-8	2	3	1				1
B-10-SURF	07/14/11	REG	480-7266-1	480-7266-9	2	3	1				1
B-7-0305	07/14/11	REG	480-7271-1	480-7271-1	2	1					
B-1-0204	07/14/11	REG	480-7271-1	480-7271-2	2	1					
B-2-0204	07/14/11	REG	480-7271-1	480-7271-3	2	1					
B-4-0507	07/14/11	REG	480-7449-1	480-7449-1	2	23	1	1	51	71	1
B-5-0002	07/14/11	REG	480-7449-1	480-7449-2	2	23	1	1	51	71	1
B-7-0305	07/14/11	REG	480-7723-1	480-7723-1	2	23		1	51	71	1
B-1-0204	07/14/11	REG	480-7723-1	480-7723-2	2	23		1	51	71	1
B-2-0204	07/14/11	REG	480-7723-1	480-7723-3	2	23		1	51	71	1

Prepared by WCG
Reviewed by WDC
10/11/11

TABLE 1 - SUMMARY OF SAMPLES
DATA VALIDATION SUMMARY REPORT
JULY SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

					846-7.3.4.2	SW1010	SW8081	SW8082	SW8151	SW9012	SW9045	SW6010	SW7470	SW8260	SW8270
Sample ID	Date	Type	SDG	Lab Id	Detected	ignite	Pest	PCB	Herb	CN	pH	Metal	Hg	VOC	SVOC
B-4-0507	07/14/11	REG	480-7449-1	480-7449-1	1	1	23	9	4	1	1	7	1	13	19
B-5-0002	07/14/11	REG	480-7449-1	480-7449-2	1	1	23	9	4	1	1	7	1	13	19

Waste Characterization analyses

Prepared by WCG
Reviewed by WDC
10/11/11

TABLE 2
SUMMARY OF QC LIMITS FOR SPIKES, AND DUPLICATES
NIAGARA FALLS
NIAGARA, NEW YORK

PARAMETER	QC TEST	ANALYTE	Soil (%R)	Soil (RPD)
Inorganics-Metals	LCS	Lead and Tin	70 - 130	
	LCS	Antimony	50 - 150	
	MS/MSD	All Target Analytes	75 -125	
	Lab Duplicate	All Target Analytes		35
	Field Duplicate	All Target Analytes		35

Notes:
LCS - Laboratory Control Sample
MS/MSD - Matrix spike/ Matrix Spike Duplicate
RPD = Relative percent difference
%R = percent recovery
QC Limits are based on USEPA Region II Data Validation Guidelines

TABLE 3 - SUMMARY OF VALIDATION ACTIONS
DATA VALIDTION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL- NIAGARA FALLS
NIAGARA, NEW YORK

Sample Delivery Group	Field Sample Id	Sample Purpose	Analytical Method	Parameter Name	Lab Result	Lab Qualifier	Validation Qualifier	Reason Codes	Lab Units
480-7266-1	MTP-1-0711	REG	SW6010	Antimony	17.6	U	UJ	MSDP	mg/kg
480-7266-1	MTP-2-0711	REG	SW6010	Antimony	98.5		J	MSH	mg/kg
480-7723-1	B-2-0204	REG	SW6010	Lead	179		J	MSH, MSL	mg/kg
480-7723-1	B-7-0305	REG	SW6010	Lead	3580		J	MSH, MSL	mg/kg
480-7723-1	B-1-0204	REG	SW6010	Lead	4630		J	MSH, MSL	mg/kg
480-7266-1	MTP-2-0711	REG	SW6010	Tin	38.3		J	MSH, MSDP	mg/kg
480-7266-1	MTP-1-0711	REG	SW6010	Tin	7.7		J	MSH, MSDP	mg/kg
480-7449-1	B-5-0002	REG	SW6010	Tin	24.7		J	MSH	mg/kg
480-7449-1	B-4-0507	REG	SW6010	Tin	42.8		J	MSH	mg/kg

Prepared by: WCG
Reveiwed by WDC
10/7/11

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-1-0204	B-2-0204	B-7-0305
		Location	B-1	B-2	B-7
		Sample Date	7/14/2011	7/14/2011	7/14/2011
Units	**Method**	**Parameter Name**			
%	ASTM D2216	Percent Moisture	16.6	37.5	17.4
%	ASTM D2216	Percent Solids	83.4	62.5	82.6
mg/kg	SW6010	Aluminum	9920	9170	8180
mg/kg	SW6010	Antimony	17.7 U	24.1 U	17.8 U
mg/kg	SW6010	Arsenic	14.4	18	16.8
mg/kg	SW6010	Barium	1690	39	305
mg/kg	SW6010	Beryllium	0.37	0.42	3.1
mg/kg	SW6010	Cadmium	11.4	0.78	0.36
mg/kg	SW6010	Calcium	57300	208000	8790
mg/kg	SW6010	Chromium	239	19.8	11.5
mg/kg	SW6010	Cobalt	10.2	10.6	13.6
mg/kg	SW6010	Copper	46.9	47.6	67.1
mg/kg	SW6010	Iron	9940	31600	7200
mg/kg	SW6010	Lead	4630 J	179 J	3580 J
mg/kg	SW6010	Magnesium	16600	66000	739
mg/kg	SW6010	Manganese	413	372	82.1
mg/kg	SW6010	Nickel	13.7	74	23
mg/kg	SW6010	Potassium	751	2200	417
mg/kg	SW6010	Selenium	4.7 U	6.4 U	4.7 U
mg/kg	SW6010	Silver	0.59 U	0.8 U	0.59 U
mg/kg	SW6010	Sodium	165 U	1130	193
mg/kg	SW6010	Thallium	7.1 U	9.6 U	7.1 U
mg/kg	SW6010	Tin	7.5	3.2 U	3.5
mg/kg	SW6010	Vanadium	13.3	16.2	40.8
mg/kg	SW6010	Zinc	2500	128	113
mg/kg	SW7471	Mercury	5.1	0.97	0.23
S.U.	SW9045	pH	8.08	7.6	7.58
ug/kg	SW8260	1,1,1-Trichloroethane	0.33 U H	0.52 U H	0.6 U H
ug/kg	SW8260	1,1,2,2-Tetrachloroethane	0.74 U H	1.2 U H	1.3 U H
ug/kg	SW8260	1,1,2-Trichloro-1,2,2-trifluoroethane	1 U H	1.6 U H	1.9 U H
ug/kg	SW8260	1,1,2-Trichloroethane	0.59 U H	0.92 U H	1.1 U H
ug/kg	SW8260	1,1-Dichloroethane	0.56 U H	0.87 U H	1 U H
ug/kg	SW8260	1,1-Dichloroethene	0.56 U H	0.87 U H	1 U H
ug/kg	SW8260	1,2,4-Trichlorobenzene	0.28 U H	0.43 U H	0.5 U H
ug/kg	SW8260	1,2-Dibromo-3-Chloropropane	2.3 U H	3.6 U H	4.1 U H
ug/kg	SW8260	1,2-Dibromoethane	0.58 U H	0.91 U H	1.1 U H
ug/kg	SW8260	1,2-Dichlorobenzene	0.36 U H	0.56 U H	0.64 U H
ug/kg	SW8260	1,2-Dichloroethane	0.23 U H	0.36 U H	0.41 U H
ug/kg	SW8260	1,2-Dichloropropane	2.3 U H	3.6 U H	4.1 U H

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-1-0204	B-2-0204	B-7-0305
		Location	B-1	B-2	B-7
		Sample Date	7/14/2011	7/14/2011	7/14/2011
Units	Method	Parameter Name			
ug/kg	SW8260	1,3-Dichlorobenzene	0.23 U H	0.37 U H	0.42 U H
ug/kg	SW8260	1,4-Dichlorobenzene	0.64 U H	1 U H	1.2 U H
ug/kg	SW8260	2-Butanone (MEK)	1.7 U H	2.6 U H	3 U H
ug/kg	SW8260	2-Hexanone	2.3 U H	3.6 U H	4.1 U H
ug/kg	SW8260	4-Methyl-2-pentanone (MIBK)	1.5 U H	2.3 U H	2.7 U H
ug/kg	SW8260	Acetone	3.8 U H	6 U H	17 J H
ug/kg	SW8260	Benzene	0.22 U H	0.35 U H	2 J H
ug/kg	SW8260	Bromodichloromethane	0.61 U H	0.95 U H	1.1 U H
ug/kg	SW8260	Bromoform	2.3 U H	3.6 U H	4.1 U H
ug/kg	SW8260	Bromomethane	0.41 U H	0.64 U H	0.74 U H
ug/kg	SW8260	Carbon disulfide	2.3 U H	3.6 U H	4.1 U H
ug/kg	SW8260	Carbon tetrachloride	0.44 U H	0.69 U H	0.8 U H
ug/kg	SW8260	Chlorobenzene	0.6 U H	0.94 U H	1.1 U H
ug/kg	SW8260	Chloroethane	1 U H	1.6 U H	1.9 U H
ug/kg	SW8260	Chloroform	0.28 U H	0.44 U H	0.51 U H
ug/kg	SW8260	Chloromethane	0.28 U H	0.43 U H	0.5 U H
ug/kg	SW8260	cis-1,2-Dichloroethene	0.58 U H	0.91 U H	1.1 U H
ug/kg	SW8260	cis-1,3-Dichloropropene	0.66 U H	1 U H	1.2 U H
ug/kg	SW8260	Cyclohexane	0.64 U H	1 U H	1.2 U H
ug/kg	SW8260	Dibromochloromethane	0.58 U H	0.91 U H	1.1 U H
ug/kg	SW8260	Dichlorodifluoromethane	0.38 U H	0.59 U H	0.68 U H
ug/kg	SW8260	Ethylbenzene	0.31 U H	0.49 U H	0.57 U H
ug/kg	SW8260	Isopropylbenzene	0.69 U H	1.1 U H	1.2 U H
ug/kg	SW8260	Methyl acetate	0.85 U H	1.3 U H	1.5 U H
ug/kg	SW8260	Methyl tert-butyl ether	0.45 U H	0.7 U H	0.81 U H
ug/kg	SW8260	Methylcyclohexane	0.69 U H	1.1 U H	1.3 U H
ug/kg	SW8260	Methylene Chloride	2.1 U H	3.3 U H	3.8 U H
ug/kg	SW8260	Styrene	0.23 U H	0.36 U H	0.41 U H
ug/kg	SW8260	Tetrachloroethene	0.61 U H	1.5 J H	1.1 U H
ug/kg	SW8260	Toluene	0.34 U H	0.54 U H	1.2 J H B
ug/kg	SW8260	trans-1,2-Dichloroethene	0.47 U H	0.73 U H	0.85 U H
ug/kg	SW8260	trans-1,3-Dichloropropene	2 U H	3.1 U H	3.6 U H
ug/kg	SW8260	Trichloroethene	1 U H	1.6 U H	1.8 U H
ug/kg	SW8260	Trichlorofluoromethane	0.43 U H	0.67 U H	0.78 U H
ug/kg	SW8260	Vinyl chloride	0.56 U H	0.87 U H	1 U H
ug/kg	SW8260	Xylenes, Total	0.77 U H	1.2 U H	1.4 U H
ug/kg	SW8270	2,4,5-Trichlorophenol	4300 U	58 U	4400 U
ug/kg	SW8270	2,4,6-Trichlorophenol	1300 U	18 U	1300 U
ug/kg	SW8270	2,4-Dichlorophenol	1000 U	14 U	1100 U

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-1-0204	B-2-0204	B-7-0305
		Location	B-1	B-2	B-7
		Sample Date	7/14/2011	7/14/2011	7/14/2011
Units	Method	Parameter Name			
ug/kg	SW8270	2,4-Dimethylphenol	5300 U	72 U	5500 U
ug/kg	SW8270	2,4-Dinitrophenol	6900 U	94 U	7100 U
ug/kg	SW8270	2,4-Dinitrotoluene	3000 U	41 U	3200 U
ug/kg	SW8270	2,6-Dinitrotoluene	4800 U	66 U	5000 U
ug/kg	SW8270	2-Chloronaphthalene	1300 U	18 U	1400 U
ug/kg	SW8270	2-Chlorophenol	1000 U	14 U	1000 U
ug/kg	SW8270	2-Methylnaphthalene	240 U	37 J	5200 J
ug/kg	SW8270	2-Methylphenol	600 U	8.2 U	630 U
ug/kg	SW8270	2-Nitroaniline	6300 U	86 U	6500 U
ug/kg	SW8270	2-Nitrophenol	900 U	12 U	930 U
ug/kg	SW8270	3,3'-Dichlorobenzidine	17000 U	230 U	18000 U
ug/kg	SW8270	3-Nitroaniline	4500 U	62 U	4700 U
ug/kg	SW8270	4,6-Dinitro-2-methylphenol	6800 U	92 U	7000 U
ug/kg	SW8270	4-Bromophenyl phenyl ether	6300 U	85 U	6500 U
ug/kg	SW8270	4-Chloro-3-methylphenol	810 U	11 U	840 U
ug/kg	SW8270	4-Chloroaniline	5800 U	79 U	6000 U
ug/kg	SW8270	4-Chlorophenyl phenyl ether	420 U	5.7 U	430 U
ug/kg	SW8270	4-Methylphenol	1100 U	15 U	1100 U
ug/kg	SW8270	4-Nitroaniline	2200 U	30 U	2300 U
ug/kg	SW8270	4-Nitrophenol	4800 U	65 U	4900 U
ug/kg	SW8270	Acenaphthene	510 J	100 J	3000 J
ug/kg	SW8270	Acenaphthylene	2000 J	2.2 U	170 U
ug/kg	SW8270	Acetophenone	1000 U	14 U	1000 U
ug/kg	SW8270	Anthracene	5800 J	230 J	8500 J
ug/kg	SW8270	Atrazine	870 U	12 U	910 U
ug/kg	SW8270	Benzaldehyde	2200 U	29 U	2200 U
ug/kg	SW8270	Benzo(a)anthracene	19000 J	580	8500 J
ug/kg	SW8270	Benzo(a)pyrene	15000 J	270	6800 J
ug/kg	SW8270	Benzo(b)fluoranthene	16000 J	370	8000 J
ug/kg	SW8270	Benzo(g,h,i)perylene	240 U	3.2 U	240 U
ug/kg	SW8270	Benzo(k)fluoranthene	7000 J	170 J	5000 J
ug/kg	SW8270	Biphenyl	1200 U	17 U	1300 J
ug/kg	SW8270	bis (2-chloroisopropyl) ether	2100 U	28 U	2100 U
ug/kg	SW8270	Bis(2-chloroethoxy)methane	1100 U	15 U	1100 U
ug/kg	SW8270	Bis(2-chloroethyl)ether	1700 U	23 U	1800 U
ug/kg	SW8270	Bis(2-ethylhexyl) phthalate	6300 U	310	6600 U
ug/kg	SW8270	Butyl benzyl phthalate	5300 U	72 U	5500 U
ug/kg	SW8270	Caprolactam	8500 U	120 U	8800 U
ug/kg	SW8270	Carbazole	230 U	110 J	2900 J

Prepared by WCG
Reveiwed by WDC
10/11/11

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-1-0204	B-2-0204	B-7-0305
		Location	B-1	B-2	B-7
		Sample Date	7/14/2011	7/14/2011	7/14/2011
Units	Method	Parameter Name			
ug/kg	SW8270	Chrysene	21000	600	8400 J
ug/kg	SW8270	Di-n-butyl phthalate	6800 U	130 J	7000 U
ug/kg	SW8270	Di-n-octyl phthalate	460 U	6.3 U	480 U
ug/kg	SW8270	Dibenz(a,h)anthracene	2900 J	41 J	1700 J
ug/kg	SW8270	Dibenzofuran	200 U	75 J	6200 J
ug/kg	SW8270	Diethyl phthalate	590 U	8.1 U	620 U
ug/kg	SW8270	Dimethyl phthalate	510 U	7 U	530 U
ug/kg	SW8270	Fluoranthene	36000	1100	20000 J
ug/kg	SW8270	Fluorene	1100 J	100 J	4300 J
ug/kg	SW8270	Hexachlorobenzene	980 U	13 U	1000 U
ug/kg	SW8270	Hexachlorobutadiene	1000 U	14 U	1000 U
ug/kg	SW8270	Hexachlorocyclopentadiene	5900 U	81 U	6200 U
ug/kg	SW8270	Hexachloroethane	1500 U	21 U	1600 U
ug/kg	SW8270	Indeno(1,2,3-cd)pyrene	7800 J	77 J	4100 J
ug/kg	SW8270	Isophorone	980 U	13 U	1000 U
ug/kg	SW8270	N-Nitrosodi-n-propylamine	1600 U	21 U	1600 U
ug/kg	SW8270	N-Nitrosodiphenylamine	1100 U	15 U	1700 J
ug/kg	SW8270	Naphthalene	330 U	57 J	23000
ug/kg	SW8270	Nitrobenzene	870 U	12 U	900 U
ug/kg	SW8270	Pentachlorophenol	6700 U	110 J	7000 U
ug/kg	SW8270	Phenanthrene	25000	910	29000
ug/kg	SW8270	Phenol	2100 U	28 U	2100 U
ug/kg	SW8270	Pyrene	43000	960	14000 J

Notes:
U = undetected
J = estimated
B = detected in lab blank
H = holding time exceeded

Prepared by WCG
Reveiwed by WDC
10/11/11

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

Lab Units	Analytical Method	Parameter Name		
		Field Sample ID	B-4-0507	B-5-0002
		Location	B-4	B-5
		Sample Date	7/14/2011	7/14/2011
%	ASTM D2216	Percent Moisture	14.8	9.2
%	ASTM D2216	Percent Solids	85.2	90.8
deg F	SW1010	Flashpoint	176	176
mg/kg	846-7.3.4.2	Sulfide, Reactive	10 U	10 U
mg/kg	SW6010	Aluminum	2170	6280
mg/kg	SW6010	Antimony	342	455
mg/kg	SW6010	Arsenic	19.8	23.8
mg/kg	SW6010	Barium	287	913
mg/kg	SW6010	Beryllium	0.24	0.51
mg/kg	SW6010	Cadmium	2.1	2.2
mg/kg	SW6010	Calcium	7210	11000
mg/kg	SW6010	Chromium	45.6	22.1
mg/kg	SW6010	Cobalt	3.8	8.3
mg/kg	SW6010	Copper	241	550
mg/kg	SW6010	Iron	19700	17000
mg/kg	SW6010	Lead	18000	27000
mg/kg	SW6010	Magnesium	564	2400
mg/kg	SW6010	Manganese	84	10200
mg/kg	SW6010	Nickel	24.5	40.4
mg/kg	SW6010	Potassium	394	795
mg/kg	SW6010	Selenium	4.7 U	4.5 U
mg/kg	SW6010	Silver	0.93	3.6
mg/kg	SW6010	Sodium	194	297
mg/kg	SW6010	Thallium	7.1 U	6.8 U
mg/kg	SW6010	Tin	42.8 J	24.7 J
mg/kg	SW6010	Vanadium	15.6	14.9
mg/kg	SW6010	Zinc	1140	1880
mg/kg	SW6020	Lead	20200	28700
mg/kg	SW7471	Mercury	1.8	2.5
mg/kg	SW9012	Cyanide, Reactive	10 U	10 U
S.U.	SW9045	pH	7.39	8.06
ug/kg	SW8081	4,4'-DDD	38 U	98 U
ug/kg	SW8081	4,4'-DDE	29 U	75 U
ug/kg	SW8081	4,4'-DDT	140 J	51 U
ug/kg	SW8081	Aldrin	48 U *	120 U *
ug/kg	SW8081	alpha-BHC	35 U *	91 U *
ug/kg	SW8081	alpha-Chlordane	96 U	250 U
ug/kg	SW8081	beta-BHC	21 U	54 U
ug/kg	SW8081	delta-BHC	26 U	66 U

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-4-0507	B-5-0002
		Location	B-4	B-5
		Sample Date	7/14/2011	7/14/2011
Lab Units	Analytical Method	Parameter Name		
ug/kg	SW8081	Dieldrin	46 U	120 U
ug/kg	SW8081	Endosulfan I	24 U	63 U
ug/kg	SW8081	Endosulfan II	35 U	91 U
ug/kg	SW8081	Endosulfan sulfate	36 U	94 U
ug/kg	SW8081	Endrin	27 U	69 U
ug/kg	SW8081	Endrin aldehyde	49 U	130 U
ug/kg	SW8081	Endrin ketone	48 U	120 U
ug/kg	SW8081	gamma-BHC (Lindane)	140 U *	360 U *
ug/kg	SW8081	gamma-Chlordane	61 U	160 U
ug/kg	SW8081	Heptachlor	30 U *	79 U *
ug/kg	SW8081	Heptachlor epoxide	50 U	130 U
ug/kg	SW8081	Methoxychlor	260	69 U
ug/kg	SW8081	Toxaphene	1100 U	2900 U
ug/kg	SW8082	PCB-1016	54 U	48 U
ug/kg	SW8082	PCB-1221	54 U	48 U
ug/kg	SW8082	PCB-1232	54 U	48 U
ug/kg	SW8082	PCB-1242	54 U	48 U
ug/kg	SW8082	PCB-1248	54 U	48 U
ug/kg	SW8082	PCB-1254	130 U	120 U
ug/kg	SW8082	PCB-1260	130 U	120 U
ug/kg	SW8151	2,4,5-T	6.2 U	87 U
ug/kg	SW8151	2,4-D	12 U	170 U
ug/kg	SW8151	Silvex (2,4,5-TP)	7 U	98 U
ug/kg	SW8260	1,1,1-Trichloroethane	0.48 U	0.45 U
ug/kg	SW8260	1,1,2,2-Tetrachloroethane	1.1 U	1 U
ug/kg	SW8260	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5 U	1.4 U
ug/kg	SW8260	1,1,2-Trichloroethane	0.87 U	0.8 U
ug/kg	SW8260	1,1-Dichloroethane	0.81 U	0.75 U
ug/kg	SW8260	1,1-Dichloroethene	0.82 U	0.75 U
ug/kg	SW8260	1,2,4-Trichlorobenzene	0.41 U	0.37 U
ug/kg	SW8260	1,2-Dibromo-3-Chloropropane	3.3 U	3.1 U
ug/kg	SW8260	1,2-Dibromoethane	0.86 U	0.79 U
ug/kg	SW8260	1,2-Dichlorobenzene	0.52 U	0.48 U
ug/kg	SW8260	1,2-Dichloroethane	0.34 U	0.31 U
ug/kg	SW8260	1,2-Dichloropropane	3.3 U	3.1 U
ug/kg	SW8260	1,3-Dichlorobenzene	0.34 U	0.32 U
ug/kg	SW8260	1,4-Dichlorobenzene	0.93 U	0.86 U
ug/kg	SW8260	2-Butanone (MEK)	2.4 U	2.3 U
ug/kg	SW8260	2-Hexanone	3.3 U	3.1 U

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-4-0507	B-5-0002
		Location	B-4	B-5
		Sample Date	7/14/2011	7/14/2011
Lab Units	**Analytical Method**	**Parameter Name**		
ug/kg	SW8260	4-Methyl-2-pentanone (MIBK)	2.2 U	2 U
ug/kg	SW8260	Acetone	5.6 U	34
ug/kg	SW8260	Benzene	0.33 U	610 E
ug/kg	SW8260	Bromodichloromethane	0.89 U	0.83 U
ug/kg	SW8260	Bromoform	3.3 U	3.1 U
ug/kg	SW8260	Bromomethane	0.6 U	0.55 U
ug/kg	SW8260	Carbon disulfide	3.3 U	5.6 J
ug/kg	SW8260	Carbon tetrachloride	0.65 U	0.6 U
ug/kg	SW8260	Chlorobenzene	0.88 U	0.81 U
ug/kg	SW8260	Chloroethane	1.5 U	1.4 U
ug/kg	SW8260	Chloroform	0.41 U	0.38 U
ug/kg	SW8260	Chloromethane	0.4 U	0.37 U
ug/kg	SW8260	cis-1,2-Dichloroethene	0.85 U	0.79 U
ug/kg	SW8260	cis-1,3-Dichloropropene	0.96 U	0.89 U
ug/kg	SW8260	Cyclohexane	0.93 U	550
ug/kg	SW8260	Dibromochloromethane	0.85 U	0.79 U
ug/kg	SW8260	Dichlorodifluoromethane	0.55 U	0.51 U
ug/kg	SW8260	Ethylbenzene	0.46 U	210
ug/kg	SW8260	Isopropylbenzene	1 U	150
ug/kg	SW8260	Methyl acetate	1.2 U	1.1 U
ug/kg	SW8260	Methyl tert-butyl ether	0.66 U	0.6 U
ug/kg	SW8260	Methylcyclohexane	1 U	1500
ug/kg	SW8260	Methylene Chloride	3.1 U	2.8 U
ug/kg	SW8260	Styrene	0.33 U	120
ug/kg	SW8260	Tetrachloroethene	0.9 U	0.83 U
ug/kg	SW8260	Toluene	0.5 U	490
ug/kg	SW8260	trans-1,2-Dichloroethene	0.69 U	0.64 U
ug/kg	SW8260	trans-1,3-Dichloropropene	2.9 U	2.7 U
ug/kg	SW8260	Trichloroethene	1.5 U	1.4 U
ug/kg	SW8260	Trichlorofluoromethane	0.63 U	0.58 U
ug/kg	SW8260	Vinyl chloride	0.81 U	0.75 U
ug/kg	SW8260	Xylenes, Total	1.1 U	1600
ug/kg	SW8270	2,4,5-Trichlorophenol	21000 U	80000 U
ug/kg	SW8270	2,4,6-Trichlorophenol	6500 U	24000 U
ug/kg	SW8270	2,4-Dichlorophenol	5200 U	9700 U
ug/kg	SW8270	2,4-Dimethylphenol	27000 U	78000 J
ug/kg	SW8270	2,4-Dinitrophenol	34000 U	65000 U
ug/kg	SW8270	2,4-Dinitrotoluene	15000 U	57000 U
ug/kg	SW8270	2,6-Dinitrotoluene	24000 U	90000 U

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-4-0507		B-5-0002	
		Location	B-4		B-5	
		Sample Date	7/14/2011		7/14/2011	
Lab Units	**Analytical Method**	**Parameter Name**				
ug/kg	SW8270	2-Chloronaphthalene	6600	U	25000	U
ug/kg	SW8270	2-Chlorophenol	5000	U	9400	U
ug/kg	SW8270	2-Methylnaphthalene	1200	U	1800000	
ug/kg	SW8270	2-Methylphenol	3000	U	83000	J
ug/kg	SW8270	2-Nitroaniline	32000	U	59000	U
ug/kg	SW8270	2-Nitrophenol	4500	U	8400	U
ug/kg	SW8270	3,3'-Dichlorobenzidine	86000	U	320000	U
ug/kg	SW8270	3-Nitroaniline	23000	U	85000	U
ug/kg	SW8270	4,6-Dinitro-2-methylphenol	34000	U	64000	U
ug/kg	SW8270	4-Bromophenyl phenyl ether	31000	U	59000	U
ug/kg	SW8270	4-Chloro-3-methylphenol	4100	U	7600	U
ug/kg	SW8270	4-Chloroaniline	29000	U	54000	U
ug/kg	SW8270	4-Chlorophenyl phenyl ether	2100	U	7900	U
ug/kg	SW8270	4-Methylphenol	5500	U	240000	J
ug/kg	SW8270	4-Nitroaniline	11000	U	41000	U
ug/kg	SW8270	4-Nitrophenol	24000	U	89000	U
ug/kg	SW8270	Acenaphthene	1200	U	580000	
ug/kg	SW8270	Acenaphthylene	810	U	580000	
ug/kg	SW8270	Acetophenone	5100	U	9500	U
ug/kg	SW8270	Anthracene	3600	J	1500000	
ug/kg	SW8270	Atrazine	4400	U	8200	U
ug/kg	SW8270	Benzaldehyde	11000	U	40000	U
ug/kg	SW8270	Benzo(a)anthracene	22000	J	1800000	
ug/kg	SW8270	Benzo(a)pyrene	30000	J	1500000	
ug/kg	SW8270	Benzo(b)fluoranthene	24000	J	1800000	
ug/kg	SW8270	Benzo(g,h,i)perylene	25000	J	780000	
ug/kg	SW8270	Benzo(k)fluoranthene	20000	J	730000	
ug/kg	SW8270	Biphenyl	6100	U	380000	
ug/kg	SW8270	bis (2-chloroisopropyl) ether	10000	U	39000	U
ug/kg	SW8270	Bis(2-chloroethoxy)methane	5400	U	20000	U
ug/kg	SW8270	Bis(2-chloroethyl)ether	8500	U	32000	U
ug/kg	SW8270	Bis(2-ethylhexyl) phthalate	32000	U	59000	U
ug/kg	SW8270	Butyl benzyl phthalate	26000	U	99000	U
ug/kg	SW8270	Caprolactam	43000	U	80000	U
ug/kg	SW8270	Carbazole	1100	U	980000	
ug/kg	SW8270	Chrysene	20000	J	1800000	
ug/kg	SW8270	Di-n-butyl phthalate	34000	U	64000	U
ug/kg	SW8270	Di-n-octyl phthalate	2300	U	8600	U
ug/kg	SW8270	Dibenz(a,h)anthracene	7000	J	240000	

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-4-0507	B-5-0002
		Location	B-4	B-5
		Sample Date	7/14/2011	7/14/2011
Lab Units	Analytical Method	Parameter Name		
ug/kg	SW8270	Dibenzofuran	1000 U	1600000
ug/kg	SW8270	Diethyl phthalate	3000 U	5600 U
ug/kg	SW8270	Dimethyl phthalate	2600 U	9600 U
ug/kg	SW8270	Fluoranthene	27000 J	5200000
ug/kg	SW8270	Fluorene	2300 U	2400000
ug/kg	SW8270	Hexachlorobenzene	4900 U	9200 U
ug/kg	SW8270	Hexachlorobutadiene	5000 U	9400 U
ug/kg	SW8270	Hexachlorocyclopentadiene	30000 U	56000 U
ug/kg	SW8270	Hexachloroethane	7600 U	29000 U
ug/kg	SW8270	Indeno(1,2,3-cd)pyrene	19000 J	730000
ug/kg	SW8270	Isophorone	4900 U	9200 U
ug/kg	SW8270	N-Nitrosodi-n-propylamine	7800 U	29000 U
ug/kg	SW8270	N-Nitrosodiphenylamine	5400 U	20000 U
ug/kg	SW8270	Naphthalene	1600 U	8300000
ug/kg	SW8270	Nitrobenzene	4400 U	8200 U
ug/kg	SW8270	Pentachlorophenol	34000 U	63000 U
ug/kg	SW8270	Phenanthrene	16000 J	7400000
ug/kg	SW8270	Phenol	10000 U	200000 J
ug/kg	SW8270	Pyrene	21000 J	3500000

Notes:
U = undetected
J = estimated
B = detected in lab blank
H = holding time exceeded
* = outside lab QC limit
E = estimated

TABLE 4 - FINAL RESULTS (TCLP)
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-4-0507	B-5-0002
		Location	B-4	B-5
		Sample Date	7/14/2011	7/14/2011
Lab Units	**Analytical Method**	**Parameter Name**		
mg/L	SW6010	Arsenic	0.01 U	0.01 U
mg/L	SW6010	Barium	0.04	5.5
mg/L	SW6010	Cadmium	0.037	0.017
mg/L	SW6010	Chromium	0.004 U	0.0047
mg/L	SW6010	Lead	185	294
mg/L	SW6010	Selenium	0.015 U	0.015 U
mg/L	SW6010	Silver	0.003 U	0.003 U
mg/L	SW7470	Mercury	0.0002 U	0.00024
mg/L	SW8260	1,1-Dichloroethene	0.0029 U	0.0029 U
mg/L	SW8260	1,2-Dichloroethane	0.0021 U	0.0021 U
mg/L	SW8260	2-Butanone (MEK)	0.013 U	0.013 U
mg/L	SW8260	Benzene	0.0041 U	0.0041 U
mg/L	SW8260	Carbon tetrachloride	0.0027 U	0.0027 U
mg/L	SW8260	Chlorobenzene	0.0075 U	0.0075 U
mg/L	SW8260	Chloroform	0.0034 U	0.0034 U
mg/L	SW8260	Tetrachloroethene	0.0036 U	0.0036 U
mg/L	SW8260	Trichloroethene	0.0046 U	0.0046 U
mg/L	SW8260	Vinyl chloride	0.009 U	0.009 U
mg/L	SW8270	1,4-Dichlorobenzene	0.00046 U	0.00046 U
mg/L	SW8270	2,4,5-Trichlorophenol	0.00048 U	0.00048 U
mg/L	SW8270	2,4,6-Trichlorophenol	0.00061 U	0.00061 U
mg/L	SW8270	2,4-Dinitrotoluene	0.00045 U	0.00045 U
mg/L	SW8270	2-Methylphenol	0.0004 U	0.0004 U
mg/L	SW8270	3-Methylphenol	0.0004 U	0.0004 U
mg/L	SW8270	4-Methylphenol	0.00036 U	0.00036 U
mg/L	SW8270	Hexachlorobenzene	0.00051 U	0.00051 U
mg/L	SW8270	Hexachlorobutadiene	0.00068 U	0.00068 U
mg/L	SW8270	Hexachloroethane	0.00059 U	0.00059 U
mg/L	SW8270	Nitrobenzene	0.00029 U	0.00029 U
mg/L	SW8270	Pentachlorophenol	0.0022 U	0.0022 U
mg/L	SW8270	Pyridine	0.00041 U	0.00041 U
S.U.	SW9045	pH	7.39	8.06

Notes:
U = undetected
J = estimated

Prepared by WCG
Reveiwed by WDC
10/11/11

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-1-0204	B-2-0204	B-7-0305
		Location	B-1	B-2	B-7
		Sample Date	7/14/2011	7/14/2011	7/14/2011
Lab Units	**Analytical Method**	**Parameter Name**			
%	ASTM D2216	Percent Moisture	16.6	37.5	17.4
%	ASTM D2216	Percent Solids	83.4	62.5	82.6
mg/kg	SW6010	Lead	1190	111	2260
mg/L	SW6010	TCLP-Lead	1.8	0.94	7

Prepared by WCG
Reveiwed by WDC
10/11/11

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-10-SURF	B-11-SURF	B-12-SURF	B-13-SURF	B-14-SURF	B-15-SURF
		Location	B-10	B-11	B-12	B-13	B-14	B-15
		Sample Date	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
Lab Units	**Method**	**Parameter Name**						
%	ASTM D2216	Percent Moisture	3.9	0.68	4.8	3.5	9.1	3
%	ASTM D2216	Percent Solids	96.1	99.3	95.2	96.5	90.9	97
mg/kg	SW6010	Antimony	101	68.3	15.4	41.2	15.9 U	14.8
mg/kg	SW6010	Lead	7940	6430	3130	4130	1210	1660
mg/kg	SW6010	Tin	20.4	9.5	6.7	18.3	50.7	9
mg/kg	SW6020	Lead	7510	6300	3160	3970	1280	1850
mg/L	SW6010	TCLP-Lead	18.4	46.5	1.5	2.7	1	1.9
S.U.	SW9045	pH	7.8	8.25	7.98	7.89	7.98	7.96

Notes:
U = undetected
J = estimated

TABLE 4 - FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
JULY 2011 SOIL SAMPLING
HONEYWELL - NIAGARA FALLS
NIAGARA, NEW YORK

		Field Sample ID	B-16-SURF	B-17-SURF	B-18-SURF	B-19-SURF	B-20-SURF	B-21-SURF
		Location	B-16	B-17	B-18	B-19	B-20	B-21
		Sample Date	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
Lab Units	**Method**	**Parameter Name**						
%	ASTM D2216	Percent Moisture	2.9	24	7.7	13.4	17.2	9.8
%	ASTM D2216	Percent Solids	97.1	76	92.3	86.6	82.8	90.2
mg/kg	SW6010	Antimony	14.6 U	63.8	192	29.7	18.6 U	15.6 U
mg/kg	SW6010	Lead	1230	2280	16900	1730	2630	316
mg/kg	SW6010	Tin	6.2	20.8	48.7	53.1	8.8	22
mg/kg	SW6020	Lead	1290	2460	17700	1800	2580	334
mg/L	SW6010	TCLP-Lead	1.3	21	69.7	0.6	1.8	0.026
S.U.	SW9045	pH	8.04	7.09	7.63	7.16	7.67	7.83

Notes:
U = undetected
J = estimated

Prepared by WCG
Reveiwed by WDC
10/11/11